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Rental Person Businesses, Loneliness, and Intimacy in Japan

Margaret Le

Despite humanity's rising population density in urban centers, the interconnectedness of our global economies, and our technology connecting us with people across the globe, loneliness is more prevalent than ever. In Japan in particular, numerous social and economic factors coalesce to create a public health crisis of loneliness, as seen in Japan's recently appointed 'minister for loneliness.'¹ One industry that emerged out of this loneliness crisis is the rental person industry, which offers actors who play as professional stand-ins for parents, friends, family members, or co-workers for both social events and private settings. Rental person businesses represent temporary solutions to social problems linked to loneliness in Japan. Though some genuine emotional experiences between client and actor are exchanged, most of the commodified intimate acts in rental person relationships represent platonic bounded authenticity, and cannot be a replacement for other forms of intimacy due to the emphasis on purchasing *acts* of intimacy without an organic process of relationship negotiation.

The Loneliness Economy

To understand rental person businesses in Japan, one must first examine anthropological definitions of loneliness and intimacy in the contemporary world, as well as the rising of loneliness economies. The core of loneliness is feeling unneeded.² Loneliness has increasingly become both a public health concern as well as a state of existence in the 21st century. However, a common misconception is exclusively defining loneliness as an individual psychological condition,³ when loneliness is "a broader internal state of feeling uncared for by fellow citizens; an existential state of feeling disconnected from those around us; and feeling socially, politically, and economically excluded by society."⁴ This definition of loneliness incorporates both the private unease of feeling detached from others, as well as how broader forces, such as globalization, urbanization, and technological disruption can impact these private relationships.⁵ It is important to note that social isolation isn't the same as loneliness, since some socially isolated people can feel less lonely than people who live close to their family and friends, such as long-term meditators.⁶ Furthermore, depression and loneliness are different conditions. Depression is a medical disorder that causes *internal* feelings of worthlessness, guilt, and suicidal ideation, while loneliness is "*relationally* oriented"⁷ towards the desire to not be alone, emphasizing our perceived disconnection from others. Thus, forming a network of intimate relationships may cure loneliness, but not depression.

¹ Skopeliti, C. (2021, February 25). Japan appoints 'Minister for Loneliness' after rise in suicides. *The Independent*. <https://www.independent.co.uk/news/world/asia/japan-minister-loneliness-suicides-tetsushi-sakamoto-b1807236.html>

² Ozawa-de Silva, C., & Parsons, M. (2020). Toward an anthropology of loneliness. *Transcultural Psychiatry*, 57(5), 613–622. <https://doi.org/10.1177/1363461520961627>

³ Ozawa-de Silva & Parsons, 2020.

⁴ Hertz, N. (2021). *The Lonely Century: How to restore human connection in a world that's pulling apart*. Currency.

⁵ Hertz, 2021.

⁶ Ozawa-de Silva & Parsons, 2020.

⁷ Ozawa-de Silva & Parsons, 2020, p. 615.

Since loneliness represents feeling disconnected from others and inconsequential to general society, lonely people crave genuine intimacy, since intimate relationships can fulfill their desire to be needed.⁸ In an anthropological context, Alexy and Cook⁹ propose that intimate relationships can be defined as (1) the transfer of physical, informational, or emotional relations; (2) taking place in a space constructed as ‘private;’ and (3) negotiating relationship bonds, which is an active process of figuring out how to relate to another person. In an intimate relationship, the first two points can be performed through the “*doing* of intimacy,”¹⁰ where individuals perform certain actions or practices that are shaped by their imagination of intimacy. However, the *doing* of intimacy alone doesn’t form an intimate relationship without the third point: negotiating relationship bonds. Negotiating relationship bonds involves considering what relationships with the other person are “ideal, pleasurable, or possible.”¹¹ This negotiation process is never static, since intimate relationships can easily deepen or sour, thus this negotiation process requires significant energy, time, and stress.

In the context of loneliness and intimacy, the loneliness economy is defined as “an emerging market that both supports and exploits people’s growing sense of disconnection from their intimate connections, fellow citizens, and society.”¹² Loneliness has created a strong “need to be needed,”¹³ a need that can be fulfilled through forming intimate relationships. However, the greatest barrier to naturally forming intimate relationships with another person is the process of negotiating relationships organically, which requires a commitment that many individuals may not have time or energy for. Thus, certain businesses in the loneliness economy allow their clients a shortcut by commodifying the *act* of intimacy, forgoing the time-consuming step of negotiating relationships with other people. Within this context of the loneliness economy, rental person services sell platonic “bounded authenticity,” in which the intimate commodified exchange has clearly defined “spatial and temporal boundaries”¹⁴ between actor and client. These commodified intimate acts temporarily fill the void of loneliness, but cannot fully replace intimate relationships due to a lack of relationship negotiation.

Japanese Context for the Loneliness Economy

Work Culture

One major contributing factor to the rise of the loneliness economy in Japan is the 1970s enterprise society. Within the post-war enterprise society, the principles of Japanese management were developed, which idealized lifetime employment to a single company as a salaryman’s entire sense of belonging and connection.¹⁵ However, the Japanese economic recession in the 1990s would lead to a rise in unemployment, leading to disillusionment about the enterprise society’s promise that Japanese citizens who worked and studied hard would be rewarded with social belonging through the role of a salaryman.¹⁶ Despite the increasing improbability of lifetime employment, Japanese children’s schooling continued to emphasize raising an ideal worker for the profit-driven

⁸ Ozawa-de Silva & Parsons, 2020.

⁹ Alexy, A., & Cook, E. E. (2019). *Intimate Japan: Ethnographies of closeness and conflict*. University of Hawai‘i Press.

¹⁰ Alexy & Cook, 2019, p. 7.

¹¹ Alexy & Cook, 2019, p. 7.

¹² Hertz, 2021, p. 5.

¹³ Ozawa-de Silva & Parsons, 2020, p. 615.

¹⁴ Meiu, G. P. (2017). *Ethno-erotic economies: Sexuality, money, and belonging in Kenya*. University of Chicago Press.

¹⁵ Allison, A. (2006). *Millennial monsters: Japanese toys and the global imagination*. University of California Press.

¹⁶ Ronald, R., & Alexy, A. (2011). *Home and family in Japan: Continuity and transformation*. Routledge.

enterprise society. This fetishization of academic records treated Japanese children as machines that would later be fed into an enterprise society fixated on profit production.¹⁷

Breakdown of Households

The rise of the post-war enterprise society would also contribute to the breakdown of traditional Japanese households. Japanese culture links one's familial connections with one's belonging to Japanese society as a whole.¹⁸ The traditional *ie* system was created during the Meiji era, emphasizing the centrality of an intergenerational family household to everyday life.¹⁹ Through the *ie* system, multiple generations of a family lived together on a single property, primary ownership of which would be continually passed down from father to his eldest son, providing Japanese citizens with a sense of belonging through tight kinship networks. However, in order to boost the housing market in post-war Japan, homes were transformed into commodities self-owned by a single nuclear family unit, fragmenting the intergenerational household.²⁰ This would be just one aspect of the increasing solitarism trend in Japan, where the focus of Japanese consumption pivoted from the household to the individual.²¹ Finding belonging through a single nuclear family home wasn't promised, either. The economic recession's employment cuts would undermine even the male breadwinner household formation established in the 1980s, resulting in a rise in single-person housing as Japanese citizens increasingly lacked the time and income to establish a family.²²

Societal Pressure

Certain societal expectations in Japan also contribute to loneliness and the necessity of the loneliness economy in Japan. Japanese society can be classified as a "vertical society"²³ emphasizing the importance of group cohesion over the individual. Japanese selfhood is heavily constructed based on the fear of social rejection and the judgment of others, leading to social pressures to conform in order to get along with others.²⁴ This group collectivity is emphasized through saving face culture, where respecting the established social hierarchy is valued more than individual opinions, and criticism can be taboo. For example, one Japanese boy described how when he had an older classmate he didn't like and confided to his friend about it, he lost his friend's respect because he spoke ill about someone else.²⁵ Even with friends, there are restrictions on what can and cannot be said. These societal expectations further contribute to the "intimate alienation"²⁶ of everyday life in Japan, where in familiar spaces shared with strangers and friends alike, people's true feelings remain anonymous and solitary.

Rental Person Businesses and the "Doing" of Intimacy

I characterize rental person services as businesses where a client with a social need seeks services from an actor who fulfills this social need in a non-sexual, platonic matter. I identified three major contributing factors to loneliness in Japan: social belonging

¹⁷ Allison, 2006.

¹⁸ Alexy & Cook, 2019.

¹⁹ Ronald & Alexy, 2011.

²⁰ Ronald & Alexy, 2011.

²¹ Allison, 2006.

²² Ronald & Alexy, 2011.

²³ Ozawa-de Silva, C. (2010). Shared death: self, sociality and internet group suicide in Japan. *Transcultural Psychiatry*, 47(3), 392-418. <https://doi.org/10.1177/1363461510370239>

²⁴ Ozawa-de Silva, 2010.

²⁵ Ozawa-de Silva, 2010.

²⁶ Allison, 2006, p. 71.

attached to Japanese work culture, the breakdown of households, and societal pressures caused by the vertical society and saving face culture. Rental person businesses' appeal in Japan comes from their ability to provide acts of intimacy without the complications that a non-commodified relationship would have. This section will explore specific services these rental person businesses provide, and how they provide temporary solutions for common Japanese social needs by offering acts of intimacy within clearly defined spatial and temporal boundaries. It also should be noted that some of these services may fulfill multiple social needs, depending on the client.

Rental Solutions for Overworking

Rental person businesses provide temporary solutions to overworking by providing single-household salarymen with small acts of everyday domesticity. Co-sleeping cuddle cafes (*soine-ya*) allow single-person household men and women to have a non-sexual sleeping partner.²⁷ Their motto is to offer “the simple and ultimate comfort of sleeping together with someone,” along with other services such as getting a back or head pat, or sleeping on the actor’s lap.²⁸ Actors and clients in these cuddle cafes remain strangers, with the expectation that few words will be exchanged,²⁹ but nonetheless, clients are provided the comfort of another human presence as they fall asleep. In businesses that specialize in long-term rental friend/family members, clients can receive daily texts from the actor, asking how their morning was or how their day went.³⁰ These texts must be requested by the clients themselves, emphasizing an act of intimacy separate from organic relationship negotiations. Nonetheless, these mundane check-ins provide clients the everyday support they may not have or be able to find organically due to their busy workdays. Both of these services fulfill the physical/emotional relationship transfer and privacy aspect of intimacy, without the need for long-term relationship negotiation.

Rental Solutions for the Breakdown of Households

Rental person businesses provide temporary solutions to the breakdown of households by providing a rental friend or family member to the client. The most publicized rental family agency, Family Romance LLC, offers clients the ability to rent out an actor for up to two years at a time, and clients will fill out an order form detailing how they want their rental friend or family member to act.³¹ Many clients often arrange for their rental friends or family members to come to their home on a scheduled basis, allowing these actors into their private spaces in order to fill these spaces and keep themselves company.³² This roleplay provides clients with their platonic intimate fantasies of eating dinner or watching TV with their rental family through a monetary transaction. Shoji Morimoto, the self-employed actor behind “hiring someone who does nothing,” describes how many of his outings with his fake-friend clients involved him not having to say much at all: many of his clients simply needed another human presence.³³

²⁷ Simonitch, S. (2012, October 3). Japan’s First Cuddle Cafe lets you sleep with a stranger. Japan Today. <https://japantoday.com/category/features/lifestyle/japans-first-cuddle-cafe-lets-you-sleep-with-a-stranger-for-y6000-an-hour>

²⁸ Simonitch, 2012.

²⁹ Simonitch, 2012.

³⁰ Morin, R. (2017, November 7). *How to hire fake friends and family*. The Atlantic. <https://www.theatlantic.com/family/archive/2017/11/paying-for-fake-friends-and-family/545060/>

³¹ Morin, 2017.

³² Imai, M. [Asian Boss]. (2019, January 5). *Behind Japan’s Fake Family Industry* [Video]. Youtube. <https://www.youtube.com/watch?v=UEhYMirs7fk&>

³³ Lantican, F. (2021, January 15). In Japan, you can rent a person to do nothing. VICE.

<https://www.vice.com/en/article/v7mp8m/japan-unique-jobs-rent-person-do-nothing-shoji-morimoto>

Rental Solutions for Societal Pressure

Rental person businesses provide temporary solutions to overwhelming societal pressure through allowing an avenue where clients can freely express themselves in ways that they wouldn't be able to ask of their own friends or family members. Japan's vertical society and saving face culture sometimes makes certain communications between close friends and family members more difficult than to a complete stranger. For example, *benriya* are self-described "part handymen, part psychologists"³⁴ who help people with mundane tasks that they are unable to do themselves or ask of others. Examples of *benriya* services are \$50 to remove a dead cockroach from a living room, or \$8,000 to eat out with someone and listen to their life story. Though these *benriya* distinguish themselves for having technical skills beyond their acting, they nonetheless are allowed into their clients' private spaces to perform emotional, physical, or informational exchanges for a price.

Furthermore, some *benriya* and some of Family Romance LLC's short-term services offer rental parents, guests, or bride/grooms for LGBT+ couples in Japan.³⁵ Due to the social stigma that LGBT+ people face in Japan, many LGBT+ couples would face social rejection if they come out of the closet, so the *benriya* and the actors take the place of parents, guests, or brides/grooms during both fake and real marriages.³⁶ The actor and bride/groom client often never meet again, but nonetheless, Ishii Yuichi, the CEO of Family Romance LLC, describes it as "a moment where it does seem very real."³⁷ Regardless of the role they play for these LGBT+ couples, the actors were allowed into an important life event in these individuals' lives, providing their clients the material and emotional support needed to live their authentic lives through their performance.

Rental Person Businesses and Bounded Authenticity

The acts of intimacy that the rental person businesses provide do temporarily fill the loneliness and desire for support that many of their clients possess. However, the commodified intimate acts that rental person businesses sell cannot replace other less commodified forms of intimate relationships. I return to the third aspect of intimacy mentioned in the second section. A genuine intimate relationship requires both the acts of intimacy (done in a realm constructed as 'private' by the individuals) and mutual negotiation of both parties' relationship bond.³⁸ This negotiation process is dynamic, always considering whether each other's company is mutually ideal or pleasurable, which is contrary to the relationship between actor and client in a rental person business. Rental person services have moments of mutual emotional understanding, but cannot fully replace other forms of intimacy since these intimate commodified exchanges have clearly defined "spatial and temporal boundaries."³⁹ In contrast, genuine intimate relationships are constantly negotiated and renegotiated, with the potential for hurt and disappointment.

The Actor

From the actor's perspective, there is a clearly defined monetary exchange. For example, when Morimoto is hired to 'do nothing' with someone, he applies a clear rental fee, transportation fee, and fee for any additional expenses, like food or drink.⁴⁰ Yuichi strictly follows the description given to him in the order form that his clients write for him,

³⁴ Magnier, M. (2003, October 12). *Japan's genuine jacks-of-all-trades*. <https://www.chicagotribune.com/news/ct-xpm-2003-10-12-0310120357-story.html>

³⁵ Magnier, 2003; Morin, 2017.

³⁶ Morin, 2017.

³⁷ Morin, 2017.

³⁸ Alexy & Cook, 2019.

³⁹ Meiu, 2017, p.98.

⁴⁰ Lantican, 2021.

since that is what the clients paid for, and the clients also must pay for any extra expenses for every session.⁴¹ This clearly defined monetary exchange binds the relationship to precisely the actions and time that the client ordered, preventing any confusions about the actor's intentions.

From the actor's perspective, this clearly defined monetary exchange reinforces the most essential component of their work: drawing a clearly defined emotional boundary. In Morimoto's business Twitter description, he states that he will only offer simple replies to his clients: "'I'm not a friend or acquaintance. I'm free of the bothersome things that accompany relationships, but can ease people's sense of loneliness.'" ⁴² Here, the "bothersome things" refers to the constant, mutual renegotiation of each other's relationships in a genuine intimate relationship, where one side must always worry how their words will affect their friend's perception of them. Morimoto sells his presence and small acts of intimacy in accompanying his clients during low points in their lives, but he makes it clear he cannot provide more than what the clients initially paid for.

Another example of this is Yuichi, who was hired by a mother to play as the fake father to her 12-year-old daughter, who doesn't know Yuichi was hired for that role.⁴³ His client wanted him "to be kind, very kind, he would never yell...[Yuichi] couldn't really find it in [himself] the kind of father that she wanted. So [he] watched a lot of movies about fathers, and cultivated [his persona]."⁴⁴ Once again, the actor is required to cultivate an emotional barrier between himself and the client, acknowledging that what he offers to his client isn't actually himself, but a constructed persona. Though he may perform platonic acts of intimacy for his fake daughter and fake wife, they are the actions that his client wanted, not his true self. There are only two paths this commodified relationship can take: the client can cancel the rental family contract, or the client can renew the rental family contract, and Yuichi must oblige. As Yuichi states himself, the actor and client must "[prepare] to sustain this lie"⁴⁵ for as long as the client is willing to continue the relationship.

The line between the performed intimacy and genuine intimacy does inevitably blur for the actors. Morimoto has been emotionally affected by some experiences with his clients, such as staying with a client who'd attempted suicide, or listening to a client confess about his affair.⁴⁶ However, Morimoto describes his relationship with these clients as more of a mutual therapy than an intimate relationship, where he can identify and work through some of his own issues through his clients' experiences.⁴⁷ Yuichi, though, carries a stronger fear of guilt due to the longer length of his rental contracts. Yuichi describes how he can feel when his client begins to grow too attached to him, but he can't let his real self appear to her, or else his self-consciousness would overwhelm him.⁴⁸ He can only let his real self appear again when he goes home and takes off his persona, where he sometimes feels guilty for having to pretend.⁴⁹ In both of these situations, though their clients do reach the actors on an emotional level, both actors decided it was inappropriate to reciprocate a deeper level of intimacy when their clients only knew their persona. Both actors quickly found strategies to separate themselves and stay within the confines of their bounded relationship.

⁴¹ Morin, 2017.

⁴² Lantican, 2021.

⁴³ Morin, 2017.

⁴⁴ Morin, 2017.

⁴⁵ Morin, 2017.

⁴⁶ Lantican, 2021.

⁴⁷ Gaijinhan (2019, May 2). *Rent a guy who does nothing*. Gaijinhan. <https://gaijinhan.com/2019/05/02/rent-a-guy-who-does-nothing/>

⁴⁸ Morin, 2017.

⁴⁹ Morin, 2017.

The Client

From the client's perspective, most clients are aware that these intimate acts only exist within the spatial and temporal boundaries established by their contract. These self-aware clients treat these commodified intimate acts as a form of therapy. Due to the vertical society and saving face culture, Japanese society establishes many social norms on what can and cannot be said to certain people.⁵⁰ The reluctance to communicate certain difficult things in one's intimate relationships both creates loneliness and a social need in individuals, yet simultaneously is a marker of genuine friendship. One rent-a-friend actor describes it as "'people can talk about their feelings without worrying what their real friends think,'"⁵¹ with that courtesy of not burdening your close friends and family distinguishing those relationships from their relationship with a hired stranger. Thus, a hired stranger can help individuals work out their own issues without fearing they might show a 'shameful,' vulnerable side. One example that exemplifies the therapy aspect of rental person services is a middle-aged client of Family Romance LLC, who rented a fake wife and daughter to keep him company since his own wife had died and he'd become estranged from his daughter.⁵² After experiencing the joy of having a family again, the client felt motivated to reach out and mend his relationship with his estranged daughter.⁵³ Through the commodified intimate acts purchased through the rental person businesses, some clients are able to wrangle with their own issues and are encouraged to pursue genuine intimate relationships again.

However, some clients do end up falling in love with the fantasy that they purchased. Rental person businesses draw in clients through the promise that their clients will purchase an ideal fantasy, not a real person. The rental order form is as specific as it gets: "hairstyle, glasses, beard, fashion sense... Do you like classy or casual? Is he affectionate or stern? When he arrives, should he be talkative, or tired from a long day at work?"⁵⁴ The mother that hired Yuichi, for example, specified that he should never yell because she used to have a violent, abusive husband in the past.⁵⁵ These actors deliver the ideal person the clients desire and all the emotional support they may want from it. However, a true, intimate loving relationship between actor and client cannot be established since the actor only acts within the confines of the order-form, and the client alone chooses how to negotiate the type of person she wants to have a rental bond with.

Hertz echoes these concerns about the one-sided nature of commodified intimacy through her discussion on companionship robots,⁵⁶ another industry within the loneliness economy. She describes companionship robots as the "ultimate rent-a-friend"⁵⁷ who is servile to their owner, always says yes, caters to their owner's wants, and doesn't take its owner out of their comfort zone. Purchasing a rental friend or family member is similar to this: it is easier to purchase five hours with your ideal person than it is to build a relationship with someone else, with the potential for it to end in disappointment.⁵⁸ The actor and the client can have emotional experiences together that pierce through their negotiated personas, but within the time frame the client has with the actor, the actor's persona is mainly servile to the client's wishes. Hertz's point demonstrates why purchasing commodified intimate acts alone cannot make up intimacy. The ability for both sides of a

⁵⁰ Morin, 2017.

⁵¹ Nordeman, L. (2016, February 19). *The incredibly true story of renting a friend in Tokyo*. Afar Magazine. <https://www.afar.com/magazine/the-incredibly-true-story-of-renting-a-friend-in-tokyo>

⁵² Imai, 2019.

⁵³ Imai, 2019.

⁵⁴ Morin, 2017.

⁵⁵ Morin, 2017.

⁵⁶ Hertz, 2021.

⁵⁷ Hertz, 2021, p. 199.

⁵⁸ Morin, 2017.

relationship to challenge and help one another grow is why the ability to negotiate relationship bonds is essential to true intimacy. Thus, Yuichi must frequently remind his clients that they are “falling in love with an order form” and not a real person.⁵⁹

Conclusion

Loneliness is a severe social problem in Japan, along with the rest of the world. Rental person services within the loneliness economy offer a temporary solution to different social needs. However, even though both actor and client do have moments of genuine emotional experiences and healing with one another, these commodified acts of intimacy cannot be a replacement for genuine intimate relationships. Intimacy is the greatest cure for loneliness, but establishing true intimacy, not just purchasing intimate acts, is difficult and taxing. Intimate acts can be commodified, but they are only temporary fixes without the long-term, mutual negotiation of relationship bonds that exist in genuine intimate relationships. Nonetheless, wrangling with profit-driven work culture, the breakdown of traditional family structures, and overwhelming societal expectations is an issue far greater than any everyday salaryman or salarywoman has the time or ability to tackle. Even though rental person businesses cannot replace genuine intimate relationships, they nonetheless fulfill a desperate social need and represent our ability to care for people who will remain complete strangers to us. Hopefully, rental person businesses are the first step towards a society without loneliness.

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The Physics of Cancer: Tensile and Fluid Forces

Ayesha Sajid

Background

Over the years, oncology research has grown to integrate a mechanistic approach with the conventional biological approach with the goal of identifying and treating cancer more efficiently. Physicians theorize the origins of cancer with competing models and examine early methods of cancer identification. One of the earliest models was posited almost 2400 years ago by the “father of medicine,” Hippocrates, who defined optimal health as the balance of a person's four “humors.” An imbalance, characterized by an excess of a humor (fluid), was considered causally related to tumor growth. This model remained unchallenged for many centuries.¹ Nevertheless, although left formally unacknowledged for centuries, cancer was likely embedded in *all living organisms* shortly after the world came to be based on the ever-present possibility of erroneous genetic transfer. Unregulated cell division is known to form masses even in plants (though the tumor is always benign/unable to metastasize due to the rigidity of cell walls: meaning, when calculating tensile stress, the force per area value of the surrounding matrix is comparatively higher than that in human beings or animals, thus being less “elastic” to adjust for the growth). Consequently, due to the tremendous amount of time cancer has had to evolve into distinct forms, a universal “cure” is yet to exist. Presently, doctors are most capable of treating cancer in its earliest stages, ranging from a ~70% 5-year survival rate for those diagnosed with stage 1 cranial meningioma, to a ~99% 5-year survival rate for stage 1 melanoma.^{2,3} These probabilities drop drastically in cases where diagnoses are overdue. According to the National Cancer Intelligence Network, a quarter to one third of patients are likely to only be diagnosed after they reach advanced stages of cancer; 62% of tumors related to the central nervous system and over half of pancreatic and liver cancers are missed until emergency admission.⁴ Unsurprisingly, when a tumor develops in the body for an extended period of time, it is more able to metastasize (spread). With the aforementioned knowledge of present limitations, physicists are able to solve some of the difficulties oncologists face by: a) identifying tumorigenesis efficiently through measures of elasticity, and b) treating the malignant nature of tumors by applying known rules of tensile and fluid forces.

Tensile Force

In physics, tensile elasticity (represented by the Young's modulus) is used to describe the tendency of a material to deform on the axis perpendicular to which a force is applied.⁵ Simply, when force is applied to an object, the object compresses (or stretches) in response. The Young's modulus represents the ability of a tumor to withstand change facing tension or compression. Numerically, it is evaluated as the ratio of stress and strain: stress being

¹ Carlos M. Galmarini, “Lessons from Hippocrates: Time to Change the Cancer Paradigm,” *International Journal of Chronic Diseases* 2020 (August 2020): pp. 1-14, <https://doi.org/10.1155/2020/4715426>.

² “Survival: Brain and Spinal Cord Tumours,” Cancer Research UK, November 5, 2019, <https://www.cancerresearchuk.org/about-cancer/brain-tumours/survival>.

³ “Melanoma Survival Rates: Melanoma Survival Statistics,” American Cancer Society, n.d., <https://www.cancer.org/cancer/melanoma-skin-cancer/detection-diagnosis-staging/survival-rates-for-melanoma-skin-cancer-by-stage.html>.

⁴ “Melanoma - Statistics,” Cancer, n.d., <https://www.cancer.net/cancer-types/melanoma/statistics>.

⁵ Paul Peter Urone et al., *College Physics* (Houston, TX, 2016).

the amount of force applied per area, strain is defined as the extent of the tumor's change in size. To quantitatively characterize the change in elasticity of a tumor, the Young's modulus measures the deformation of the growth. A low Young's Modulus would indicate that a material is stretchy and elastic whereas a higher Young's Modulus would imply the opposite. Because the tumor and its surrounding tissue possess elastic properties, it is expected that the surrounding tissue will return to its original shape once relieved of pressure in cases of minimal deformation. However, when solid stress (non-fluid mechanical forces exerted by the tumor) accumulates due to excessive proliferation, the surrounding tissue resisting expansion can cross its elastic limit or "threshold" (the minimum amount of stress to cause a permanent change in shape) and cause a plastic deformation. Referred to as residual stress, the surrounding tissue behaves as plastic does under stress and is unable to elastically recover even after the carcinoma is excised.^{6,7}

Mechanical properties can help distinguish cancerous cells from noncancerous cells and in turn simplify the identification process. Increased tissue stiffness, an accepted hallmark of cancerous tumors, directly relates to a loss of tumor elasticity. This is due to the continuous structural rearrangement of collagen in the extracellular matrix (surrounding area) as the mass expands. Collagen is not to be underestimated: in fact, the tensile/compressive strength of bone is attributed to the fibrous protein collagen, illustrating the level of strength it can achieve. The amount of collagen present in the tumor corresponds directly to the stiffness of the tumor while also increasing the risk of lymph node metastasis. If cancer metastasis is left unchecked, it eventually causes systemic failure and results in death. Collagen remodeling in tissue not only causes an increase in tensile strength of the tumor (hence reducing elasticity) but also encourages cell migration towards the cancer. Researchers hypothesize that this type of cell migration could be explained by the linearity of collagen which allows cells to move unusually quickly; others attribute increased cell migration to a disturbance in chemical gradient.⁸

Taking an algorithmic approach towards identifying tumorigenesis based on stages of elasticity as well as graphically predicting the rate of progression and severity of any specific tumor over time through precise measurements made by non-invasive imaging could help optimize survival rates in patients. If the growth is caught early enough, the linear model of Hooke's Law (which states that for minute deformations, displacement is proportional to force applied) could identify each vessel and what percentage of said vessel could potentially face obstruction.

Fluid Force

As pressure increases from the tumor growth and the increase of solid stress, another force that increases is fluid pressure. The physical force the tumor applies can compress blood vessels, limiting necessary perfusion and medication delivery. Sufficient vessel compression can induce hypoxia and create a pocketed acidic environment for cancer to thrive in (cancer is averse to oxygen, producing energy independently through glycolysis, and low pH environments are more conducive to cancer growth). These conditions optimize metastatic potential while compromising any positive effects a drug could have due to the cancerous area being minimally accessible.⁹ Limited vessel access also prevents

⁶ Hadi T Nia et al., "Quantifying Solid Stress and Elastic Energy from Excised or in Situ Tumors," *Nature Protocols* 13, no. 5 (2018): pp. 1091-1105, <https://doi.org/10.1038/nprot.2018.020>.

⁷ Hadi T. Nia et al., "Solid Stress and Elastic Energy as Measures of Tumour Mechanopathology," *Nature Biomedical Engineering* 1, no. 1 (2016), <https://doi.org/10.1038/s41551-016-0004>.

⁸ Min Fang et al., "Collagen as a Double-Edged Sword in Tumor Progression," *Tumor Biology* 35, no. 4 (2013): pp. 2871-2882, <https://doi.org/10.1007/s13277-013-1511-7>.

⁹ E Sevick and R Jain, "Viscous Resistance to Blood Flow in Solid Tumors: Effect of Hematocrit on Intratumor Blood Viscosity," in *Cancer Research*, 13th ed., vol. 49, 1989, pp. 3513-3519.

the body's natural immune system from taking oppository action against cancerous cells. Heterogeneous distribution of fluids inside and outside the tumor also undermines any attempt at uniformity of treatment. Because of this imbalance, a steep pressure gradient becomes prevalent, causing the tumor to leak cells into the surrounding tissue (and creating yet another outlet for metastasis).¹⁰

According to Poiseuille's Law, resistance to blood flow within a vessel depends on vessel radius, vessel length, and fluid (blood) viscosity. The main point to note from Poiseuille's equation is that resistance is inversely proportional to the radius of the vessel to the fourth power. This indicates that a relatively small change in radius (caused by the solid stress) causes large changes in resistance. Unless the cancerous mass has grown to entirely block off circulation, the law of conservation of mass requires flow through each segment of the circulatory system to be equal. Additionally, because the velocity of blood flow is related inversely to the cross sectional area of a given vessel, regions where diffusion occurs are very large in radius as to lower velocity and optimize transfer of oxygen, nutrients, etc. As the cross sectional area (or radius) is obstructed, intravenous pressure increases (blood flows with a greater force). These laws combined suggest that blood pressure would noticeably increase as a vessel's radius is reduced.^{11,12} According to the Law of LaPlace, arteries and veins with thicker walls are able to withstand greater amounts of pressure as tension exerted on walls from a constant amount of blood varies inversely based on wall thickness.¹³ Vessels, usually thin walled, are less equipped to resist blood travelling at a high velocity with great pressure and are therefore more prone to leakage, creating an ideal situation for cancerous cells to travel. This may explain why a portion of individuals diagnosed with pulmonary or cardiac hypertension are concurrently experiencing high blood pressure as a symptom of carcinomic growth.¹⁴

A Step-by-Step Mission

In essence, cancer cells follow a specific sequence of events: 1) a tumor forms and generates forces by rearranging collagen to increase tumor stiffness, 2) tumor deformation due to compressive stress exerts pressure on surrounding vessels and creates a means for cancerous cells to travel, 3) cancer cells bind to a blood vessel wall to exit the circulatory system through either physical occlusion or cell adhesion, 4) cancer cells metastasize and are able to introduce a high Young's Modulus to a new location in the body. To elaborate: physical occlusion occurs when a circulating tumor enters a vessel which is smaller in diameter than the tumor itself. Thus, it is forced to stop there as it cannot proceed. Cell adhesion requires the tumor to form a bond with a blood vessel wall. The collision frequency of the tumor multiplied by time equates to the probability of the cell adhering to the vessel. Because the tumor is undergoing both rotational and translational motion, it has both translational and angular velocity. Because the translational velocity of a cell is always

¹⁰ Denis Wirtz, Konstantinos Konstantopoulos, and Peter C. Searson, "The Physics of Cancer: The Role of Physical Interactions and Mechanical Forces in Metastasis," *Nature Reviews Cancer* 11, no. 7 (2011): pp. 512-522, <https://doi.org/10.1038/nrc3080>.

¹¹ Wirtz, et. al., "The Physics of Cancer: The Role of Physical Interactions and Mechanical Forces in Metastasis."
¹² E Sevcik and R Jain, "Viscous Resistance to Blood Flow in Solid Tumors: Effect of Hematocrit on Intratumor Blood Viscosity."

¹³ Max Valentinuzzi and Alberto Kohen, "Laplace's Law: What It Is about, Where It Comes from, and How It Is Often Applied in Physiology [Retrospectroscope]," *IEEE Pulse* 2, no. 4 (2011): pp. 74-84, <https://doi.org/10.1109/mpul.2011.942054>.

¹⁴ Soni Savai Pullamsetti et al., "Lung Cancer-Associated Pulmonary Hypertension: Role of Microenvironmental Inflammation Based on Tumor Cell-Immune Cell Cross-Talk," *Science Translational Medicine* 9, no. 416 (2017), <https://doi.org/10.1126/scitranslmed.aai9048>.

greater than the angular velocity (due to fluid flow), the tumor slips against the tumor wall, increasing the likelihood of adhesion due to more frequent contact.^{15,16}

Some research points to the conclusion that compressive stress (step 2) triggers not only cancer migration but also the formation of a group of leader cells which are able to enhance the probability of adhesion to occur. After experimenting with varying levels of compressive stress, it was concluded that moderate continuous stress activated an increase in cell motility (movement) whereas extreme stress caused cell death. It was also suggested that cells in the periphery of the tumor led cell migration.^{17, 18, 19} It can be rationalized that this occurs due to the proximity and exposure of peripheral cancer cells to the stresses in the outermost layer of the tumor.

The Benefits of Incorporating Physics in Oncology

Using the laws of physics, tumor identification no longer has to be invasive. With a 3D imaging camera and suitable technology (e.g. AFM), the elasticity of any given mass of tissue from any angle should be calculated from the force perpendicular to it. AFM, also known as atomic force microscopy, highlights the importance of identifying mechanical properties distinguishing deformed cells from typical cells. AFM not only identifies cancerous tumors, it identifies a significant increase in deformability (using the Young's Modulus) when a tumor has metastasized, leaving minimal room for overlooking the departure of a small mass.²⁰

The technological/mechanical approach would avoid an invasive biopsy (e.g. obtaining a slice of tissue to test for cancer) and possible misdiagnosis by simplifying the stages of cancer on the basis of elasticity, a property only cancer exhibits. This provides a consistent, numerical characterization rather than the present system which provides an estimate of how much the cancer has spread. In fact, with the present system, small metastases can remain in the body undetected for many years; using elasticity progression as the criteria for all at-risk tissue give a more precise idea of the situation at hand. Pediatric oncology would also benefit from employing a less invasive technique in monitoring tumor progression.

Additionally, analyzing fluid tensions could indicate the urgency of treatment, with pressure on vital arteries/veins being of optimal concern. When proliferation goes unchecked, the primary focus should be to reopen collapsed vessels so as to maintain blood flow and drug delivery. The option of inserting a stent to open up a vessel affected by residual stress or one that is under pressure of a dormant tumor in order to reduce fluid forces can also be considered. By inserting a stent, the radius of the vessel would increase, causing pressure to decrease. The dilation of the vessels using angiotensin inhibitors should have a similar effect in improving medicinal efficacy.

Lastly, by recognizing the relationship between cancer motility and compressive stress from the lens of physics in addition to biology, cancer metastasis can be better controlled. Because most deaths caused by cancer are a result of the spread/movement of cancer, alleviating compressive stress from tumors early in development would drastically improve survival rate.

¹⁵ Wirtz, et. al., "The Physics of Cancer: The Role of Physical Interactions and Mechanical Forces in Metastasis."

¹⁶ Paul Peter Urone et al., *College Physics*

¹⁷ Wirtz, et. al., "The Physics of Cancer: The Role of Physical Interactions and Mechanical Forces in Metastasis."

¹⁸ Hadi T Nia et al., "Quantifying Solid Stress and Elastic Energy from Excised or in Situ Tumors."

¹⁹ Hadi T. Nia et al., "Solid Stress and Elastic Energy as Measures of Tumour Mechanopathology."

²⁰ Małgorzata Lekka, "Discrimination between Normal and Cancerous Cells Using AFM," *BioNanoScience* 6, no. 1 (2016): pp. 65-80, <https://doi.org/10.1007/s12668-016-0191-3>.

Opposition

A 2017 article by a researcher named Dr. Alibert opposed all others with a controversial view: individual tumor cells are softer than normal cells and cellular rigidity decreases with the progression of cancer. In the article, mechanical differences between individual cancerous and noncancerous cells were analyzed rather than the whole tumor or tissue itself. Rather than attributing the low elasticity to the stiffening of the tumor itself, he attributes it to the stroma (surrounding interstitial space). He also concludes that tumor deformability is unnecessary to the metastasis of cancer; rather, tumors are just as able to spread by invading local tissues or through lymphatic circulation (compared to blood circulation). Conducting all the same tests that researchers had conducted on masses of cancer cells, he arrived at paradoxical results: individual cells gravitated towards a lower Young's Modulus than their healthy counterparts.²¹

This conclusion raises questions in regards to individual cancer cell behavior and the mechanical benefit that may come from soft individual cancer cells within rigid tumors. For example, it would be logical to hypothesize that it may be easier for softer cells to diffuse and travel in order to spread to areas a larger, rigid tumor would not be able to bind to; however, this would oppose the conclusion that cells migrate using peripheral cells following a "lead" cell.^{22, 23} Though the purpose of cell softening needs further investigation, this variation may provide an additional element as a novel marker in the prognosis or diagnosis of cancer. In other words, whole tumor rigidity need not be the sole physical parameter that could be evaluated in identifying cancer and its progression. Additionally, monitoring changing levels of tensile heterogeneity within a tumor may be key to limiting mechanical metastasis; by identifying which ratio of softened and rigid cells is most prone to spreading, theoretically, targeted tumor cells could be chemically influenced and shift to a less harmful physical conformation.

Prospective Solutions

Re-adjusting the collagen matrix within or around the tumor could potentially relieve some of the effects of a cancerous mass. Although collagen-digesting medications have been tested on mice with some degree of success, it has been noted that, in humans, cancer develops with the original collagen in the human body and later triggers a more aggressive gene coding for a more dense collagen. This would suggest that such medications would result in a cycle of researchers fighting against the ever-evolving cancer. Additionally, dissolving collagen is an impractical solution for osteosarcomas where collagen is necessary for normal function. Not only that, collagen is the most abundant protein in the body, meaning any negative adjustments to its natural structure would cause major side effects unless the treatments was localized towards a specific area in which no skeletal structures were affected.²⁴

In contrast to dissolving what enables the cancer (collagen), a less dramatic approach could be undertaken by focusing on minimizing the symptoms of cancer and limiting its growth rather than risking damage to an entire area of tissue. By inducing the tumor into a dormant state and alleviating tumor-caused pressure from vessels under stress using stents or altering the vessel route (as a cardiologist would do in a coronary artery bypass graft),

²¹ Charlotte Alibert, Bruno Goud, and Jean-Baptiste Manneville, "Are Cancer Cells Really Softer than Normal Cells?" *Biology of the Cell* 109, no. 5 (June 2017): pp. 167-189, <https://doi.org/10.1111/boc.201600078>.

²² Matgorzata Lekka, "Discrimination between Normal and Cancerous Cells Using AFM."

²³ Charlotte Alibert, Bruno Goud, and Jean-Baptiste Manneville, "Are Cancer Cells Really Softer than Normal Cells?"

²⁴ Min Fang et al., "Collagen as a Double-Edged Sword in Tumor Progression."

it may be possible to live with and maintain the cancerous growth throughout life rather than living a life with the struggles and pains of chemotherapy, radiation, and medications. Another possibility would be to calculate the optimal wall thickness based on the Law of LaPlace and medicate accordingly.²⁵ Hence, if a vessel wall is able to withstand high blood pressure and keep leakages at bay (in turn cutting off the route of metastasizing cancer cells), it could provide a temporary solution until an alternative option becomes available. This could be a viable option for those with interfering conditions such as heart disease, lung failure, etc, where chemotherapy or radiation would be counterintuitive (e.g. the cancer would be cured but treatment would weaken another structure affecting the second condition).

Though slightly far-fetched, intratumor blood viscosity has also been a recent topic of research with primitive conclusions indicating that cancerous blood has a comparatively higher viscosity to normal blood cells.²⁶ This could provide insight on a) allowing a biomarker to attach to cancerous blood (e.g. a drug could be designed to attach to a certain viscosity of fluid) or b) isolating the viscous blood within the tumor by closing off its entrance into the bloodstream and thinning the blood that is unaffected in order to keep it from having a high resistance rate. If the blood is just barely viscous enough to be classified as a non-Newtonian fluid (though it is unlikely), its viscosity can be calculated using a variation of Newton's 2nd law which states that the shear stress (force/area, simply: it is the friction between fluid particles) of a fluid is directly proportional to the force applied and inversely proportional to the viscosity. A netting could be designed and inserted at the junction where the blood vessel and cancerous cells meet in order to filter out the blood too viscous to merge with the healthy cells.

Conclusion

It is evident that both biology and physics play vital roles in explaining the mechanisms cancer employs to achieve notoriety as the world's #1 killer. Understanding the role of tensile and fluid forces is pivotal in developing a technique to more efficiently diagnose cancer, to disable cancer from finding a way to leak into the blood, and to prevent the carcinomic tumor from expanding and exerting more pressure on surrounding tissue. Although numerous challenges remain in finding a "cure" for cancer, a collaborative understanding of both physics and oncology may open the door to successful new methods of cancer identification and treatment in the near future.

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²⁵ Max Valentinuzzi and Alberto Kohen, "Laplace's Law: What It Is about, Where It Comes from, and How It Is Often Applied in Physiology [Retrospectroscope]."

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Reformation Propaganda and the Common Man

Carson Schlittler

Introduction

The Protestant Reformation gained an impressive amount of momentum following Martin Luther's initial release of his Ninety-Five Theses in 1517, resulting in significant pockets of Protestant populations throughout Central, Northern, and Western Europe by the end of the century. One of the most oft-cited explanations for the rapid dissemination of Reformation ideas is the accelerated communication enabled by the printing press. While it is undeniable that reformers like Luther took full advantage of this new technology in order to advance their cause, this explanation does need to address the issue of how Reformation ideas reached a largely illiterate population. The printing press still provides an avenue to reach the common man (a term which can and does include peasants, farmers, laborers, and artisans), just not necessarily through text—instead, through images. This paper investigates the relationship between the so-called “Common Man” and Reformation propaganda within the Holy Roman Empire from the start of the Reformation to the mid-sixteenth century. This paper will examine the “Common Man” as both the subject of Reformation propaganda and as an intended audience for the images.

Print and the Reformation

In her chapter on Martin Luther in *The Oxford Illustrated History of the Reformation*, Lyndal Roper argues that the main reason Luther was able to succeed where previous reformers had failed was due to the existence of the printing press, which allowed for an unprecedented level of information dissemination.¹ Roper is far from the only scholar to argue for the importance of press; in *Commerce and Print in the Early Reformation*, John D. Fudge demonstrates how the new information technology combined with pre-existing commercial ties enabled the rapid spread of Protestant thought throughout Europe. Early German reformers relied heavily on the press to reach the public, with three reformers producing approximately a quarter of the four hundred books published in Low German in the 1520s.² Ursula Meyer goes so far as to assert that “political art as Massenkunst (mass art) originated in Germany during the Reformation,” with reformers taking full advantage of the various print mediums in order to pump out propaganda. Reformers produced not only books but also cheaper, more accessible works like pamphlets and broadsheets to spread their message as far as possible, resulting in the image of “die fliegenden Blätter der Reformation” (the flying leaves of the Reformation).³

Early reformers certainly wanted their beliefs to become a mass movement and attempted to achieve this, at least in part, through their mass production of print works. This desire to reach the masses, including the lower classes—the “Common Man,” that is—makes sense in terms of Protestant reforms, which originated in critiques of the material excesses of the Church and centered around making Christianity fully accessible

¹ Lyndal Roper, “Martin Luther,” in *The Oxford Illustrated History of the Reformation*, edited by Peter Marshall, (Oxford: Oxford University Press, 2015), 53–54.

² John D. Fudge, “Commerce, Books, and Decrees,” in *Commerce and Print in the Early Reformation*, (Leiden: Brill, 2007), 28.

³ Ursula Meyer, “Protestant Broadsheets,” *The Print Collector's Newsletter* 5, no. 3 (1974): 60, accessed March 22, 2020, www.jstor.org/stable/44129723.

to common people through reforms like preaching in the vernacular and belief in the priesthood of all believers. However, there is a limitation on the ability of text to propagate Reformation ideas, namely the historical reality that, at best, only 30 percent of German-speakers were literate.⁴ The press again helped address this issue with its ability to quickly reproduce images. While not the only method of spreading the Reformation to the common man, Protestant images are a legitimate avenue by which to convey Protestant ideas in a low literacy society, and an avenue that historians still have access to today.

The Place of the Common Man in the Reformation

The Reformation went beyond simply criticizing the material excess of the Catholic Church in their attempts to appeal to the lower classes. Werner Packull argues that early German reformers, in particular, rehabilitated the image of the *gemeinem Mann*, the Common Man. Before the sixteenth century, peasants were often depicted as both physically and morally disgusting, a stereotype that found support in some interpretations of biblical stories, such as God forcing Adam and Eve to do hard labor as punishment and Ham, a son of Noah, being cursed to toil in the fields.⁵ By contrast, early reformers consistently portrayed peasants in a positive light, with Martin Luther himself defending physical labor as good and moral.⁶

This shift in views of the peasantry manifested in early Reformation propaganda, with numerous pamphlets and texts printed between 1520 and 1525 incorporating the figure of the Common Man as a cornerstone of the “true” Church, the Protestant church. Many of these featured the “evangelical peasant,” a peasant who would engage in dialogue with opponents of the Reformation, simply and eloquently defending the faith. 1521 saw the publication of *Karsthans*, a text which depicted a dialogue between the peasant Karsthans and his son with both prominent reformers, like Luther, and opponents of reform. *Karsthans* was immensely popular, with ten editions released in a handful of months, and cemented the image of the Common Man as the defender of the Reformation; the *Karst* and *Flegel* (the two-pronged hoe and the threshing flail of the peasant) mentioned in the *Karsthans* became symbols of popular support for the Reformation.⁷



Figure 1. An image from the title page of *Karsthans*. Karsthans stands at the far right, holding his *flegel*. Public Domain.

⁴ Andrew Pettegree, *Reformation and the Culture of Persuasion*, (Cambridge: Cambridge University Press, 2009), 160.

⁵ Werner Packull, "The Image of the "Common Man" in the Early Pamphlets of the Reformation (1520-1525)," *Historical Reflections / Réflexions Historiques* 12, no. 2 (1985): 255, accessed March 22, 2020, www.jstor.org/stable/41298856.

⁶ Packull, "The Image of the "Common Man,"" 257.

⁷ Packull, "The Image of the "Common Man,"" 258.

In fact, such dialogues led by a Protestant common man, called *Dialogflugschriften*, were the most common type of German pamphlets published between 1518 and 1526.⁸ Hans Sachs, a major Protestant writer based in Nuremberg, crafted several of these *Dialogflugschriften* such as his *Disputation Between a Canon and a Shoemaker*, of which eleven editions appeared in 1524, and *A Conversation Concerning the False Good Works of the Clergy*, of which seven editions appeared in 1524.⁹ Both of these dialogues were accompanied by images which emphasized the figure of the Common Man, contrasting his clothing and belongings with that of the monastics and making him physically dominate the image in order to visually indicate who has the upper hand in the dialogue.¹⁰ *A Conversation Concerning the False Good Works of the Clergy* also includes a baker, Peter, who expresses the concerns of the peasantry as he and the middle class cobbler, Hans, debate a monk.¹¹

Hans Sachs made it a point to prioritize the peasantry. Notably, Sachs intended for his poem *The Nightingale of Wittenberg* to educate the peasantry about the truth of the Reformation.¹² While it may be easy to imagine middle class reformers crafting these written works in order to talk down to the peasantry, it is evident from his life and works that Sachs was genuinely invested in the concerns of the lower classes, even writing *Tyranny, Usury, and Hypocrisy* in 1525, a work which shows the common man being tortured by both the Church and wealthy laymen, a clearly radical statement in the wake of the German Peasants Revolt.¹³ Sachs' pro-peasantry credentials are further reinforced through his frequent collaborations with Sebald Beham; Beham was briefly exiled from Nuremberg in 1525 for his Lutheran beliefs and continued depicting peasant life in a positive light long after the subject fell out of popularity following the Peasants Revolt.¹⁴ Beham's works consistently elevate the common man as a true believer, something perhaps best seen in his *Allegory on Monasticism*, in which a poor man force feeds a Bible to a monk.¹⁵



Figure 2. *Allegory on Monasticism* by Sebald Beham. Public Domain.

⁸ Fudge, "Commerce, Books, and Decrees," 28.

⁹ Rosemarie Bergmann, "Hans Sachs Illustrated: Pamphlets and Broadsheets in the Service of the Reformation," *RACAR: Revue D'art Canadienne / Canadian Art Review* 17, no. 1 (1990): 11-12, accessed March 22, 2020, www.jstor.org/stable/42630441.

¹⁰ Bergmann, "Hans Sachs Illustrated," 12.

¹¹ Bergmann, "Hans Sachs Illustrated," 12.

¹² Bergmann, "Hans Sachs Illustrated," 11.

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¹⁴ Alison Stewart, "Paper Festivals and Popular Entertainment the Kermis Woodcuts of Sebald Beham in Reformation Nuremberg," *The Sixteenth Century Journal* 24, no. 2 (1993): 309, accessed March 23, 2020, <https://www.jstor.org/stable/2541952>.

¹⁵ Sebald Beham, *Allegory on Monasticism*, 1521, single-leaf woodcut (Photo: Munich, Staatliche Grapische Sammlungen), in "Hans Sachs Illustrated: Pamphlets and Broadsheets in the Service of the Reformation" by Rosemarie Bergmann, Figure 3. *RACAR: Revue D'art Canadienne / Canadian Art Review* 17, no. 1 (1990): 89.

Collaborations between Sachs and Beham—and later Erhard Schön, Sachs' primary illustrator after Beham was exiled—resulted in some of the most compelling depictions of the common man's centrality to the Reformation. Besides for the aforementioned works, Sachs and Schön also created *The House of the Wise and the House of the Foolish Man*, which depicts a peasant man defending the House of the Wise (Protestantism) from various Catholic aggressors.¹⁶ Beham portrays a similar moment in *A New Poem Concerning the Complaints of Clergy and Some Trades against Luther*, which shows a peasant man at the front of a gathering of Protestants, intent on defending Martin Luther and the other reformers from the opposing Catholics with his flail, the *Flegel*, a signature tool of the Protestant Common Man.¹⁷ *Christ's Sheepfold*, a copy of a Beham work, shows a peasant man and his wife as the first to enter the sheepfold, with Christ inviting them from the doorway.¹⁸ All of these works depict the common man as an essential part of the Reformation, the primary defender of the faith whose humble belonging and righteousness bearing is in direct contrast to the decadent and corrupt Catholic officials.

Reformation Images in Context

This paper has so far focused on the common man as a subject of Protestant images. While this is an important part of early Reformation ideas and propaganda, this type of analysis emphasizes the beliefs of reformers about the position of the common man within the Reformation, and such glowing depictions of the “evangelical peasant” almost entirely disappeared following the German Peasants Revolt. The following section will switch to focus on the common man as audience, or viewer, of Reformation images—and an intended audience at that, one which can be influenced by well-crafted rhetoric. Before examining these rhetorical strategies, it may be useful to understand the context in which the common man could come into contact with Reformation works. Some scholars have argued that, since pamphlets and broadsheets from the sixteenth century typically include both image(s) and text, these works were primarily aimed at a wealthy, literate audience.¹⁹ One such scholar, Andrew Pettegree, argues that historians have overestimated the impact of mass print in spreading the Reformation to the illiterate, even suggesting that Reformation visuals are too obtuse to be understood on their own.²⁰ Addressing these criticisms of the historical literature provides an opportunity to discuss the ways in which the common people came into contact with propaganda.

First, Pettegree's claim about the understandability of Reformation imagery seems unlikely given the concerted efforts of the Catholic Church to encourage visual literacy among adherents for the purposes of religious understanding.²¹ This general visual literacy is further supported by two surviving printed peasant calendars from the mid-sixteenth century, which explicitly state that they are intended for use by the illiterate.²² As for the issue of the inclusion of both text and visuals in pamphlets and broadsheets, the consensus among scholars is that these works were aimed at both literate and illiterate;²³ authors and

¹⁶ Erhard Schön, *The House of the Wise and the House of the Foolish Man*, 1524, broadsheet (Photo: Berlin, Staatsbibliothek), in “Hans Sachs Illustrated” by Rosemarie Bergmann, 90, Figure 5.

¹⁷ Sebald Beham, *A New Poem Concerning the Complaints of Clergy and Some Trades against Luther*, 1524, broadsheet (Photo: Nuremberg, Germanisches Nationalmuseum), in “Hans Sachs Illustrated” by Rosemarie Bergmann, 90, Figure 7.

¹⁸ Copy after Sebald Beham, *Christ's Sheepfold*, 1524, broadsheet (Photo: Berlin, Staatsbibliothek), in “Hans Sachs Illustrated” by Rosemarie Bergmann, 90, Figure 6.

¹⁹ Stewart, “Paper Festivals,” 303-305.

²⁰ Pettegree, *Culture of Persuasion*, 105-106.

²¹ Catherine R. Osborne, “Visual Literacy and Catholic Studies,” in *The Catholic Studies Reader*, edited by James T. Fisher and Margaret M. McGuinness, 235-36. New York: Fordham University Press, 2011, accessed May 7, 2020. doi:10.2307/j.ctt13wzvt6.15.

²² Stewart, “Paper Festivals,” 340.

²³ Meyer, “Protestant Broadsheets,” 60.

printers included striking images alongside textual content to add to the commercial viability of a work by broadening the potential audience and making the work more appealing on the whole.²⁴ In terms of composition, the image elaborates on the text just as often as the text elaborates on the image—in most cases, there is mutual enhancement between the two mediums. Another common criticism is that print works were not affordable, which Pettegree acknowledges is not supported by the evidence—the cheapest pamphlets cost the equivalent of what an artisan (i.e. a common man) would earn for three to four hours of work.²⁵ Even if a common man did not want to purchase a broadsheet for himself, he was still likely to encounter religious-centered broadsheets in his daily environment. Numerous scholars have pointed out that viewership was typically a more public and communal experience in the sixteenth century. There are many reported instances of broadsheets being posted on public walls²⁶ or in churches for general entertainment,²⁷ as well as in other public spaces like taverns or inns.²⁸

Rhetorical Strategies in Reformation Images

Reformation propagandists utilized several rhetorical strategies in order to convey their positions and appeal to the common man. The first and most innovative rhetorical strategy was that of antithesis, established by Lucas Cranach in his *Passional Christi und Antichristi*, which illustrates a Luther pamphlet.²⁹ *Passional Christi und Antichristi* consists of thirteen pairs of woodcuts, with each pair directly contrasting the virtuous, godly actions of Christ on the left side with the sinful, corrupt actions of the pope on the right side. For example, the first pair depicts Christ holding audience with a large group of followers, on the one hand, and the pope roping himself off from the people, with guards and artillery in place to ensure no one can get to him. The last pair of the *Passional* hammers home the point, juxtaposing Christ's ascension to Heaven with the pope's descension into Hell.³⁰ In this instance, the utilization of antithesis conveys both Protestant critiques of the Catholic Church and beliefs about what constitutes truly virtuous behavior. Cranach further codified Protestant symbols of antithesis through his other works, such as *Law and Gospel*. Since *Law and Gospel* was a painting, Cranach could not utilize the two-sided medium of the book to naturally portray antithesis, so he instead incorporated a tree into the center of the composition to act as the visual divider. One side of the tree is bare, dead and decaying, while the other side is covered in leaves, fully alive, thereby making the distinction between the two sides even more clear.³¹

This strategy of antithesis became common throughout Reformation images, with Cranach himself using it for many of his Lutheran commissions.³² Beham incorporated many of Cranach's compositional techniques into his own work, most notably in his illustration for Sachs' *The Nightingale of Wittenberg*, which includes a tree in the center in order to contrast the hungry wolves (the Catholic Church) on the right with the Lamb of God and his sheep (Protestants), along with the titular nightingale (Luther), on the left.

²⁴ Stewart, "Paper Festivals," 314.

²⁵ Pettegree, *Culture of Persuasion*, 128.

²⁶ Meyer, "Protestant Broadsheets," 60.

²⁷ F. J. Stopp, "The Early German Broadsheet and Related Ephemera: A Bibliographical Survey," *Transactions of the Cambridge Bibliographical Society* 5, no. 2 (1970): 88, accessed March 23, 2020, www.jstor.org/stable/41154486.

²⁸ Stewart, "Paper Festivals," 345, 348-349.

²⁹ Bonnie Noble, "*Law and Gospel* and the Strategies of Pictorial Rhetoric," in *Lucas Cranach the Elder: art and devotion of the German Reformation*. (Lanham, Maryland: University Press of America, 2009), 50.

³⁰ Lucas Cranach, *Passional Christi und Antichristi*, 1521, British Library, accessed May 7, 2020. <https://www.bl.uk/collection-items/luthers-anti-papist-pamphlet-passional-christi-und-antichristi-1521>.

³¹ Noble, "Strategies of Pictorial Rhetoric," 32.

³² Noble, "Strategies of Pictorial Rhetoric," 50.

Schön again employs antithesis in his *The House of the Wise and the House of the Foolish Man*, which lacks the distinct central divider but clearly conveys the moral distinction between the Protestants, who live in a pristine, stable house, on the right, and the Catholic Church, whose smaller house is falling apart.

Reformation artists also incorporated commonly understood symbols in order to convey their meaning, like including the hoe and flail to represent the peasantry. *The Nightingale of Wittenberg* and *The House of the Wise and the House of the Foolish Man* are other good examples of this. *The House of the Wise and the House of the Foolish Man* is filled with well-known biblical imagery. The illustration references the Parable of the Wise and the Foolish Builders, wherein the Wise build their house on solid rock (representing Christ) and the Foolish build their house on sand. Schön makes the distinction abundantly clear to even those who may be unfamiliar with the parable, with the House of the Wise literally built on the back of the Lamb and the House of the Foolish built on a seven-headed dragon. Beham draws on both biblical and folk symbols for *The Nightingale of Wittenberg*, with the depiction of Christ and his followers as a lamb and sheep drawn directly from biblical imagery, along with the association between snakes (who attempt to feed off the sheep near the tree) with temptation. The other animal figures come from folk symbols, with the nightingale heroically warning the other animals while the goats and geese attempt to cover up his song with their own noise. Beham used animals as symbols in his secular works, too, depicting drunkards alongside pigs in many of his *kermi* festival prints, with the equation of drunkards as swine recently having entered the German vernacular by that time.³³



Figure 5. *The House of the Wise and the House of the Foolish Man* by Erhard Schön. Public Domain.

Reformation artists did not restrict themselves to biblical imagery when developing rhetorical strategies to appeal to the masses. They also relied on popular culture and comical exaggeration, some of which Beham employed for pieces like *The Nightingale* and *Allegory on Monasticism*. Humor in the sixteenth century usually revolved around the bawdy and the bodily, as is clear from the gleeful debauchery portrayed in popular carnival plays. Protestant artists and writers would draw on this type of humor for their works. The 1551 broadsheet *About the Origin of Monks*, *About the Origin of Antichrist* relies on scatological humor, showing devils walking up to latrines and giving birth to/defecating monks, who are then mashed up by more devils so that they may be more easily

³³ Stewart, "Paper Festivals," 311.

incorporated into the pope.³⁴ Such scathing depictions of the Catholic Church made the Protestant message loud and clear, and allowed the common man to laugh at and ridicule these sanctimonious figures of religious authority.

Reformation artists incorporated other strains of sixteenth century popular culture into their works. Besides for religious broadsheets, the most frequent type of broadsheet that survived to the present day were those that depicted so-called monstrous births, a fact that speaks to popular fascination with the bizarre and grotesque. Wenzel von Olmutz's *Roma Caput Mundi*, made sometime in the late fifteenth century, was an example of one such monstrous birth, and a highly popular one at that. The engraving shows a monstrous creature that was allegedly found dead in the Tiber River in Rome, which von Olmutz portrays as a humanoid figure with a woman's torso, a donkey head, a tail with another head at the end, and scales.³⁵ This image was reprinted as a broadsheet by the Cranach workshop in 1523 with the new title *Interpretation of the Terrible Figure of the Pope-Ass Found in Rome by Mr. Philippum Melanthon*; at least another twenty-one anti-papal copies of it were created.³⁶ Cranach (and evidently many Protestant propagandists after him) appropriated this image of monstrous births for the Protestant cause, drawing on the popular culture surrounding monstrous births.

The common thread between the artistic strategies used by Reformation propagandists to appeal to the common man is their focus on extremes. Extreme contrasts, extreme scatological humor, extreme monstrosities, extremes of biblical proportions. Even some of the usually more grounded art for *Dialogflugschriften* dipped into these extremes, showing the morally correct common man with a physical presence that physically takes up half of the room. Reformation images were designed to be immediately striking, and often immediately inflammatory, with the eye-catching imagery serving as a kind of visual "loudspeaker," broadcasting Reformation stances to the world and leaving their extreme imprints on the minds of their viewers. It is likely for this very reason that Luther singled out the Book of Revelation for illustration, despite his personal distaste for the book;³⁷ Revelation is filled with vivid, often bizarre imagery and continuously contrasts extreme evil (like the seven headed dragon) with extreme good.

This focus on extremes is perhaps both the greatest strength and weakness of Reformation propaganda. It makes Protestant criticisms of the Catholic Church abundantly clear, but much of it fails to convey the more nuanced ideas of Protestantism, like sola fida, sola scriptura. Of course, as Bonnie Noble points out in her book on Cranach, something will always get lost or distorted in religious imagery, no matter how carefully crafted the work—even the pieces made in direct collaboration with Luther perfectly convey his ideas to the uninitiated. This limitation of images could be another reason why text was included, though, once again, even the lengthy works by Hans Sachs distort some of Luther's theology. In short, Reformation propagandists were masters at crafting attention-grabbing, memorable images to critique the excesses of Catholicism while simultaneously drawing on popular culture to appeal to the common man. However, when it came to developing an effective visual language for the details of Reformation theology in order to educate the illiterate, they ultimately fell short.

³⁴ *About the Origin of Monks, About the Origin of Antichrist*. 1551. In *The Four Horsemen of the Apocalypse* by Andrew Cunningham and Ole Peter Grell, (New York: Cambridge University Press, 2001), 29, plate 2.1.

³⁵ Wenzel von Olmutz, ca. 1481–ca. 1500. *Roma Caput Mundi*. Place: Dresden (A 1906; WM: high crown), Brunswick, Coburg, Frankfurt, London BM, Paris CR. https://library-artstor-org.ezproxy.lib.ou.edu/asset/BARTSCH_5690023.

³⁶ "Roma Caput Mundi," *The Illustrated Bartsch*, Vol. 9, pt. 2, commentary, Abaris Books, accessed May 7, 2020, https://library-artstor-org.ezproxy.lib.ou.edu/asset/BARTSCH_5690023.

³⁷ Andrew Cunningham and Ole Peter Grell, *The Four Horsemen of the Apocalypse*, (New York: Cambridge University Press, 2001), 27–30.

Conclusion

Early German reformers utilized the relatively new technology of printing to great effect, using this means of mass production to spread their ideas to the masses, to the so-called "common man." While the Reformation had many aspects that common people would find appealing due to the greater power it gave them over their religious life, the earliest reformers in Germany further sought to not only rehabilitate the image of the peasant in society, but to make the common man central to the Reformation as the defender of the faith. Even though this new, positive image of the common man fell out of favor following the German Peasants' Revolt, lower class, illiterate people still had a place within the mind of Protestant propagandists as an audience member, with Protestant artists consistently producing pamphlets and broadsheets that were accessible to the common man in both ownership and content.

This paper has sought to demonstrate how early German reformers leveraged technology and visual rhetoric in an effort to overcome the barrier of illiteracy in coming into contact with Reformation ideas. Though this was obviously an avenue of communication that Protestants, in particular, were able to take effective advantage of, it is by no means the only avenue. Other methods of spreading the Reformation to the illiterate included public preaching, plays, and songs, and it is likely that these had just as much—if not more—success at introducing the Reformation to the common man. The visual image inherently has some limitations in its ability to accurately convey religious beliefs, an issue that is clear in Reformation images, which often make their scathing critiques of Catholicism clear without much reference to the nuances of Reformation theology. Nonetheless, the cheap Reformation images contained within pamphlets and broadsheets remain of interest as some of the earliest examples of concerted mass propaganda.

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The Evolution of Ghanaian Pentecostalism: Addressing African Identity & Authentic Spirituality

Robin Miller

Abstract

The evolution of Pentecostalism in Ghana has been inspired by the importation of Christian beliefs through mission work, along with Ghanaians' desire for deep religious experience and adherence to traditional customs. This paper discusses the four main phases of the Pentecostal movement within Ghana while addressing how Ghanaians have attempted to remain true to their African roots amidst cultural persecution and suppression. There exists a common theme of shifting local and global influences regarding Pentecostal practices and priorities within the country of Ghana.

A Glimpse into Ghanaian Pentecostalism

In the Akan culture of Ghana, the *Sankofa* represents a bird “reaching back to retrieve the past and use it in the way forward.”¹ Throughout recent centuries, the Ghanaian people have struggled to preserve their culture while being exposed to and exploring new religious ideas. The symbolism of the *Sankofa* is the quintessence of Ghanaians' ambition to adhere to their African roots while pursuing spiritual satisfaction.

Beginning in the early 20th century, the people of Ghana began seeking spiritual fulfillment through the practice of Pentecostalism, a denomination of Christianity that spotlights the spirit phenomenon, which includes the spiritual gifts of healing, speaking in tongues, prophesying, having visions, and performing miracles.² In addition to channeling supernatural gifts, Pentecostals believe the Bible to be sound theological doctrine, and they emphasize the direct and intimate experience of God through baptism with the Holy Spirit.

Within Ghana, the past century has been marked by four phases of Pentecostal evolution: The emergence of the African prophets and charismatic personalities, the establishment of African Initiated Churches, the emergence of Classical and Neo-Pentecostal churches, and the Pentecostalisation of the mainline churches.³ As Ghanaians have worked to achieve self-realization through spiritual authenticity and African identity, they have combated missionaries' attempts to bring about the assimilation of culture through foreign versions of Christianity.

Ghana Prior to Pentecostalism: Christian Missions

To accurately understand the spiritual progression of Ghana, it is important that one understands the origin of religious thought in the African country, referred to by scholars as “Ghanaian Indigenous Religion.”⁴ This label was created to describe the Akan, a prominent group of people who resided in southern Ghana and parts of the Ivory Coast.

¹ White, P. (2017). Decolonising Western missionaries' mission theology and practice in Ghanaian church history: A Pentecostal approach. In *Die Skriflig/In Luce Verbi*, 51(1). doi:10.4102/ids.v51i1.2233

² White, P. (2017). Decolonising Western missionaries' mission theology and practice in Ghanaian church history: A Pentecostal approach. In *Die Skriflig/In Luce Verbi*, 51(1). doi:10.4102/ids.v51i1.2233

³ White, P. (2017). Decolonising Western missionaries' mission theology and practice in Ghanaian church history: A Pentecostal approach. In *Die Skriflig/In Luce Verbi*, 51(1). doi:10.4102/ids.v51i1.2233

⁴ Godwin, O. (2007). Comparing the Concept of Spirit and Soul in the Traditional Religion of the Akan and Ewe Tribes to that of the Bible. 22-23.

On-trend with surrounding regions, the Akan believed in an omnipotent God but did not adhere to any form of religious literature or keep written records. Knowledge of the Supreme Being was passed down orally through “songs, names, prayer rituals, liturgy, religious ceremonies, and proverbs.”⁵

Although many Ghanaians believed God existed, they did not have an established, biblically rooted system of Christianity until European missionaries arrived during the late 15th century. Their presence in Ghana sparked a scattered spread of Christianity confined to the coastal regions. It was not until the mid-19th century that the migration of British missionaries brought about a substantial increase in Christian conversion. From 1829 to 1847, the Basel mission and the Bremen mission introduced Presbyterianism and evangelical Presbyterianism to the Ghanaian people. In 1880, the French introduced Roman Catholicism to the country during their mission at Elmina, followed by Americans’ entry and establishment of the African Methodist Episcopal Zion Church in the Keta region six years later.⁶

These cerebral mission denominations did not connect well with the Ghanaians’ desire for charismatic expressions of Christianity.⁷ Spiritual cravings left unsatisfied by previous Christianity movements opened the door for Pentecostalism to establish its presence in the country of Ghana.

The Popularization of Pentecostal Ideas in Ghana

The birth of Pentecostalism in Ghana is primarily attributed to several African prophets and charismatic personalities, supplemented by written works from the United States. One piece of literature that catalyzed the Ghanaian Pentecostalism movement was *The Sword of the Spirit*,⁸ a religious magazine, edited by Pastor James Ambrose Clark (founder of the Faith Tabernacle ministry, Philadelphia), that sparked Ghanaians’ interest in spiritual healing and holiness.⁹ Inspirational testimonies of healing found in this literature inspired many Ghanaian people to consider Pentecostalism during the 1918 Influenza pandemic.¹⁰ Apostle Peter Anim, later known as The Father of Ghanaian Pentecostalism, was one of the people particularly intrigued by the piece of Philadelphia theology. Growing up as a member of the Presbyterian church, Anim’s experience with Christianity was one of mundane traditions and limited spiritual experience. Like many Ghanaians, Anim’s soul was not satisfied with Presbyterianism’s sole focus on the intellectual aspects of theology. Inspired by spirit-focused teachings presented in *The Sword of the Spirit*, Anim resigned from the Presbyterian church and formed the Unity Prayer Group in 1917, a group that later developed into the Christ Apostolic Church International and is accredited as the origin of classical Ghanaian Pentecostalism.¹¹ Along with Apostle Peter Anim, Prophet John Swatson, Prophet Sampson Oppong, and Prophet William Wade Harris of Ghana also contributed to the birth of the Ghanaian Pentecostalism movement. Their tours and ministries made way for the early African Independent

⁵ Godwin, O. (2007). Comparing the Concept of Spirit and Soul in the Traditional Religion of the Akan and Ewe Tribes to that of the Bible. 22-23.

⁶ Salm, S. J., & Falola, T. (2002). Christianity. In *Culture and customs of Ghana* (pp. 45-46). Westport, CT: Greenwood Press.

⁷ Asamoah-Gyadu, J. K. (2008). Anointing Through the Screen: Neo-Pentecostalism and Televised Christianity in Ghana. *Studies in World Christianity*, 11(1), 9. doi:10.3366/swc.2005.11.1.9

⁸ White, P. (2019). Centenary of Pentecostalism in Ghana (1917–2017): A case study of Christ Apostolic Church International, HTS Theologies Studies/Theological Studies 75(4), a5185. <https://doi.org/10.4102/hts.v75i4.5185>

⁹ Larbi, E. K. (2001). Anim, Peter Newman. Retrieved December 14, 2020, from

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¹⁰ Mohr, A. (2010). Out of Zion Into Philadelphia and West Africa: Faith Tabernacle Congregation, 1897-1925. 73. doi:10.1163/027209610X12628362887631

¹¹ White, P. (2019). Centenary of Pentecostalism in Ghana (1917–2017): A case study of Christ Apostolic Church International, HTS Theologies Studies/Theological Studies 75(4), a5185. <https://doi.org/10.4102/hts.v75i4.5185>

Churches to form, the first one being the Twelve Apostles Church, which arose in 1914 from Harris' tours throughout western Ghana.¹²

The Formation of African Initiated Churches: Addressing African Christian Identity

Following the initial rise in Ghanaian Pentecostalism, African Initiated Churches emerged between 1920 and 1930 to address Ghanaian's cravings for authentic spirituality while maintaining a sense of African identity.¹³ The establishment of these churches denotes the spread of Christianity in Africa during the 20th century, with an emphasis on the contextualization of theology. The idea of Christian contextualization refers to the written and physical communication of the Gospel in ways that resonate with peoples' "local cultural context" and allow them to follow Christ without compromising their traditional ways of life.¹⁴ The practice of evangelism within the confines of contextualization has resulted in "syncretistic movements" across these AICs, which mix Christian beliefs with traditional African customs and ideals.¹⁵ There are four main areas where this practice is seen within Ghana, including missions, discipleship, finance, and interactions with the Holy Spirit.

Encouraging Missional Inclusivity

The first core aspect of Pentecostal Ghanaians' contextualization of theology is their perspective of the Christian mission. This mission, referred to in Matthew 28 as The Great Commission, regards God's call for his followers to evangelize and disciple fellow believers. Although the western missionaries proposed an exclusive view of the mission, the Ghanaians took a more inclusive approach. Rather than solely encouraging ordained clergy members to participate in ministry, they encouraged all believers, including the non-ordained laity, to actively participate in ministry.¹⁶ In neglecting western attempts to color their interpretation of this tenet, the Ghanaian Pentecostals preached and adhered to their belief that God provides spiritual gifts and callings unto each of his followers that are to be used to further the mission.

Cultivating Discipleship within the Community

Along with establishing an inclusive perspective of the Christian mission, Pentecostal Ghanaians also took to imitating the relational aspects of the early church in Antioch as described in the book of Acts. One relational aspect of the early church that Pentecostals deem important to their Christian walk is discipleship. Discipleship is a foundational element of the Christian faith, which involves a mentor-mentee relationship between followers, the main purpose being spiritual growth and sanctification. The book of Acts, Chapter 11 references the early church in Antioch's pursuit of sanctification and adherence to the Great Commission by teaching and equipping followers of Christ through discipleship.

Within Gospel contextualization, Ghanaians practiced biblical discipleship through "the Salem system of settlement," a system originally implemented by Basel, Presbyterian

¹² White, P. (2017). Decolonising Western missionaries' mission theology and practice in Ghanaian church history: A Pentecostal approach. In *Die Skriflig/In Luce Verbi*, 51(1). doi:10.4102/ids.v51i1.2233

¹³ White, P. (2017). Decolonising Western missionaries' mission theology and practice in Ghanaian church history: A Pentecostal approach. In *Die Skriflig/In Luce Verbi*, 51(1). doi:10.4102/ids.v51i1.2233

¹⁴ Whiteman, D. L. (2002). Contextualization: The Theory, the Gap, the Challenge. Retrieved December 14, 2020, from <https://spu.edu/temp/denuol/context.htm>

¹⁵ Pobee, J. S. (2002). African Instituted (Independent) Churches. Retrieved December 14, 2020, from <https://www.oikoumene.org/item-3>

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missionaries as a communal living arrangement for Ghanaian Christians in the mid-19th century.¹⁷ At the point of salvation, a native person would move out of their traditional home and into a Christian community surrounding their society. Although implemented with pure intentions, the Presbyterian practice led to an unfavorable separation between the indigenous Christian converts and their kin who remained in the traditional Ghanaian living quarters. Not only did the salems separate families, threatening the preservation of Ghanaian traditions and communal ties, but they also failed to provide proper biblical teaching and discipleship.

Following the communal dysfunction ignited by the western missionaries' discipleship efforts, Pentecostal Ghanaians worked to undo the harm brought to their family relations and traditional communal hierarchy. The primary methods of reversing these negative repercussions and reviving Ghanaian culture came in the form of Sunday schools and home cells (White, 2017, para. 18). Emphasis on discipleship through close, but controlled environments within these Sunday schools and home cells allowed for Ghanaian Christians to keep close ties with their families and preserve their culture, while simultaneously maturing in their faith. This practice also encouraged the spread of the Gospel and Christian living within Ghana due to the proximity between the believers and non-believers within the community. With the spread of Biblical ideals and Christian customs, the Pentecostalism movement continued to expand during the tail end of the 20th century.

Money and Ministerial Pursuits

Along with bringing a westernized take on discipleship, the 19th century Europeans attempted to provide financial support to the Ghanaians. Although this seems beneficial, the Ghanaians were reluctant to accept financial aid because of the conflict of interest regarding the practice of religion. During their time abroad, the European missionaries undermined Ghanaian culture by banning the use of African languages in mission schools and enforcing European customs and ideals upon the natives.¹⁸ In an act of resistance against assimilation techniques imposed on Ghana, the indigenous people strived to promote church growth internally within the country. The church of Pentecost asserted its intention to remain independent by practicing self-financing and rejecting dependence upon external sources, accepting only limited amounts of unsolicited philanthropic funding for social services.¹⁹ Their efforts to achieve financial self-sufficiency allowed Ghanaian Pentecostals to retain both their African culture and Pentecostal beliefs while adhering to their ministerial pursuits of expanding the church.

Experiencing the Holy Spirit Through Dynamic Worship

Motivated by a desire to experience and praise the Holy Spirit, Pentecostal Ghanaians incorporated their expressive African tendencies and traditions with musical worship sessions. Many members of the AICs incorporated customs such as wearing traditional African clothing, using percussive instruments, and dancing in their spirit-filled worship of God.²⁰ Worship sessions were often repetitive in rhythms and melodies, with a dominant

¹⁷ White, P. (2017). Decolonising Western missionaries' mission theology and practice in Ghanaian church history: A Pentecostal approach. In *Die Skriflig/In Luce Verbi*, 51(1). doi:10.4102/ids.v51i1.2233

¹⁸ White, P. (2017). Decolonising Western missionaries' mission theology and practice in Ghanaian church history: A Pentecostal approach. In *Die Skriflig/In Luce Verbi*, 51(1). doi:10.4102/ids.v51i1.2233

¹⁹ White, P. (2017). Decolonising Western missionaries' mission theology and practice in Ghanaian church history: A Pentecostal approach. In *Die Skriflig/In Luce Verbi*, 51(1). doi:10.4102/ids.v51i1.2233

²⁰ Twumasi-Ankrah, K. (1994). SOME OBSERVATIONS ON CHRISTIAN CHURCHES AND WORSHIP IN GHANA. *International Review of Modern Sociology*, 24(1), 95-108. Retrieved December 14, 2020, from <http://www.jstor.org/stable/41420400>

presence of drums, tambourines, and other percussive instruments typical of African culture. The dynamic music paired with churchgoers' zealous handclapping, swaying, sprawling on the ground, and speaking in tongues, among other expressions, highlighted the blending of local African tradition with globally adopted Pentecostal beliefs and practices. Examples of this can be seen in Figures 1 and 2.



Figure 1.²¹

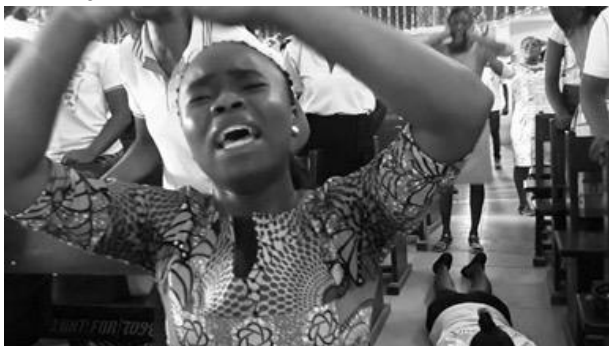


Figure 2.²²

The Pentecostal emphasis on joyous and vocal celebration directly contrasted the underwhelming hymns missionaries brought during the 19th century when they came to convert Ghanaians to their westernized version of Christianity.²³ Disengaging with historic church habits of institutionalizing the Holy Spirit, the Pentecostal Ghanaians embraced intimate encounters with the Holy Spirit through their practice of animated, African-inspired worship music.

As well as providing a medium for Pentecostals to experience the Holy Spirit, music also served as a form of oral theology. As an “essential ingredient of Pentecostal worship,” music incorporated choruses of church members’ testimonies of spiritual experience and inspired many people to convert to Christianity, and specifically to the denomination of Pentecostalism.²⁴

Along with voicing personal testimonies, Pentecostal worship songs passed down early Ghanaian beliefs regarding the character of God. The Akan traditional religion

²¹ (Reed, 2014)

²² (Adinkrah, 2016)

²³ White, P. (2017). Decolonising Western missionaries’ mission theology and practice in Ghanaian church history: A Pentecostal approach. In *Die Skriflig/In Luce Verbi*, 51(1). doi:10.4102/ids.v51i1.2233

²⁴ Asamoah-Gyadu, J. K. (2009). ‘The Promise is for You and Your Children’: Pentecostal Spirituality, Mission and Discipleship in Africa. 7.

recognized God as the keeper, protector, pastor, and savior of creation.²⁵ These foundational beliefs were weaved throughout the melodies of Ghanaian Pentecostal songs, addressing God by various, personal names. Examples of these titles include “Onyame” (“God, the creator of all things”), “Tweduampōn” (“The Dependable One”), and “Nyame” (“the greatest satisfier and lover of humanity”).²⁶ These lyrical choices showcase the harmonious melding of traditional Ghanaian religion with newfound Pentecostal practices.

The Second Pentecostal Wave: The Development of Neo-Pentecostalism in Ghana

With the rising restoration of African identity and spiritual authenticity through the contextualization of theology, Ghanaian AICs paved the path for Neo-Pentecostalism to develop. This movement followed the expansion of the mainline Classical Pentecostal churches, which included the Christ Apostolic Church International, the Apostolic Church of Ghana, the Church of Pentecost, and the Assemblies of God.²⁷ Beginning in the 1970s and prevailing through the early 2000s, Neo-Pentecostal churches began to gain popularity with their emphasis on the charismatic movement.²⁸ Along with their focus on the Holy Spirit, these churches highlighted the importance of the individual religious experience, Jesus-centered piety, prayer, praise, enthusiasm for testifying, and a pneumatic interpretation of the Bible.²⁹ These churches were also marked by the inspirational, charismatic leadership of their founders.³⁰ With the rise in the charismatic movement, various Neo-Pentecostal churches in Ghana began to acquire mainline church status and became more prevalent than some of the Classical Pentecostal churches of their time.³¹

Ghanaian Pentecostalism within Recent Decades: Threats and Advances

Although there has been a great success with the Pentecostal movement in Ghana, there are still threats that attempt to undermine its practice. The first half of the 20th century marked by British colonialism posed external threats to Ghanaian culture and religious autonomy. The missionaries’ attempts to impose their version of Christianity (which many Gold Coast natives referred to as “the white man’s religion”) contradicted traditional Ghanaian community structure and cultural practices.³² However, there were also internal forces that threatened Ghanaian identity and sparked division between Pentecostals and traditionalists. One major example of this is the ban on drumming during the annual Homowo festival. This festival is an ancient Ga ritual started in conjunction with early Ghanaian religious beliefs involving polytheism and ancestral spirits.³³ It was first implemented to encourage spiritual blessings upon the Ghanaian agriculture sector and is

²⁵ Quayesi-Amakye, J. (2013). God in Ghanaian Pentecostal Songs. *Journal of Pentecostal Theology*, 22(1), 131–151. <https://doi.org/10.1163/17455251-0220101>

²⁶ Quayesi-Amakye, J. (2013). God in Ghanaian Pentecostal Songs. *Journal of Pentecostal Theology*, 22(1), 131–151. <https://doi.org/10.1163/17455251-0220101>

²⁷ White, P. (2017). Decolonising Western missionaries’ mission theology and practice in Ghanaian church history: A Pentecostal approach. *In Die Skriflig/In Luce Verbi*, 51(1). doi:10.4102/ids.v51i1.2233

²⁸ Dijk, R.A.van. (2001). Contesting silence: the ban on drumming and the musical politics of Pentecostalism in Ghana. *Ghana studies*, 4, 31 - 64 (2001). 4.

²⁹ Madany, B., Stek, J. H., Hart, D., Howlwerda, D., & Sweetman, L. (1973). *Neo-Pentecostalism* (p. 402, Rep. No. 34). Christian Reformed Church in North America.

³⁰ Dijk, R.A.van. (2001). Contesting silence: the ban on drumming and the musical politics of Pentecostalism in Ghana. *Ghana studies*, 4, 31 - 64 (2001). 4.

³¹ White, P. (2017). Decolonising Western missionaries’ mission theology and practice in Ghanaian church history: A Pentecostal approach. *In Die Skriflig/In Luce Verbi*, 51(1). doi:10.4102/ids.v51i1.2233

³² White, P. (2017). Decolonising Western missionaries’ mission theology and practice in Ghanaian church history: A Pentecostal approach. *In Die Skriflig/In Luce Verbi*, 51(1). doi:10.4102/ids.v51i1.2233

³³ Dijk, R.A.van. (2001). Contesting silence: the ban on drumming and the musical politics of Pentecostalism in Ghana. *Ghana studies*, 4, 31 - 64 (2001). 4.

marked by a period of *gbemlilaa* which requires over a month of silence to promote Ghanaians' sole focus on attending to crops after they are planted.³⁴ This period of silence enforced by the government to preserve historic tradition led to a ban on forms of noisemaking including drumming, dancing, and singing.

Greatly upset by this act, the Pentecostals, whose religion was fundamentally rooted in pneumatic worship, fostered resentment towards the traditionalists. Tensions between these groups rose during the late 1900s, reaching an all-time high in 1998, when traditionalists violently stormed a Pentecostal church, proclaiming that the church members violated the ban on noisemaking. This example demonstrates the complex nature of the relationship between historic and modern religions within Ghana. Contemporary disputes between the people of Ghana regarding traditional rituals and Pentecostal practices continue to be of concern heading into the mid-21st century.

Although the internal conflict has made Ghanaian Pentecostal worship more difficult to practice, various advancements, such as the development of mobile technology, have helped to progress the religion. A prime example of this development is an app called Asoriba, created in 2015 by Ghanaian entrepreneurs. The app consists of a "cloud-based church management software" that has revolutionized administration, communication, and tithing within the church.³⁵

The digitalization of Christianity by these Ghanaian entrepreneurs demonstrates a desire to globalize the mission of "[winning] more souls" for the Lord.³⁶ The company's headquarters is located in Accra, Ghana, and currently operates in Nigeria, Kenya, and South Africa. Asoriba's goal to expand their reach into the rest of Africa highlights the trend of rising Christianity that has persisted in the continent since the 1400s. However, instead of attempting religious conversion through physical migration, this company is utilizing modern technology to spread the good news of the Gospel.

Pentecostalism's Effects on the Ghanaian Identity

Ever since Ghanaians gravitated towards the divine experiential nature of Pentecostalism, they found a sense of "empowerment and enhanced agency" unbeknownst to them before the dynamic denomination arrived on their doorstep.³⁷ Despite internal and external forces working against the prosperity of Ghanaian Pentecostalism, the religion has managed to prevail throughout the last few centuries due to the Ghanaian peoples' desperate desire and willingness to fight for self-realization and spiritual authenticity.

The extent to which the pursuit of this religion has served to preserve Ghanaian culture is nothing short of amazing. The active pushback against peoples and policies that threatened the development of Pentecostalism and retention of African customs highlighted the importance of inculturation, which refers to inclusive evangelistic efforts geared towards people of various religio-cultural backgrounds. The goal of this method is to enrich and fulfill indigenous cultures by presenting the Gospel in a way that appeals to their spiritual desires and cultural context.³⁸ The people of Ghana did wonders to spark global

³⁴ Osabu-Kle, D. T. (n.d.). The Ga People and Homowo Festival. (pp. 9-10).

³⁵ Jackson, T. (2016, February 02). Ghanaian startup wins "Best African Startup" at Seedstars Africa Summit. Retrieved December 14, 2020, from <https://www.pulse.com.gh/news/business/asoriba-ghanaian-startup-wins-best-african-startup-at-seedstars-africa-summit/tr7g7fv>

³⁶ Morlin-Yron, S. (2016, November 11). The app that's changing religion in West Africa. Retrieved December 14, 2020, from <https://www.cnn.com/2016/05/17/africa/asoriba-church-app-ghana/index.html>

³⁷ Daswani, G. (2010). Transformation and Migration Among Members of a Pentecostal Church in Ghana and London. *Journal of Religion in Africa*, 40(4), 442-474. Retrieved December 14, 2020, from <http://www.jstor.org/stable/25801392>

³⁸ White, P. (2017). Decolonising Western missionaries' mission theology and practice in Ghanaian church history: A Pentecostal approach. In *Die Skriflig/In Luce Verbi*, 51(1). doi:10.4102/ids.v51i1.2233

awareness of this perspective, which has revolutionized how the Gospel and religion are spread throughout not just Africa, but the world. Today, Pentecostal Ghanaians continue to live Christ-centered lives without abandoning their African roots, and in doing so, display the ability to successfully interlace cultural tradition with identity and spirituality.

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A Lesson Plan to Address Students' Conceptual Difficulties with Learning Subspaces

Tien Tran

Abstract

Several studies on first-semester linear algebra students have been conducted to observe their conceptual difficulties with learning abstract concepts. The topic of subspaces is especially challenging to students because of the formality of the definition. However, subspaces are an important concept for advanced mathematics, and teaching subspaces also simultaneously shows students how to write direct proofs. Inspired by contemporary research on the topic, we propose a lesson plan which emphasizes the importance of formal mathematical definitions and addresses common conceptual issues that students face while learning about subspaces, such as the inability to identify different representations of the same set. Other primary goals of the lesson plan are to introduce helpful examples, to teach advanced formal proof-writing, and to challenge potential conflict factors in a student's concept image.

Keywords: lesson plan; visualization; subspaces; linear algebra; formal definitions

Theoretical Background and Introduction

Although abstract mathematical definitions may be introduced to undergraduate students in their calculus courses, students often are not prepared to encounter advanced proofs and abstract definitions in their first semester of linear algebra. Unfortunately, if students are unable to grasp the definitions, theorems, and concepts which are taught in linear algebra, they will continue to struggle in the many advanced math and science courses which use linear algebra as a foundation, such as circuit design, differential equations, algorithm analysis, and abstract algebra courses. Content aside, the skill of understanding and applying abstract definitions to proofs is vital for mathematicians. To face this challenge, this paper aims to create a framework for a

lesson plan which will address common conceptual struggles that first-semester linear algebra students have about subspaces. The topic of subspaces was chosen because the definition is interpreted as being abstract, while proofs and examples involving subspaces are often visual or algebraic. Thus, the issues that students have with understanding subspaces can typify common issues that students have with many other abstract concepts of mathematics. In addition, the exercise of proving that a set is a subspace can be a good introduction to students on how formal definitions are used in direct proofs.

This paper will focus on only a few common reasons that students struggle with understanding subspaces, including: (a) students' difficulty with switching back and forth between representations of subspaces (between geometric or visual, algebraic or symbolic, and formal representations), (b) students' difficulty with understanding and applying the formal definition of subspace to proofs, and (c) the struggle of balancing an overly rigid visualization of subspace with an abstract notion of subspace. (As seen in Wawro et al., sometimes geometric views of subspace may lead students astray.)¹

¹ Wawro, M., Sweeney, G. F., & Rabin, J. M. (2011)

In our discussion of these conceptual issues, we will be using the vocabulary from Tall and Vinner's paper: *concept image*, *concept definition*, and *potential conflict factors*.² The theoretical framework for our plan was also formed by Skemp; we will consider the ideas of *relational* and *instrumental understanding* throughout the paper.³ Most of all, the major linear algebra education theories and data which inspired our lesson plan were drawn from Britton and Henderson, Konyalioglu et al., and Wawro et al.⁴ In this paper, we will describe different representations of linear algebra concepts using the language from Britton and Henderson's study and Tall's Three Worlds interchangeably. In other words, we will use the terms *geometric* or *visual* to identify examples or understandings of subspaces that coincide with Tall's concept of the *embodied* world; we will also use *algebraic* and *symbolic* interchangeably.⁵ Both Britton and Henderson and Tall had a similar understanding of the *formal* representation of a concept.⁶ On this topic, we will also reference Duval's analysis, which focused on the nature of different representations of mathematical concepts.⁷

In addition to the theoretical background provided by these research studies, this lesson plan was inspired by many conversations with undergraduate students and by drawing from personal experience. Undergraduate professors who have taught or are currently teaching linear algebra were consulted throughout the creation of this lesson, and the comments of one professor will be included anonymously later under the name "Dr. G".⁸

This lesson plan aims to introduce the importance of formal definitions, prevent students from forming concept images of subspaces which are stuck on one single example or representation, and allow students to test their own concept images. Students should be given a space to challenge potential conflict factors early, since students do not tend to change solidly formed concept images even after they are presented with conflicting information or the formal definition.⁹

Preparations for the Lesson and Practicality

The ideas proposed by this lesson plan will not be based on any particular class size, method of delivery (online versus in-person), or time constraints. As such, any teacher planning to use the exercises discussed in this paper should feel free to alter or cut them to their needs. Although many suggestions will be posited in this paper, we understand that real classroom experiences do not always unfold as planned. However, with the amount of material provided, we suggest that a first-semester undergraduate linear algebra class should be given the opportunity to work with subspaces for at least two class periods.

In addition, for this lesson to be as effective as possible, we hold a few assumptions about the prior experience of our theoretical students. Whether before this lesson or before taking a first-semester linear algebra course, we assume that students have already been introduced to basic set theory, basic proofs, vectors, real vector spaces, and some algebra. We state this prerequisite because Britton and Henderson named "inexperience with proofs, logic and set theory" as a major reason for student conceptual difficulties with identifying

² Tall, D., & Vinner, S. (1981)

³ Skemp, R. R. (1976)

⁴ Britton, S., & Henderson, J. (2009); Konyalioglu, A. C., Ipek, A. S., & Isik, A. (2003); Wawro, M., Sweeney, G. F., & Rabin, J. M. (2011)

⁵ Britton, S., & Henderson, J. (2009); Tall, D. (2010)

⁶ Britton, S., & Henderson, J. (2009); Tall, D. (2010)

⁷ Duval, R. (2006)

⁸ Dr. G, personal communication, April 26, 2020

⁹ Wawro, M., Sweeney, G. F., & Rabin, J. M. (2011)

and writing proofs about subspaces.¹⁰ This inexperience cannot be addressed directly by a single lesson plan. Therefore, teachers may consider making this list of prerequisite topics explicit to students before introducing subspaces. In this way, students may have the opportunity to seek help outside of the classroom and build a solid foundation on which better concept images of subspaces and proof-writing may be formed.

Here, Dr. G commented on his personal experience with students' knowledge of proofs:

Dr. G: ...most students have not seen logic or proofs... If you're teaching a class at [Dr. G's university]. I tried my best to teach students formal proofs in algebra, but it does not go very well.

Dr. G suggested adding more proof exercises to this lesson plan in order to help strengthen students' experience with proof-writing and logic:

Dr. G: For the sake of completion, ... you may consider [including] subset proofs. *Dr. G:* If they've learned proofs, they know subsets.¹¹

A Lesson Plan for Teaching Subspaces

We will now discuss a lesson plan for teaching subspaces that aims to address common student conceptual difficulties seen in Britton and Henderson and Wawro et al.¹² Before introducing the formal definition of subspace, it may be helpful to provide students a motivation for why they should learn about subspaces. From personal experience and from speaking with undergraduate students, we see that students find it is important to "set the scene" and ready their mind for a new mathematical concept. This motivation may appear in the form of discussions about the history of a concept, theorems, or proofs that mathematicians used in the discovery of this concept, connection of the new concept to previously introduced mathematical concepts, or practical applications of the concept. The goal is to place the new mathematical definition or idea in context of another concept which students already recognize. We hope providing a motivation will aid students in creating a concept definition for subspace and broaden their concept image through connections to other ideas, regardless of whether the connection is with other mathematical objects.

For example, the instructor may introduce subspaces in comparison to subsets, emphasizing that there are special requirements for subspaces. The teacher may also introduce subspaces by highlighting its relevance to future mathematics courses, such as Topology (subspace topology) or Abstract Algebra (group theory). Students may not have encountered these ideas before, but we hope that this approach will help students feel that learning about subspaces has long-term value.

Teachers may be inclined to introduce subspaces through geometrical examples to cater to the students' familiarity with pre-existing visual images. However, introducing more than one or two geometric examples to students without giving a definition for subspace will be difficult. In addition, as seen in Wawro et al., once students have built a concept image using a predominantly geometric representation of subspaces, it becomes difficult for them to change this image to accommodate algebraic and abstract representations needed to understand the formal definition.¹³ The study conducted by Konyalioglu et al. also emphasized how geometric examples of a concept persist in students' minds more than algebraic examples.¹⁴ As we will discuss in depth later, one goal of this lesson framework is to prevent students from understanding subspaces from a

¹⁰ Britton, S., & Henderson, J. (2009), p. 964

¹¹ Dr. G, personal communication, April 26, 2020

¹² Britton, S., & Henderson, J. (2009); Wawro, M., Sweeney, G. F., & Rabin, J. M. (2011)

¹³ Wawro, M., Sweeney, G. F., & Rabin, J. M. (2011)

¹⁴ Konyalioglu, A. C., Ipek, A. S., & Isik, A. (2003)

strictly visual standpoint, since students are not always able to translate this type of understanding into symbolic manipulations and formal proofs.¹⁵ Overall, we do not recommend using only geometric examples as a transition into subspaces.

We do suggest transitioning into this lesson by having students recall their knowledge on vector spaces and introducing a subspace through its relationship to a vector space. On this topic, Dr. G brought an alternative classroom setting to our attention. Previously, we believed that real vector spaces were introduced to linear algebra students before the topic of subspaces. However, Dr. G revealed that subspaces can be taught to students before vector spaces are ever mentioned. In fact, vector spaces may be taught at the end of the semester.

Dr. G: [referring to subspaces] I did everything with Euclidean spaces and introduced vector spaces last week.

In this case, Dr. G suggested teaching subspaces by relating the concept to systems of equations:

Dr. G: Every linear algebra course starts with systems of equations. I started with a solution set of a homogenous system. This is a subspace. I talked about the shape of it. The solution is going to be a point, line, or plane... This was my segue into subspaces.

Using this transition into subspaces, Dr. G showed consideration for the motivation and emotions of their students:

Dr. G: [referring to systems of equations] Students are already familiar with it, and they care about it. That gives them the idea of why those two steps, closure under addition and scalar multiplication, are important.¹⁶

The steps mentioned above are used in proving that a set fits the definition of subspace, which we will now discuss.

After providing a transition, the formal definition of subspaces should be given to students. The formal definition of a subspace used by Wawro et al. is written:

“A nonempty subset V of \mathbf{R}^n is a subspace of \mathbf{R}^n if it is closed under addition and scalar multiplication. That is, if $\mathbf{x}+\mathbf{y}$ is in V whenever \mathbf{x} and \mathbf{y} are in V ; also if $a\mathbf{x}$ is in V whenever \mathbf{x} is in V and a is a real number.”¹⁷

In order to better emphasize the qualities of a subspace that must be shown in proofs and to make the definitions for closure clearer, we consider re-formatting the definition in the following way:

Given two elements \mathbf{x} and \mathbf{y} in a subset V of \mathbf{R}^n , V is a subspace of \mathbf{R}^n if it is

- (i) non-empty,
- (ii) closed under addition (whenever \mathbf{x} and \mathbf{y} are in V , $\mathbf{x}+\mathbf{y}$ is in V), and
- (iii) closed under scalar multiplication (whenever \mathbf{x} is in V and a is a real number, $a\mathbf{x}$ is in V).

From here, we divide the lesson plan into three sections: (a) examples, (b) introducing subspace proofs, and (c) challenging potential conflict factors with group work.

¹⁵ Duval, Raymond. (2006)

¹⁶ Dr. G, personal communication, April 26, 2020

¹⁷ Wawro, M., Sweeney, G. F., & Rabin, J. M. (2011), p. 3

Utilizing Examples to Build Accurate Concept Images

After introducing the formal definition of subspace, the teacher should give students examples of subspaces. In this section of the lesson, we propose specific types of subspace examples that teachers should give their students along with precautions and suggestions regarding the delivery of the examples. Examples should be carefully chosen to help students build a relational understanding of the nature of subspaces. Specifically, the lesson aims to help students create a broad concept image containing many connections to examples and the formal definition.

Students who are predominantly taught with one representative type of example may recall subspaces only through that lens. Konyalioglu et al. discovered that students who were taught the concept of vector spaces using predominantly geometric examples performed better on an exam than students who were taught with more algebraic examples.¹⁸ However, this practice may not be as effective for building accurate concept images for subspaces. Wawro et al. revealed that strong beliefs about the geometric representations of subspace may be one of the reasons that students falsely believe \mathbf{R}^k is a subspace of \mathbf{R}^n for $k < n$. For example, students may incorrectly believe that since both \mathbf{R}^2 and a subspace of \mathbf{R}^3 can be geometrically represented by a plane, \mathbf{R}^2 is a subspace of \mathbf{R}^3 .¹⁹ This shows that a strictly geometric understanding may hinder students' abilities to analyze subspaces. To address this issue, teachers should take care to introduce a balance of geometric and algebraic examples of subspaces. Since students have pre-existing knowledge about the embodied world both from previous classes and from their experiences outside of the classroom, teachers may begin with visual examples of subspaces to help students feel more comfortable. However, teachers should choose a sufficient mix of algebraic and visual examples which do not accidentally imply that a subspace is simply a plane in \mathbf{R}^3 or a line in \mathbf{R}^2 . It is important that this misconception be addressed early because Wawro et al. found that the initial formation of a visual concept image is likely to persist even after new information is introduced.²⁰

However, a different issue occurs when introducing both geometric and algebraic examples. A common conceptual issue for linear algebra students, as highlighted by Britton and Henderson, is that students have difficulty identifying mathematical objects when the teacher switches quickly between objects' visual, symbolic, and formal representations.²¹ Students often do not form concept images that relate geometric and algebraic examples of the same set. For example, a student may be unable to recognize that the descriptions of a set of vectors in Figure 1 are in fact identical.

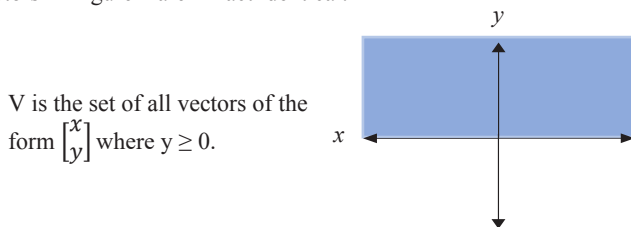


Figure 1. An algebraic or symbolic representation (left) and a geometric or visual representation (right) of the same set of vectors. This is not a subspace.

¹⁸ Konyalioglu, A. C., Ipek, A. S., & Isik, A. (2003)

¹⁹ Wawro, M., Sweeney, G. F., & Rabin, J. M. (2011), p. 15

²⁰ Wawro, M., Sweeney, G. F., & Rabin, J. M. (2011), p. 10

²¹ Britton, S., & Henderson, J. (2009)

Duval found that students also had difficulty performing the switch from one representative system to another.²² This is an issue since students should understand how to algebraically manipulate and describe elements of a set for subspace-related proofs, even if they are given a more geometric description of the set. To combat this issue, the lesson plan encourages an emphasis on the relationship between the different types of representations of the elements of subspaces, whether these elements are vectors, functions, points, or arbitrary letters. To do so, teachers should consider giving the same example of subspace both in a geometric view and a symbolic representation (i.e. drawing the y-axis on an xy -plane and showing “the set of all vectors of the form $\begin{bmatrix} x \\ y \end{bmatrix}$ where $x = 0$ ”). In addition, the teacher should explicitly state that they are switching between representations of the same set.

Finally, the teacher should attempt to tie all examples, regardless of representation, back to the formal definition of subspace by bringing attention to how the example fulfills each part of the definition. We hope that this will guide students to make connections between both different representations of subspaces and between the examples and the formal definition, which is written abstractly. The goal of this section of the lesson plan is to prevent students’ concept images from being confined to a single representation or example of a subspace. Students will hopefully gain a relational understanding of subspaces by forming a rich network of conceptual connections between subspace examples and the definition.

Introducing Subspace Proofs

If the teacher continually underscores how examples of subspaces fulfill each component of the formal definition, they will find it easier to transition into introducing subspace proofs. We use the term subspace proofs to describe problems in which students must prove or disprove whether a given set is a subspace of a given vector space.

Unless a proof-writing course is required by their institution or unless proofs are emphasized in their early calculus courses, many linear algebra students have not had much practice writing mathematical proofs prior to taking the course. This assumption was supported by Dr. G’s personal experience teaching linear algebra.²³ Unfortunately, students with a weak understanding of proofs often struggle to differentiate which aspects of the proof are general to all subspace problems and which are specific to the given problem. Britton and Henderson recognized this issue as “pseudo-conceptual behavior”, where students associate words without forming ideas and could only reference a partial and incorrect concept definition. Students with a pseudo-concept image of subspaces attempt to apply a single example to every problem involving subspaces since they are drawing from surface-level associations.²⁴ Using ideas founded by Skemp, these students hold only an instrumental understanding of subspaces and are simply trying to recreate rules or follow patterns in their calculations.²⁵ One solution to this obstacle, suggested by Britton and Henderson, is providing students a table which outlines the specific steps for proof of closure under addition across several examples.²⁶ Students would then understand the difference between which aspects of proving closure by addition are general and which are specific to the example.

²² Duval, Raymond. (2006).

²³ Dr. G, personal communication, April 26, 2020

²⁴ Britton & Henderson (2009), p. 967-968

²⁵ Skemp, R. R. (1976)

²⁶ Britton & Henderson (2009), p. 972

We use this idea and suggest applying it to the entire proof. In other words, we suggest that teachers provide students a table, shown in Figure 2, which compares examples of subspace proofs. These steps are drawn from the definition of subspace and correspond directly to the requirements outlined in our re-written definition before. Example 1 was written by Kolman and Hill.²⁷ Examples 2 and 3 were problems given to students from the study conducted by Britton and Henderson.²⁸ Teachers and students may use this table to discuss the similarities and differences between the proofs. We hope this exercise will help students identify the necessary skills and steps for writing their own subspace proofs. That would help to prevent students from applying techniques used in unrelated examples to every problem.

Subspace Example Proof Comparison			
<i>Proof/Definition Section</i>	<i>Example 1</i>	<i>Example 2</i>	<i>Example 3</i>
<i>Question</i>	Let W be the set of all vectors of the form $\begin{bmatrix} a \\ b \\ a+b \end{bmatrix}$ in \mathbb{R}^3 and a, b are real numbers.	Let $V = \{t \begin{bmatrix} 1 \\ 2 \\ 3 \end{bmatrix} \mid t \in \mathbb{R}\}$. Show that V is a subspace of \mathbb{R} .	Let X be the set of functions $f: \mathbb{R} \rightarrow \mathbb{R}$ in \mathbb{F} such that the graph $y = f(x)$ passes through the point $(0, 0)$. Show that X is a subspace of \mathbb{F} .
<i>Show set is non-empty (usually by showing it contains 0 vector or element)</i>	We see that setting $a = b = 0$ gives the vector $\begin{bmatrix} 0 \\ 0 \\ 0 \end{bmatrix}$, so W is non-empty.	Let $t = 0$. Then, we see that $0 \cdot \begin{bmatrix} 1 \\ 2 \\ 3 \end{bmatrix} = \begin{bmatrix} 0 \\ 0 \\ 0 \end{bmatrix}$ is in V , so V is non-empty.	Define a function $f: \mathbb{R} \rightarrow \mathbb{R}$ as $f(x) = 0$ for all x in \mathbb{R} . Then, the graph $y = f(x)$ passes through $(0, 0)$ (when $x = 0, y = 0$). Therefore, $f(x)$ is in X , and X is non-empty.
<i>Show set is closed under addition</i>	Let $\mathbf{u} = \begin{bmatrix} a_1 \\ b_1 \\ a_1+b_1 \end{bmatrix}$ and let $\mathbf{v} = \begin{bmatrix} a_2 \\ b_2 \\ a_2+b_2 \end{bmatrix}$ be two vectors in W . Then we observe that $\mathbf{u} + \mathbf{v} = \begin{bmatrix} a_1+a_2 \\ b_1+b_2 \\ (a_1+b_1) + (a_2+b_2) \end{bmatrix} = \begin{bmatrix} a_1+a_2 \\ b_1+b_2 \\ (a_1+a_2) + (b_1+b_2) \end{bmatrix}$. Then, $\mathbf{u} + \mathbf{v}$ is in W because W is the set of all vectors whose third entry is the sum of the first two entries. Thus, W is closed under vector addition.	Let $t, s \in \mathbb{R}$ and suppose $t \begin{bmatrix} 1 \\ 2 \\ 3 \end{bmatrix}, s \begin{bmatrix} 1 \\ 2 \\ 3 \end{bmatrix} \in V$. Then, $t \begin{bmatrix} 1 \\ 2 \\ 3 \end{bmatrix} + s \begin{bmatrix} 1 \\ 2 \\ 3 \end{bmatrix} = (t+s) \begin{bmatrix} 1 \\ 2 \\ 3 \end{bmatrix}$. Since $(t+s) \begin{bmatrix} 1 \\ 2 \\ 3 \end{bmatrix} \in V$, V is closed under addition. (It may be helpful for students to observe that $(t+s)$ is a real number and a scalar of the vector $\begin{bmatrix} 1 \\ 2 \\ 3 \end{bmatrix}$, which is the reason why $(t+s) \begin{bmatrix} 1 \\ 2 \\ 3 \end{bmatrix} \in V$.)	Let $g, h \in X$. Then, $y = g(x)$ and $y = h(x)$ pass through the point $(0,0)$. In other words, $g(0) = 0$ and $h(0) = 0$. We see that $(f+g)(0) = f(0) + g(0) = 0 + 0 = 0$. Therefore, the graph $y = (f+g)(x)$ passes through the point $(0,0)$, and $f+g \in X$. X is closed under addition.

²⁷ Kolman, B., & Hill D. R. (2008), p. 200

²⁸ Britton, S., & Henderson, J. (2009)

<i>Show set is closed under scalar multiplication</i>	<p>Let c be a real number. (Denote c to be a real scalar.) Then, we observe that</p> $c \cdot \mathbf{u} = c \cdot \begin{bmatrix} a_1 \\ b_1 \end{bmatrix} = \begin{bmatrix} ca_1 \\ cb_1 \end{bmatrix} = \begin{bmatrix} c(a_1 + b_1) \\ ac_1 \\ cb_1 \end{bmatrix},$ <p>which is in W. Therefore, W is closed under scalar multiplication.</p>	<p>Let k be a real number. Then, $k \cdot \mathbf{t}$</p> $\begin{bmatrix} 1 \\ 2 \\ 3 \end{bmatrix} = (kt) \begin{bmatrix} 1 \\ 2 \\ 3 \end{bmatrix},$ <p>which is in V. (kt is a real number.) Therefore, V is closed under scalar multiplication.</p>	<p>Let k be a real number. Then, $(kg)(0) = k(g(0)) = k \cdot 0 = 0$. This shows that the graph $y = (kg)(x)$ passes through the point $(0,0)$, so $kg \in X$. X is closed under scalar multiplication</p>
<i>Concluding Statement</i>	Therefore, W is a subspace of \mathbb{R}^3 by definition of subspace.	By the definition of subspace, V is a subspace of \mathbb{R} .	By the definition of subspace, X is a subspace of \mathbb{F} .

Figure 2. A table which compares three examples of subspace proofs and emphasizes how they each fulfill the necessary aspects of the formal definition of subspace.

Using Group Work to Challenge Conflict Factors

If time allows for the discussion of subspaces to be divided between two lesson days, this section of the teaching plan may benefit from allowing students to first develop a clearer concept image through self-reflection or through exposure to practice problems at home. In the next day of class, students should be introduced to the “three categories of concept image” that were observed by Wawro et al.: Geometric Object (visualizing a subspace as a plane or line within a vector space), Part of a Whole (understanding a subspace as something “contained within a space”), and Algebraic Object (understanding a subspace as a collection of elements of a set).²⁹ Then, ask students to self-subscribe to one or more of the categories of thought based on their own understanding of subspaces. Students who visualize subspaces of \mathbf{R}^3 as planes, for example, would articulate that they see subspaces as a Geometric Object.

We should note that not one method of thought is more correct than another, and this exercise only serves to help divide students into diverse groups. Allow the students to speak with others who hold a different type of concept image for subspace. Members of each group should informally explain or teach their concept definitions of subspace to one another. Teaching assistants or the instructor may walk between the groups to answer questions and to correct students only when their concept definition is egregious. The goal of this exercise is to allow students to learn from their peers if they do not already have a strong concept image of subspace and to give students the opportunity to address what Tall and Vinner refer to as potential conflict factors.³⁰ Student who finds themselves holding an understanding of subspace which conflicts with their classmate’s now has the opportunity to adjust their concept image. Although students are most likely to alter new information to accommodate their current concept image, Wawro et al. observed that students can fix their concept images of subspace to better fit the formal definition, a skill that the researchers observed as showing “mathematical sophistication”.³¹ By exposing students to different ways of thinking and by encouraging them to actively engage with their own

²⁹ Wawro, M., Sweeney, G. F., & Rabin, J. M. (2011), p. 7

³⁰ Tall, D., & Vinner, S. (1981)

³¹ Wawro, M., Sweeney, G. F., & Rabin, J. M. (2011), p. 17

knowledge, this group activity aims to give students the chance to revise their concept images before taking an exam.

After the group discussions, teachers may find it beneficial to address common conflicting ideas about subspaces together. For example, if the teacher finds that students are confused about the embedding of subspaces in vector spaces, they can use this opportunity to show students why \mathbf{R}^k is not embedded in \mathbf{R}^n for $k < n$. As always, while answering student questions, the teacher should emphasize the importance of referring to the formal definition of subspace. This lesson plan hopes to show students that they may benefit from understanding their potential conflict factors in a meta or self-reflective fashion. This would allow them to identify gaps in their knowledge and to help them practice thinking abstractly. We aim to address student potential conflict factors as soon as possible to reduce future distress for the student.

Future Studies and Conclusion

We have proposed a lesson plan which aims to address students' difficulty with understanding different representations of a set or subspace by carefully choosing and explaining parallel examples of subspaces and by tying the examples back to the formal definition. The lesson attempted to fix students' difficulty with understanding the formal definition by re-writing the definition in a clearer way. Students were then shown how to apply the formal definition in subspace proofs by comparing different proofs and highlighting the general and specific aspects of each exercise. Finally, the lesson hoped to reduce students' struggles to balance overly rigid visualizations with abstract ideas of subspace both by giving a balanced mix of algebraic and geometric examples and by encouraging students to identify conflicting concept images early on.

From here, studies in real classrooms must be conducted in order to test the practicality and effectiveness of this lesson plan. We can start by giving Figure 2 to teachers and conducting a survey on its effect on students' understanding. We observe that there is a chance that students may be overwhelmed or confused by the group exercises. Dr. G noted that teachers can only hope that students do not remain silent when placed into groups.³² We must also study whether students will refuse to change their concept image after such an exercise because some students may be unable to critically analyze their own understanding though simple prompting. These students may simply view their peers' interpretations as a different way of wording their own thoughts, even if that is not the case. Additionally, the level of student enthusiasm and class participation during lectures may also affect the outcome of this lesson. Until further evidence is collected, we merely propose this lesson plan as a possible framework for teaching subspaces in the classroom.

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³² Dr. G, personal communication, April 26, 2020

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“But You Don’t Look Indian?”: Native American Racialization and the Hindrance of Tribal Sovereignty

Kamryn Yanchick

The history of America is inextricably tied to a dynamic and often painful history of race and race relations. From slavery to immigration, civil rights, affirmative action, and even the contemporary debates on critical race theory in education, the United States appears almost obsessed with race and how it manifests in policies that shape the course of our nation. Lesser discussed is how race has influenced federal Indian law and policy. Importantly, race has an especially elusive role in the identity of Native Americans as a distinct political group. The racialization of Native Americans, as a continuation of historical and essentialist stereotypes, has a pattern of obscuring and invalidating the political status of Native Americans as tribal citizens, which in turn interferes with the exercise of tribal sovereignty. This obstruction of political status has dubious historical roots as well as dangerous modern sites of conflict, such as the federal recognition process and the Indian Child Welfare Act, that could have severe consequences for the future landscape of tribal sovereignty within the United States.

Tribes as Nations

Native American people have a unique status in the United States. In conversations around tribal sovereignty and the rights of Native people, it is essential to understand the context around tribal nations. Indigenous peoples and respective political bodies predate the establishment of the United States government and continue to exist today. The creation of a settler nation does not inherently dissolve Indigenous political entities, and the United States recognized this during early interactions with tribes. The Commerce Clause in the Constitution specifically delegates trade with tribes as a responsibility of the federal government along with trade with foreign nations.¹ Furthermore, the use of treaties as the method for legal agreements between the U.S. and tribes for nearly a hundred years shows diplomacy being made on a nation-to-nation basis.² While treaty-making is no longer the standard practice, upholding treaty obligations remains a core tenant of tribal-federal relations.

While the United States federal government has not always supported tribes in fully exercising their right to self-determination, even key decisions that limit tribal sovereignty still recognize its existence. In *Cherokee Nation v. Georgia*, as part of the highly influential Marshall Trilogy, Chief Justice John Marshall dubbed tribal nations “domestic dependent nations,” thereby placing tribes at a level of autonomy less than a completely foreign nation while still upholding the existence of tribes as distinct political entities.³ This domestic dependent nation status is the basis of the federal trust relationship and heavily influences the state of Indian affairs today. Therefore, the state-to-state relationship between tribes and the United States is well-established and subsequently creates a unique and distinct

¹ Art 1, Sect 8

² Judith Thierry, George Brenneman, Everett Rhoades, and Lance Chilton, “History, Law, and Policy as a Foundation for Health Care Delivery for American Indian and Alaska Native Children,” *Pediatric Clinics of North America* 56, no. 6 (2009): 1539–1559.

³ *Cherokee Nation v. Georgia*, 30 U.S. (5 Pet.) 1 (1831).

political status that distinguishes Native Americans from other racial and ethnic minority groups.

Furthermore, Native Americans are not only recognized as politically distinct in the United States but also internationally. Indigenous peoples' inherent right to political and cultural self-determination without forfeiting participation in the settler state is an internationally recognized right. The United Nations Declaration on the Rights of Indigenous People (UNDRIP) states that, "Indigenous peoples have the right to maintain and strengthen their distinct political, legal, economic, social and cultural institutions, while retaining their right to participate fully, if they so choose, in the political, economic, social and cultural life of the State."⁴ This recognizes and protects the dual citizenship status for Indigenous people. Each of the 574 federally recognized tribal nations in the United States has clearly defined criteria for determining citizenship into the tribe. Those who are recognized as citizens of tribal nations are still eligible to be citizens of the United States or other nations, and citizens of both their tribe and the settler state can vote, run for office, and participate in both political systems as citizens.

The distinctive political status of Native Americans in the US is not wishful thinking. This status manifests in our current political system today. Tribes, the Bureau of Indian Affairs (BIA), and the Indian Health Service (IHS) have the ability to exercise "Indian preference" when making hiring decisions without posing an equal protection violation, and Native American individuals also have the ability to obtain medical care at IHS facilities that non-Native individuals cannot.^{5 6} Certain tribal members can exercise specific hunting, fishing, and water use rights that differ from those of non-tribal members as determined by treaty provisions, often to the disapproval and even violent frustration of those non-tribal members.⁷ Hunting rights were not awarded on racial grounds, and access to IHS is not determined by physical appearance. Provisions like these were established by treaties and other government-to-government agreements and serve as examples of Native political status in action.

The legal and political precedents present a clear and unique status for Native American individuals and tribal nations. However, it should not be mistaken to say that political distinction is the sole defining attribute of Native identity. Identity is a deeply personal phenomenon that differs for each individual. For many Indigenous people, culture and kinship to both human and nonhuman entities is a crucial component of identity as an Indigenous person and as a member of a specific tribe, band, or clan. Furthermore, phenotypic attributes can shape how many Native Americans view themselves. However, regardless of how each individual Native American individual chooses to identify themselves, the unique political characteristic that distinguishes Native Americans from other racial, ethnic, cultural, and social groups in the nation remains. Unfortunately, some of these other potential aspects of identity, particularly race, get misconstrued as the primary defining characteristics of Native identity in a way that jeopardizes the importance of tribal citizenship and sovereignty.

The Racialization of Native Americans

Equally important to understanding Native American identity as a political status is understanding race as a social construct. Race is largely constructed and influenced by society's perceptions and categorizations of racial group boundaries rather than strict

⁴ United Nations (General Assembly). 2007. *Declaration on the Rights of Indigenous People*.

⁵ Sarah Krakoff, 2012. "Inextricably Political: Race, Membership, and Tribal Sovereignty," *Washington Law Review* 87 no. 4: 1041-1132.

⁶ Thierry et al., 2009.

⁷ David E. Wilkins and Heidi Kiiwetinepiessik Stark, *American Indian Politics and the American Political System* (Lanham: Rowman & Littlefield, 2018), 69.

biological classifications. One example of shifting racial classifications includes the concept of whiteness as a requirement for citizenship. Courts in the early 1900s struggled to have consistent rulings on whether immigrants from countries like Mexico, Syria, and India were or were not considered legally white for immigration purposes.⁸ Furthermore, how individuals choose to identify racially has changed over time as well. The struggle to categorize these individuals exhibits how racial categories are fluid, subjective, and not always mutually exclusive. Just as perceptions of whiteness are not concrete, perceptions of Native American-ness are also not simply and definitively defined based on phenotype alone.

It is vital to understand that Native American identity, while often presented as based on race alone, is not exclusively or purely racial. While there is an element of kinship that requires the ability to trace one's lineage to those who lived in the Americas pre-European contact, descent and ancestry are not synonymous with the socially-constructed concepts of race.⁹ While there are many individuals who may consider their racial identity to be Native American, it is also entirely possible for someone to identify as mixed race or as a race other than Native American, such as white or Black, and still possess the legal distinction as a Native American if they are a citizen of a tribe.

This is not to say that race is an insignificant aspect of identity for many Native individuals. Many Native Americans have certainly been subjected to racial discrimination from governments and individuals with no regard to their political status. Several states with higher Native populations, such as California, explicitly mentioned Native American in addition to African American children in their school segregation statutes without specifying anything regarding enrollment in a federally recognized tribe.¹⁰ For the many Native American individuals who have been harassed or denied their rights on the basis of non-white features, race is likely difficult to disentangle from their lived experiences as a Native American. Furthermore, for those who refute Eurocentric beauty standards by taking pride in their Indigenous features, race can also be an important source of joy and resistance to colonial ideals and standards as well as a marker of belonging in the Native community.¹¹ The racial component of Native American identity, however, has a problematic habit of overshadowing and obscuring the political component of Native American identity to the detriment of tribal rights.

The issue arises when considering how Native Americans have been racialized to the point of creating an essentialized Native identity that relies primarily, or even exclusively, on race. The concept of racialization involves ascribing racial classifications onto individuals and groups in society.¹² In the public imagination, stereotypes about Native Americans skew perceptions of real Native American people, which includes perceptions about the race of those who identify as Native American. When a disappointing majority of non-Native Americans claim they do not personally know a Native person, a majority of Americans are left to base their perceptions of Indigenous people off of non-personal interactions such as media representations, K–12 history education, and cultural stereotypes.¹³ When Native people are not invisible, they are usually “frozen in time” as

⁸ Ian Haney López, *White by Law: The Legal Construction of Race* (New York: New York City University Press, 2006), 1.

⁹ Sarah Krakoff, “They Were Here First: American Indian Tribes, Race, and the Constitutional Minimum,” *Stanford Law Review* 69 (2017), 496.

¹⁰ Deborah A. Rosen, *American Indians and State Law: Sovereignty, Race, and Citizenship, 1790 – 1880* (Lincoln: University of Nebraska Press, 2007), 123.

¹¹ Hilary N. Weaver, “Recognizing Our Past and Moving Toward Our Future: Decolonizing Attitudes About Skin Color and Native Americans,” *Journal of Indigenous Social Development* 4 no. 1 (2015), 7.

¹² Michelle R. Jacobs, “Resisting and Reifying Racialization Among Urban American Indians,” *Ethnic and Racial Studies* 42 no. 4 (2019) 570-588.

¹³ Reclaiming Native Truth Project, “Research Findings: Compilation of All Research.” First Nations Development Institute and Echo Hawk Consulting (2018).

one-dimensional homogeneous relics of the past.¹⁴ Having such a limited perception of authentic and diverse contemporary Native life constructs a narrow and often incorrect perception of what a “real” Native American is like.

Socio-Political Impact of Breaking Stereotypes

This collection of myths, which scholar Michelle R. Jacobs refers to as the “Indian Imaginary,” becomes the litmus test for Native authenticity.¹⁵ Real-life Native people who do not align with these stereotypes often prompt Non-Native observers to question the authenticity of the Native person themselves rather than to question the accuracy of their schema. This results in a challenge of validity to those who do not match up with essentialist conceptions of Nativeness. Unfortunately, racialization heavily influences the “Indian Imaginary.” Thus, racial purity has become one of the most common standards by which Natives are evaluated when determining the authenticity and validity of their identity. This leaves mixed-race Natives and Natives who do not visually conform to the Native archetype especially vulnerable to accusations of inauthenticity.¹⁶

Breaking stereotypes comes with a price for many individuals and tribes. Physical appearance is not the only stereotype associated with the Native community. The tradeoff for disrupting degrading or essentialist tropes can be liberating in the sense that negative or inaccurate assumptions are proved wrong. Breaking stereotypes can also be out of necessity to survive and thrive, or even out of no conscious or controllable action at all. Jessica Cattelino’s concept of the double-bind of need-based sovereignty exhibits how tribes are forced to face these tradeoffs when breaking stereotypes.¹⁷ Specifically, Cattelino describes how tribes are also stereotyped to be poverty-stricken and dependent on federal support; however, when tribes defy this stereotype by building industry and wealth necessary to exercise their sovereignty, their legitimacy as tribal nations is socially and legally challenged and often negatively characterized as “special rights”.¹⁸ The Seminole Tribe of Florida is one example of the double-bind, as exhibited when they became one of the targets for termination, a process that sought to dissolve the federal recognition and government-to-government relationship between tribes and the United States. By eliminating the tribes, there would be no entity left to receive the provisions of treaty obligations and trust responsibilities that the government owed. The Seminole Tribe of Florida became a target for termination partially based on their economic self-sufficiency earned in large part due to a wildly successful casino gaming industry.¹⁹ In this example of the double-bind, the same stereotype-defying quality that empowered the tribe to become stronger economically and culturally – successful industry – also became the same quality that threatened the tribe’s legal status because it defied what was expected from a tribe.

The double-bind of sovereignty illustrates how straying from stereotypes can have very real and severe negative implications for tribal nations and tribal citizens. Defying racial stereotypes can also evoke real socio-political harm. This does more than potentially spark microaggressive comments such as, “But you don’t look like a Native American.” This racialization can shift perceptions of authenticity that can have political and legal impacts on how tribes and tribal citizens exercise their rights. Understanding the political

¹⁴ Peter A. Leavitt, Rebecca Covarrubias, Yvonne A. Perez, and Stephanie A. Fryberg, “‘Frozen in Time’: The Impact of Native American Media Representations on Identity and Self-Understanding,” *Journal of Social Issues* 71 no. 1 (2015), 39-53.

¹⁵ Jacobs, 2019, 572.

¹⁶ Bonita Lawrence, *“Real” Indians and Others: Mixed-Blood Urban Native Peoples and Indigenous Nationhood* (Lincoln: University of Nebraska Press, 2004).

¹⁷ Jessica Cattelino, “The Double Bind of Need-Based Sovereignty,” *Cultural Anthropology* 25 no. 2 (2010) 235–262.

¹⁸ Cattelino, 2010, 237.

¹⁹ *Ibid.*

history of Indigenous people as well as the social construction of racial categories helps untangle the common misconception that Native Americans are simply and only a racial minority group. However, for many Americans who do not possess this knowledge, the importance of tribal sovereignty and the political significance of Native American identity is often drowned out by the pervasiveness of the racialized image of the stereotypical Native American. Dangerously, the public perception of legitimacy is often just as important as what the historical, political, and legal precedents have set in place.²⁰

Racialization's Political Roots

Ideas and perceptions regarding race have influence over political decisions for Native Americans as well as other groups. The political impact of racialization is no coincidence. Upholding Native people to a myth of racial purity has a history of being used as a tool to diminish tribal political strength and resources. The United States, as a settler colonial nation, benefits from a mythology and contemporary environment that is free of Indigenous presence, and especially from Indigenous resistance. Patrick Wolfe coined the phrase “elimination of the Native” to refer to the constant process of disappearing Native people in order to remove moral and political challenges to colonization and thereby more easily justify taking land and other resources.²¹ By eliminating the Native from the settler State, the moral dilemmas of conquest, as well as the obligations to the Indigenous populations, cease to exist. Even if complete and total biological genocide of Indigenous populations is not possible, elimination can be carried out through alternative channels. Elimination has been enacted geographically through the forced removals and reservation systems as well as culturally through assimilation tactics like residential schools and the criminalization of cultural practices and religious ceremonies.²² Another method of elimination is to implement limiting criteria as to whom a Native person is based on concepts like race and blood quantum.

Blood Quantum in the Allotment Era

The concept of blood quantum, which refers to the percentage of Native ancestry or “blood” one possesses, exhibits how the concept of a Native American race has been weaponized against tribes. The dilution of Native “blood” was viewed as one method to eventually cease tribal existence. Minimum blood quantum standards were not traditional tools tribes used to determine community membership, and in fact, the concept is a relatively recent phenomenon.²³ The federal government crafted blood quantum rules during the Allotment Era, which was a period of federal Indian policy when communally owned tribal reservation land was broken up and divided into individually-owned allotments of land. In order to lower the number of tribal citizens eligible for land allotments, and thereby increase the amount of excess land that could then be sold to non-Native settlers, the federal government undermined tribal authority and briefly implemented minimum blood quantum requirements for tribal citizenship.²⁴ Thus, it became in the best interest of the federal government and non-Native settlers, as opposed

²⁰ Terry P Wilson, “Blood Quantum: Native American Mixed Bloods,” In *Racially Mixed People in America*, ed. Maria P. Root. (Newbury Park: Sage Publications, 1992), 110.

²¹ Patrick Wolfe, “Settler Colonialism and the Elimination of the Native,” *Journal of Genocide Research* 8 no. 4 (2006), 387–409.

²² Raymond Orr, Katelyn Sharratt, and Muhammad Iqbal, “American Indian Erasure and the Logic of Elimination: An Experimental Study of Depiction and Support for Resources and Rights for Tribes,” *Journal of Ethnic and Migration Studies* 45 no. 1 (2018), 2080.

²³ Wilson, 1992, 116.

²⁴ Abi Fain and Mary Kathryn Nagle, “Close to Zero: The Reliance on Minimum Blood Quantum Requirements to Eliminate Tribal Citizenship in the Allotment Acts and the Post-Adoptive Couple Challenges to the Constitutionality of ICWA,” *Mitchell Hamline Law Review* 43 no. 4 (2017), 805.

to tribes and tribal members, to have arbitrarily drawn cutoffs as to who could legally be considered Native American.

Important to note about blood quantum during the allotment process is the unscientific and inaccurate ways these designations were determined. Considering the socially constructed nature of race and the lack of a specific “Indian” definition in allotment legislation, the process for determining blood quantum was inconsistent.²⁵ Especially for those with both Native American and Black ancestry, misclassifications were common, and many mixed Natives were recorded as non-Native and placed on freedmen rolls used to record former slaves of the Five Tribes.²⁶ These incorrect placements on the wrong citizenship rolls continue to pose problems for many freedmen within the Five Tribes considering the unequal citizenship rights that exist between those who are considered tribal members “by blood” and freedmen.²⁷ However, the White Earth Nation is a notable example of how many mixed Natives with white ancestry were also denied Native status, thus resulting in massive land losses for the tribe as a whole that became known as the “White Earth tragedy”.²⁸ This point serves to further emphasize the presence and influence of race in these tribal policies and how the malleable concept of race can often supersede pre-established metrics of Native identity such as kinship systems, cultural belonging, and tribally determined criteria for political citizenship to the detriment of the tribe.

Racialization and Sovereignty

The racialization of Native peoples has unfortunately continued to impact the political strength and sovereignty of tribes. Orr, Sharratt, and Iqbal took an innovative, experimental approach to better understand how attitudes on Native authenticity influence political support for tribes today.²⁹ Overall, their findings indicate that people were less supportive of expanding resource access to tribes that were perceived as less authentic, such as those that possessed characteristics that broke from commonly held stereotypes, including racial purity.³⁰ This piece contributes to the vast literature linking racial beliefs and attitudes to concrete policy outcomes. As much as some may claim the United States is now a post-racial and color-blind society, race still has tremendous sway over political and legal decisions. Two of the most notable contemporary examples of racialization’s negative influence on tribal sovereignty are the ongoing quest for federal recognition for tribes such as the Lumbee, as well as the highly controversial legal battles over the Indian Child Welfare Act.

Federal Recognition

Considering the importance of the political relationship between tribal nations and the United States, the federal and state governments clearly designate which tribes they formally acknowledge as political entities. This designation is known as recognition, and federal recognition is the threshold tribal nations must meet in order to have the formal government-to-government relationship and access various government services and

²⁵ Ibid.

²⁶ Katherine M.B. Osburn, “‘Any Sane Person’: Race, Rights, and Tribal Sovereignty in the Construction of the Dawes Rolls for the Choctaw Nation,” *The Journal of the Gilded Age and Progressive Era* 9 no. 4 (2010): 451-471.

²⁷ Sean Murphy, “Black Freedmen Struggle for Recognition as Tribal Citizens,” *ABC News* (May 1 2021), abcnews.go.com/US/wireStory/black-freedmen-struggle-recognition-tribal-citizens-77437501.

²⁸ Katherine Ellinghaus, “The Benefits of Being Indian: Blood Quanta, Intermarriage, and Allotment Policy on the White Earth Reservation, 1889-1920,” *A Journal of Women Studies* 29 no. 2 & 3 (2008), 81-105.

²⁹ Orr, Sharratt, and Iqbal, 2018.

³⁰ Ibid.

provisions set aside for tribes.³¹ While there are nearly 600 federally recognized tribes across the United States that represent a diversity of cultures, appearances, languages, and histories, there are still several tribes that have failed to obtain recognition and are currently making efforts to achieve this legal legitimacy.

Having a threshold in place is not an inherently negative concept. Not all unrecognized tribes have equal claim to legitimacy, and unfortunately, there have been cases of both individuals and groups who have attempted to use a falsified Native American identity for personal and financial gain, which ultimately “undermines Native self-determination and poses a real threat to tribal sovereignty.”³² Therefore, not only is the concept of recognition not inherently bad, but it even serves an important purpose that can help protect the rights of tribes and their citizens.

However, like many aspects of Indian policy, the concept of a Native race has made the recognition process difficult for some tribes with compelling cases for recognition. There are several different criticisms over elements of the current process, but McCulloch and Wilkins argue that an overarching issue is that recognition relies on how well tribes align with the social construct of an Indian tribe.³³ Furthermore, while blood quantum and phenotype requirements are not currently part of the recognition criteria, a history of race-based criteria for Native status has had lasting consequences for tribes that still lack recognition.

The Lumbee Case

The Lumbee Tribe of North Carolina is currently not federally recognized; however, the Lumbee quest for recognition has been a lengthy, on-going, process with several close calls. The Lumbee have been trying to get recognized since 1885.³⁴ Early chapters in their acknowledgment process involved federal agents conducting physical examinations of a portion of the population to evaluate skin color, hair texture, head size, and more as a way to determine if the Lumbee had an adequate Indigenous ancestry to be eligible for federal recognition.³⁵ However, Lumbee history is filled with accounts of Indigenous intermarriage with both white and Black individuals, and the population’s mixed race appearance had become a point of contention for many outsiders who viewed the departure from the myth of Native racial purity as a sign of illegitimacy. This is not unique to only the Lumbee. The Mashpee Wampanoag Tribe of Massachusetts, which only recently got federal recognition in 2007, had also been refused recognition partly due to its largely mixed-race citizenry that failed to conform to stereotypes.³⁶ ³⁷ However, given the tribe’s location in the ex-Confederacy south, anti-blackness has been an especially powerful force in the stigmatization of mixed race identity.³⁸ The prominence of Black features amongst much of the tribe even prompted local whites to disparagingly adopt “cro,” derivative of “Jim Crow,” as a slur indicating the commonly held belief that the Lumbee were only imposters trying to pretend to be a Native American tribe.³⁹ While a complicated provision

³¹ Stephen L. Pevar, *The Rights of Indians and Tribes* (New York: Oxford University Press, 2012), 271.

³² Rebecca Nagle, “How ‘Pretendians’ Undermine the Rights of Indigenous People,” *High Country News* (April 2 2019) hcn.org/articles/tribal-affairs-how-pretendians-undermine-the-rights-of-indigenous-people.

³³ Anne Merline McCulloch and David E. Wilkins, “‘Constructing’ Nations within States: The Quest for Federal Recognition by the Catawba and Lumbee Tribes,” *American Indian Quarterly* 19 no. 3 (1995), 365.

³⁴ Mark Edwin Miller, *Claiming Tribal Identity: The Five Tribes and the Politics of Federal Recognition* (Norman: The University of Oklahoma Press, 2013), 313.

³⁵ Malinda Maynor Lowery, “Racial Science and Federal Recognition: Lumbee Indians in the Jim Crow South,” In *Recognition, Sovereignty Struggles, and Indigenous Rights in the United States: A Sourcebook*, ed. Amy E. Den Ouden and Jean M. O’Brien (Chapel Hill: University of North Carolina Press, 2013), 67.

³⁶ Pevar, 2012, 271.

³⁷ Haney-López, 2006, 9.

³⁸ Lowery, 2013.

³⁹ Miller, 2013, 314.

of a prior piece of legislation places the Lumbee Tribe in a uniquely difficult position to obtain federal recognition, racial perceptions have nonetheless played a role in their unsuccessful efforts.

Of all the unrecognized tribes, however, the Lumbee Tribe arguably has the strongest case for recognition, making the racial issue that much more significant. While the community outside of the tribe was hyper-fixated on the Lumbee race, they failed to adequately weigh the incredibly strong kinship systems, genealogical records, political structure, and cultural traditions that make the Lumbee who they are.⁴⁰ Lumbee recognition has also been supported by numerous leaders in tribal law, policy, and scholarship who vouch for their authenticity as a legitimate Native American tribe.⁴¹ Recognition legislation has passed a single chamber of Congress multiple times, but so far, for one reason or another, full federal recognition has yet to be won for the Lumbee.⁴² Yet, the Lumbee Tribe continues to assert its authenticity and remain optimistic.

While the Lumbee do not yet have the critical acknowledgment that formalizes their government-to-government relationship with the United States, they are limited in how they can operate as a tribal nation. These limited rights are why the fight for recognition is so significant, and likewise, why the role of race in this conflict has had such detrimental impacts. The impact is not negative because of the racial mixing and diversity itself, but rather because the stigma and labels of inauthenticity that outside entities have placed on physical characteristics has posed a major roadblock to a tribe of roughly 55,000 members who are all impacted by the lack of recognition.⁴³ The solution is not for the Lumbee to prove that their race is “Native enough,” but instead, it rests on the federal government and non-Lumbee community members to accept and understand that the physical characteristics of the Lumbee should not be held to essentialist standards to begin with. Until then, racialization will continue to pose a barrier to full sovereignty for some tribes, such as the Lumbee.

The Indian Child Welfare Act

Another site of racialization that impacts tribes and Native individuals today is the Indian Child Welfare Act (ICWA). ICWA is one of the most significant pieces of federal Indian policy today due to how its controversies frame and grapple with the distinction between Native American identity as a political versus a racial category. The final outcome of ICWA debates is still unknown as the United States Supreme Court could decide to hear an ICWA-related case, *Brackeen v. Haaland*, challenging its constitutionality but has not yet made a decision to do so. A decision on ICWA, despite being about adoption procedures, could have significant implications on Indian law as a whole, given its potential to uphold or disregard the validity of the political status of Native Americans and tribal nations.

Origins

Being able to raise Indigenous children within their tribe is a critical element of cultural preservation and self-determination. It was no secret that the disruption of generational knowledge has been a well-documented tool of cultural genocide and elimination of the Native, as seen in the tragic number of residential schools that took many

⁴⁰ Lowery, 2013.

⁴¹ Miller, 2013, 324.

⁴² Ibid.

⁴³ Chelsea Zhang, Dario Roque, Jessie A. Ehrisman, Nicola DiSanto, Gloria Broadwater, Kemi M. Doll, Paola A. Gehrig, Angeles Alvarez Secord, and Laura J. Havrilesky, “Lumbee Native American Ancestry and the Incidence of Aggressive Histologic Subtypes of Endometrial Cancer,” *Gynecologic Oncology Reports* 13 (2015), 49–52.

Native children away from their communities. Tearing families apart has become such a common practice used against Indigenous families so much so that being able to raise children within their Indigenous community is included in the *Declaration on the Rights of Indigenous People*.⁴⁴ When the next generations of tribal members are being removed from their tribe and stripped of their cultural knowledge and identity, it becomes incredibly difficult to pass down that culture and tribal identity into the future.

ICWA was created in 1978 as a response to the jarring research that found roughly a third of Native children were being removed from their homes, and an overwhelming majority of whom were placed in the custody of non-Native families or institutions.⁴⁵ This mass removal was not always done in the best interest of the child, and in fact, “Congress found that the removals were ‘often unwarranted’”.⁴⁶ Even then, anti-Indigenous prejudice was rampant in the child welfare system, where poverty and non-western kinship structures were interpreted by non-Native social workers as neglectful and unstable family environments.⁴⁷ Psychiatric research also showed how removing Native children from their culture and communities led many Native children to suffer from psychological distress and identity crises.⁴⁸ This cultural isolation would follow children into adulthood, and the rapid rate of children being stripped of their cultural knowledge and identity was a major concern. Recognizing that keeping Native children within the tribe was in the best interest of both the child and the tribe, ICWA was created as a way to try to keep Native children connected to their tribe for the betterment of the child’s well-being and the tribe’s sovereignty.

ICWA created a list of criteria to follow when deciding where to place a Native American child who has been removed from their home. It prioritizes keeping families together unless it is “likely to result in serious emotional or physical damage to the child”.⁴⁹ If a child must be removed, ICWA creates a placement preference hierarchy for the child. First preference goes to a placement within the extended family, then to placement within the same tribe, then to placement within any Native American household, and finally to a non-Native.⁵⁰ Aside from creating a tiered placement preference, ICWA also mandated that the Native child’s tribe was notified when one of their citizens is involved in a custody case and also gives the tribe full or concurrent jurisdiction in these custody procedures.⁵¹ Significantly, this provision helps honor and facilitate the government-to-government consultations that tribal nations should be due when one of their citizens is involved in a legal matter.

Controversy

While this piece of legislation was originally passed with bipartisan support and has been considered a great success by child welfare experts, it has recently been subject to numerous legal challenges.⁵² Opponents to ICWA claim that the law violates the Equal Protection Clause by racially discriminating against non-Native adoptive parents and Native children. The key factor in these oppositions to ICWA, however, goes back to the misconception that “Native American” is a racial classification as opposed to a political classification. In ICWA, the definition of Indian child carefully hinges on tribal citizenship

⁴⁴ United Nations (General Assembly). 2007. *Declaration on the Rights of Indigenous People*.

⁴⁵ Allison Krause Elder, “Indian as a Political Classification: Reading the Tribe Back into the Indian Child Welfare Act,” *Northwestern Journal of Law and Social Policy* 13 no. 4 (2018), 418.

⁴⁶ *Ibid*.

⁴⁷ Hannah Taylor, “Challenging the Narrative: Challenges to ICWA and the Implications for Tribal Sovereignty,” *Northeastern University Law Review* (2020), 1-13.

⁴⁸ Elder, 2018, 421.

⁴⁹ Pevar, 2012, 293.

⁵⁰ *Ibid*.

⁵¹ *Ibid*.

⁵² *Ibid*, 304.

and not blood quantum as a way to reinforce the political, and not racial, nature of this act.⁵³ Furthermore, *Morton v. Mancari*, the case that upheld Indian hiring preference, states that these considerations of tribal citizenship are not akin to racial discrimination since they are based purely on the legal status of tribes and their citizens.⁵⁴ Still, opponents claim the definition of “Indian child” ultimately comes down to race-based criteria and thus results in an Equal Protection violation. These arguments once again show an attempt to obscure the political basis of tribal citizenship by inaccurately attributing race as the defining characteristic of Native identity, this time to the detriment of Native children and their families. A decision that places race over citizenship as the primary determinant of Native American status jeopardizes the significance of the political status of Native peoples and the associated rights, treaty obligations, and sovereign powers of tribal nations. Diminishing Native political status threatens the numerous exercises that this status yields for both individuals and nations.

Another concerning aspect of these challenges, however, is the explicit debate on blood quantum that has occurred in a prior Supreme Court dispute over ICWA. In the famous baby Veronica case, also known as *Adoptive Couple v. Baby Girl*, even the justices seemed to fixate on the significance, or lack thereof, of this particular child’s small blood quantum amount despite her tribe’s citizenship requirements not requiring a minimum percentage.⁵⁵ It is concerning when even the Supreme Court begins to debate if and where there is a limit to whom tribes are allowed to designate as tribal citizens. Like any nation, tribes have the authority to determine who is eligible for citizenship in their tribe, even if others may not always be content with the outcome, and this right has been reaffirmed by the Supreme Court in the past in *Santa Clara Pueblo v. Martinez*.⁵⁶ This conversation has an eerie similarity to the Allotment Era restrictions on tribal citizenship. While there may be a valid question as to if that limit exists, that discussion should be led by tribes themselves and not by federal powers who question whether tribal citizens of federally recognized tribes should be considered legitimate Indian children. Allowing non-tribal entities to determine a cutoff for tribal citizenship opens a dangerous door that could allow outsiders to override any tribal decision that is not viewed as adequately Indian enough. This potentially jeopardized any and all decisions made by tribes, as well as the very composition and existence of tribes themselves. If there comes a day when a tribe’s overall blood quantum does not satisfy the United States’s perception of a Native American tribe, this logic creates a precedent that could very well result in the extinction of that tribe. The United States has already tried to terminate tribes that failed to adhere to certain stereotypes before, such as the wealthy Seminole Tribe of Florida.⁵⁷ ICWA shows a potential future avenue for elimination on racial grounds.

Looking to the Future

While racialization’s potential impact can be severe, especially regarding ICWA, it is important to remember that race is ultimately a social construct that can be wielded to benefit sovereignty, just as some have been attempting to wield it in the opposition. Cattelino states that the way to reconcile the double-bind is not to succumb to its seeming contradictions but to instead refute that the contradiction exists.⁵⁸ The Native American population has always been diverse, and it is projected to become more diverse in the future. The important work lies in correcting the misinformation and stereotypes that have

⁵³ Fain and Nagle, 2017, 858.

⁵⁴ *Ibid*, 863.

⁵⁵ Taylor, 2020.

⁵⁶ Fain and Nagle, 2017, 863.

⁵⁷ Cattelino, 2010.

⁵⁸ *Ibid*, 253.

allowed race to have this much influence thus far by proving that racial determinations of Native identity are inaccurate at best and harmful at worst.

Especially considering the lack of knowledge of the unique political status of tribes and Native individuals, it is no wonder so many Americans only know Native Americans as a racialized minority instead of as citizens of sovereign tribal nations. With the media and education playing such a powerful role in setting up strict stereotypes, these can become sites of change and progress with more accurate and diverse representation both on screen and behind the scenes. Furthermore, social and political discourse surrounding Native Americans must also change. There is a tremendous gap in information about Native people that we deal with on a daily basis, resulting in events like the CNN exit poll that included “White”, “Black”, “Latino”, “Asian”, and “Something Else” voters.⁵⁹ Non-Natives especially have a role to play in elevating Native experiences and honoring the rights of tribal nations. In all possible realms, there must be a conscious effort to repurpose prior sites of elimination into sites of representation and resistance.

Native people must also reflect on how we perpetuate racialization within our own communities. Blood quantum policies, which some tribes have elected to adopt as part of their citizenship requirements, are a highly controversial and sensitive issue in tribal politics. However, for the Native community, unraveling racialization’s hold on our identity involves having difficult conversations about the harm that blood quantum laws perpetuates within our own communities and the dangerous precedents they set for non-Native attitudes and opinions on what it means to be a “real” Native American. Blood quantum is already falling out of favor as people realize how it was designed to eliminate our nations, and more tribes are lowering their blood quantum rules or moving away from it entirely.⁶⁰ Alternative forms of citizenship include the common method of lineal descent, where the percentage of ancestry does not matter as long as it can be traced unbroken from a member on a preset citizen roll. Weaver calls for the decolonization of tribal citizenship requirements and highlights the need for each tribe to rid themselves of colonized ways of thinking and incorporate traditional values and ideas about what it means to be an Indigenous person, and more specifically, a member of each unique tribal nation.⁶¹ With that, there is no set path forward, and each tribe will need to determine what membership criteria best fits their community. It may also be a slow process, but one that already seems to have begun.

Conversations about the intersection of policy and race are usually light on content regarding Native Americans despite such a unique and tumultuous history and ongoing relationship between the two concepts. As citizens of sovereign tribal nations, Native people often get lumped in with other minority groups with little to no mention of this defining political status. While Native identity certainly extends beyond citizenship, other identifying elements and stereotypes are typically overpowering. Unfortunately, when this status is not clearly understood and put into action, the power of tribal nations can suffer as a result. Both historically and presently, tribes see these concepts compete for principal authority over Native status, sometimes with outcomes. Pushing for the paramount legal significance of Native identity as political instead of racial is crucial to not only honoring treaty promises, but also to respecting and perpetuating the strength of tribal sovereignty.

⁵⁹ Mikah Carlos and Nikki Pitre, “Native Voters Played a Huge Role in the 2020 Elections,” *Teen Vogue* (Nov 19 2020) [teenvogue.com/story/native-voters-2020-election-swing-states](https://www.teenvogue.com/story/native-voters-2020-election-swing-states).

⁶⁰ LaDonna Harris, Kathryn Harris Tijerina, and Laura Harris, “Applying Indigenous Values to Contemporary Tribal Citizenship: Challenges and Opportunities” In *The Great Vanishing Act: Blood Quantum and the Future of Native Nations*, ed. Kathleen Ratteree and Norbert Hill (Golden, CO: Fulcrum Publishing, 2017), 316-330.

⁶¹ Hilary N. Weaver, “Recognizing Our Past and Moving Toward Our Future: Decolonizing Attitudes About Skin Color and Native Americans,” *Journal of Indigenous Social Development* 4 no. 1 (2015), 12.

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HIV Criminalization Laws and Public Health Concerns in Texas

Ian Miller

I. Introduction

Curtis Weeks died from AIDS untreated in a Houston, Texas prison in 2013. At this point his appeal, after being denied, was still in pendency after 21 years in jail. Weeks was convicted of attempted murder, a grave offense that bears with it a sentence of life imprisonment. However, no real murder weapon was ever found. The Texas district attorney prosecuted Weeks for something that is scientifically proven to be harmless. Weeks was imprisoned for having HIV and spitting on the face of a prison guard.

The first cases of HIV were first reported in the United States in the early 1980s, where the disease would be termed Gay Related Immune Deficiency (GRID), due to its prevalence among gay men.¹ The unavailability of life saving drugs, slow developing funding sources, and cultural stigmatization led to problems with public health treatment, eventually resulting in a global epidemic. Today tens of millions of people live with HIV while mortality rates have slowed.

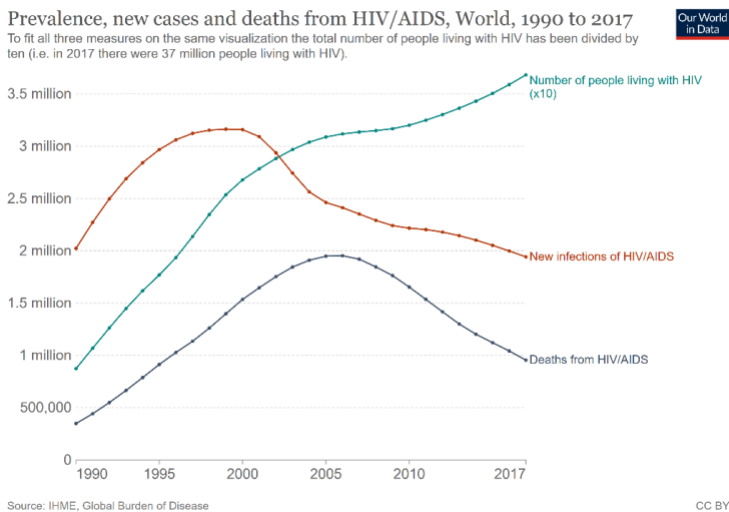


Figure: Evolution of the HIV/AIDs epidemic.²

HIV criminalization laws are one of the greatest travesties of justice in the American legal system. They demonstrate both a lack of public health understanding about HIV transmission and also the severe public health effects of being poor, a minority, or a sex-worker with HIV. The story of Curtis Weeks may seem to apply to only one individual, but in reality it is emblematic of an institutional system that punishes marginalized populations for being in circumstances where they are at the risk of acquiring HIV. This paper explores the legal and ethical foundations of these laws because they demonstrate

¹ Altman, L.K. (1982). New homosexual disorder worries health officials. The New York Times.

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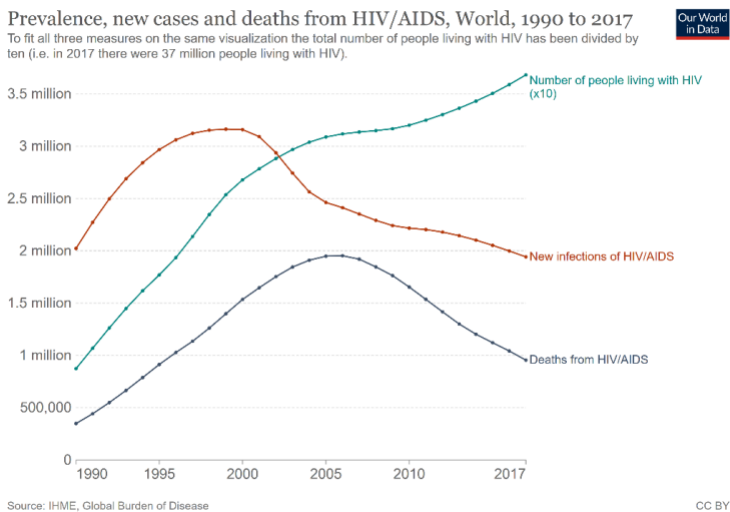


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how institutional systems can perpetuate discrimination, leading to unequal health outcomes. As Clarence Gravlee in “How Race Becomes Biology,” explains, health disparities in racial populations are not natural phenomena but rather a consequence of how social inequities are structured.³ HIV criminalization laws disproportionately target sex workers and people of color and put them in jail for decades. This clearly has health consequences, leading to lower access to medical care and increased vulnerability to violence.

Although there is no federal law that regulates HIV transmission, most state governments have implemented a way to criminalize it, whether through creating a new law or applying transmission penalties to current laws. Emerging research has shown that this disproportionately affects poor and minority populations who are more likely to fall under risk factors for HIV, such as engaging in sex-work or needle-sharing. For example, a study by the UCLA School of Law found that black women in California were more likely to not only be arrested for HIV transmission, but also to be convicted of a felony in court.⁴ Furthermore, vertical transmission from women to children is also criminalized in many states. Csete et. al. (2009) found cases in Florida and Maine, where women were charged with felony child neglect for passing on HIV via breastfeeding even when they feared disclosing their HIV status to an abusive partner.⁵ Even outside of the United States these laws are prevalent. Research shows that HIV criminalization laws in the United States have been modeled by other countries, such as Uganda and Kenya.⁶

II. Historical Context

“And I once called on somebody, ‘Well, change your behavior; if the behavior you’re using is prone to cause AIDS, change the behavior.’ Next thing I know, one of these ACT Up groups is out saying, ‘Bush ought to change his behavior.’”

— President George H.W. Bush

This paper will analyze HIV laws in the context of Texas, who introduced them in the late 1980s. In 1987 Texas Penal Code § 22.012 made it illegal for an HIV positive person to transfer bodily fluids onto someone without their consent. It punished violators with up to a \$10,000 fine and 10 years in prison. This law was targeted towards AIDs activists who would be charged for scratching or spitting on police officers during arrests.⁷ Texas was currently under a Republican governor, and as evidenced by the quote above, the mainstream political atmosphere was very much against AIDs activism. Not only was AIDs attributed to behavioral deficiencies of people, but reactions towards this injustice were effectively silenced by these laws.

In 1994 this law was overturned. However, that did not end HIV criminalization. It was not until 1998 that the Supreme Court in *Bragdon v. Abbott* held that healthcare workers could not discriminate against HIV positive individuals. It is particularly illuminating that in this case GLAD (known at the time as Gay and Lesbian Advocates and Defenders) chose to represent a well-off white woman instead of a drug user or sex worker. Clearly, HIV/AIDs discrimination is an enduring pattern. As this paper will discuss, HIV

³ Gravlee, C. C. (2009). How race becomes biology: Embodiment of social inequality. *American Journal of Physical Anthropology*, 139(1), 47–57. <https://doi.org/10.1002/ajpa.20983>

⁴ Hasenbush, A., et. al. (2017). HIV Criminalization and Sex Work in California. The Williams Institute at UCLA School of Law. 6. <http://www.jstor.org/stable/resrep35015>

⁵ Csete, J., et. al. (2009). Vertical HIV transmission should be excluded from criminal prosecution. *Reproductive Health Matters*, 17(34), 154–162. <http://www.jstor.org/stable/40647457>

⁶ Ahmed, A., & Hull, B. (2011). Sex and HIV Disclosure. *Human Rights*, 38(2), 11–13. <http://www.jstor.org/stable/23032417>

⁷ HIV Law and Policy (2021). HIV Criminalization in the United States. hivlawandpolicy.org

can be implicated under several other Texas laws, including assault with a deadly weapon and attempted murder.

III. Scientific Consensus of HIV

It is indisputable that HIV cannot be spread by biting, spitting, or scratching someone. The best available randomized clinical trials and controlled studies prove that saliva has a negligible amount of HIV and contains several inhibitory compounds, making transmission impossible.⁸ Even if blood containing HIV is present in saliva the possibility of transmission is still zero. Yet, this scientific consensus is not recognized in criminal law.

The legal system also fails to recognize the science behind anti-retroviral therapies (ARTs). ARTs allow for even people who are in most stages of the disease to decrease their viral load to undetectable levels.⁹ This means that AIDs is no longer a death sentence for most people; with ARTs, those infected can live out the course of a normal healthy life.

Lastly, the method of phylogenetic analysis is often misinterpreted in legal settings. Phylogenetic analysis incorporates “gene trees” of mutation to trace how HIV has moved across people. This is often used as evidence to implicate someone for HIV transmission. However, multiple people can be a phylogenetic match for a mutation, so phylogenetic analysis cannot conclusively prove someone is guilty. However, it can rule out someone from transmission if they are not a phylogenetic match.¹⁰

IV. Case Analysis

Prosecutors encourage plea deals by design. Trumped up charges using HIV transmission as an aggravating offense allows for the potential sentence length from conviction to start high, increasing the chances that a defendant will settle for a somewhat lesser plea bargain. If a defendant agrees to settle, their case doesn’t reach the court and is not published as caselaw. If a defendant does not agree to a plea bargain, often they will not have the resources to appeal the trial court’s decision.¹¹ As a consequence, most cases in Texas are swept under the rug. Although there is this lack of evidence, the Center for HIV Law and Policy has found dozens of examples of cases in Texas based on misinformation about HIV. Among these, only three relevant cases are accessible on public databases, *Campbell v. State*, *Weeks v. State*, and *Weeks v. Scott* (which was Weeks’ *habeas corpus* plea).

a. *Campbell v. State*

“He turns and spits. He hits me in the eye and mouth. Then he told me he has AIDS...I know it sounds cliché, but this is why you lock someone up, so our streets are safer. Without him out there, our streets are a safer place.”

– Officer Daniel Waller, “assault victim.”

“You can see why we thought that we needed to get this guy off the streets.”

– Jenni Morse, Lead Prosecutor.

⁸ Barré-Sinoussi, F., et. al. (2018). Expert consensus statement on the science of HIV in the context of criminal law. *Journal of the International AIDS Society*, 21(7), 6, e25161. <https://doi.org/10.1002/jia2.25161>

⁹ Barré-Sinoussi, F., et. al. (2018). 7.

¹⁰ Barré-Sinoussi, F., et. al. (2018). 8.

¹¹ Kane, S., & Mason, T. (2001). AIDS and Criminal Justice. *Annual Review of Anthropology*. 30:466.

“You’re all railroading me. I’m an innocent man.”

– Willie Bernard Campbell, convicted
of assault with a deadly weapon.¹²

At 4:00 AM one night an unreported citizen called 911 because they saw an “unconscious man” sitting near the Federal Reserve Bank of Dallas. The Dallas Police Department arrived at the scene and arrested the man Willie Campbell, who was very much conscious, for public intoxication. When Campbell was strapped into the police car, he supposedly went “totally berserk” screaming and kicking. Police officer Daniel Waller then took Campbell out of the car, pepper sprayed him for “pain compliance,” and called backup. At that point, Campbell supposedly spit at Officer Waller’s face and with a “guttural sound” threatened Waller with AIDs transmission.¹³ No bodycam data or audio recordings were present as evidence.

Texas’ aggravated assault doctrine is supposed to apply to people who commit serious bodily injury or use a deadly weapon in an assault. This crime is a 2nd degree felony and can become a 1st degree felony if it is committed against a police officer. There is a wide range of punishment available, including up to a \$10,000 fine and 5-99 years in prison.¹⁴ Effectively, someone can be punished with life in prison if the judge feels inclined to do so.

Campbell was 42 years old when convicted by the trial court and was sentenced to 35 years in prison, meaning he would get out when he was 75. Campbell decided to appeal his unjust conviction in 5th District Court of Texas. In order to qualify as an assault with a deadly weapon charge, three things are necessary for the prosecution to prove: “(1) the object meets the statutory definition of a deadly weapon; (2) the deadly weapon was used or exhibited during the charged offense; and (3) someone was put in actual danger.”¹⁵ Campbell primarily argues against number 3, proposing that the prosecution’s argument is not factually sufficient to prove that he put Officer Waller in actual danger. Although Campbell is taking the scientifically correct position, the cards are stacked against him. First, appeals courts are biased against overturning a jury’s decision on matters of fact. Waller had a higher standard of proof than the State in this instance because he had to prove a “preponderance of evidence” for his position. Second, Waller as a low-to-no income homeless man did not have access to expert testimony or a prepared lawyer. Instead, he elected to testify in his own defense. The State hired Dr. Laura Armas to testify for the prosecution. Dr. Armas was the Clinical Director for the Texas/Oklahoma AIDS Education and Training Center. In her testimony she incorrectly stated that HIV could be transmitted through saliva and when Waller questioned her about it in cross-examination she argued that transmission is “hypothetically possible” and that there are “unpublished cases.”¹⁶ She even admitted that in her tenure as a Clinical Director for a HIV/AIDs center she had not seen one single case of transmission via saliva. Unfortunately, the judge decided to settle this question of fact in favor of the State, relying on Dr. Armas’ testimony.

Post-decision, this case received press coverage, with several public health workers disagreeing with the notion that HIV could be transmitted through spitting. Deborah Jack, the Executive Director of the National AIDS Trust, replied that “It is shocking that in the same country which has some of the most advanced research into HIV and its treatments, there can be such ignorance within the legal system.”¹⁷ And although she locked up a

¹² The Dallas Morning News. (2008). HIV-positive man gets 35 years for spitting on Dallas police officer.

¹³ *Campbell v. State*. (2009). No. 05-08-00736-CR (Tex. App.). 1.

¹⁴ HIV Law and Policy (2021). HIV Criminalization in the United States. hivlawandpolicy.org. 2.

¹⁵ *Campbell v. State*. (2009). 2.

¹⁶ *Campbell v. State*. (2009). 2.

¹⁷ Bernard, E. (2008). Texas jury concludes saliva of HIV-positive man a ‘deadly weapon’, sentenced to 35 yrs jail. <https://www.aidsmap.com/news/may-2008/texas-jury-concludes-saliva-hiv-positive-man-deadly-weapon-sentenced-35-yrs-jail>

homeless man on bad science, this controversy did not seem to impact Dr. Armas' career. She remained as a Clinical Director for another 10 years before cashing in on a Senior VP position at a health clinic. This leads one to question which communities public health workers serve when they imprison a middle-aged African-American homeless man for an act that cannot possibly transmit HIV. This case helps illustrate how the communities that are at the highest risk for HIV are the least likely to be protected within the legal system.

b. Weeks v. State

Curtis Weeks was transferred between prison units in June of 1988, in midst of one of the hottest summers on record.¹⁸ This practice of transferring inmates can be retaliatory in nature; it separates them from anyone they had got to know in their current prison and makes it more difficult for their family to see them.¹⁹ It should not be a surprise then that Weeks was angry at being put in restraints, placed in a hot prison car, and moved away from his friends and family. He expressed this anger by cursing at the guard in the driver's seat and spitting on them. The criminal justice system decided to retaliate against Weeks by convicting him of life in prison for attempted murder. Similar to *Campbell*, no proof was offered of these events besides the guard's testimony.

Texas Penal Code Sec. 15.01(a) requires proof beyond a reasonable doubt of four elements: "(1) a person; (2) with the specific intent to commit murder; (3) does an act amounting to more than mere preparation; (4) that tends but fails to effect the commission of murder."²⁰ Weeks is primarily contesting number 4 in his appeal, arguing that spitting at a prison officer while having HIV does not "tend" to kill anyone. What is interesting about this case is that both Weeks and the State have at least one expert witness that testifies. Thanks to the efforts of the ACLU, Dallas Gay Alliance, and Texas Human Rights Foundation, Weeks is more prepared in this case than Campbell was.²¹

The case first goes through the testimony of the State's witnesses. Dr. Mark E. Dowell, an infectious disease fellow at Baylor College of Medicine, was the first. Dowell cited a study where HIV was grown in saliva in 3 out of 55 instances, however admitted that it was not proven that HIV could be transmitted from saliva where it is not intentionally cultured.²² Next up, Dr. Paul Drummond Cameron testified that he knew of 10 cases of saliva transmission. Dr. Cameron was expelled from the American Psychological Association by an Ethics Commission 5 years prior to the trial for publishing false studies. He is also known as a prominent anti-gay activist and is classified by the Southern Poverty Law Center as a radical extremist. Dr. Cameron is almost comically unreliable as an expert; he claimed that 17% of gay people eat feces and described homosexuals as "the lower strata...waiters and busboys and bums and hobos and jailbirds and so forth."²³ Lastly for the State, Dr. Lorraine Day, the Chief Orthopedic at the San Francisco General Hospital, testified that HIV could be passed through saliva. Dr. Day admitted that she did not have "any formal training in infectious diseases."²⁴ Shortly after this trial, Dr. Day would step down from her position and start an alternative medicine company that would be later discredited by the Better Business Bureau.²⁵ Dr. Day supplemented her career by

¹⁸ MNR. (1989). Drought of 1988. Minnesota Department of Natural Resources. Iii.

¹⁹ Robertson, J. (2009). "One of the Dirty Secrets of American Corrections": Retaliation. University of Michigan Journal of Law Reform, Volume 42. 612.

²⁰ *Weeks v. State*. (1992). 834 S.W.2d 559 (Tex. App.). 2.

²¹ *Weeks v. State*. (1992). 6.

²² *Weeks v. State*. (1992). 2.

²³ Southern Poverty Law Center. (2021). Paul Cameron. <https://www.splcenter.org/fighting-hate/extremist-files/individual/paul-cameron>

²⁴ *Weeks v. State*. (1992). 3.

²⁵ Barrett, S. (2004). NAD Concludes That Lorraine Day Infomercial Is Misleading. <https://quackwatch.org/infomercial/reports/daynad/>

publishing anti-Semitic documents that denied the existence of the Holocaust and argued that the Jewish people “own the money supply of virtually every country in the world.”²⁶ Like Dr. Cameron, Dr. Day is an extremely unreliable witness, to say the least.

Next, Weeks’ expert witness, Dr. Richard B. Pollard, Professor of Internal Medicine and Microbiology and Director of the Diagnostic Virology Lab at the University of Texas, testified. Dr. Pollard said that it had not been proven that HIV can be acquired by spitting. He also questioned the State’s logic, arguing that the world would have a multitude of more cases of HIV if it could be transmitted by saliva-transmission acts like kissing.²⁷

Unfortunately for Weeks, the cards were still stacked against him. The wrongful conviction in the trial court was not overturned because the appeals court concluded that the evidence of transmission could convince a rational jury to decide against him. The State’s multiple “expert” witnesses make it seem like an unresolved question when in reality the science is settled on this matter.

c. *Weeks v. Scott*

After losing the appeal, Weeks submitted a *habeas corpus* petition to Wayne Scott, the Director of Texas’ Department of Criminal Justice. In this petition, he outlined problems with the prosecution’s conduct, including the fact that they misled the jury.

“[Transmission of HIV through saliva] is not necessarily an element of this case...Nowhere in there does it say that the State has to prove that this man is going to get AIDS. It doesn’t say that the State has to prove that this man has a high probability of getting AIDS. It doesn’t say that we even have to prove that he could even get AIDS this way. It doesn’t say that anywhere in there.”

– Prosecutor, trial court²⁸

This interpretation of the law is incorrect. Texas law requires the murderous act to “tend” to cause death. Despite this clear jury manipulation by the prosecution, the Federal Appeals Court decided to let them off because of a technicality. The court concluded that since the whole of Texas Penal Code Sec. 15.01(a) was recited at the beginning of the trial, the jury had sufficient information to decide the case. However, this is a terrible precedent to set. It effectively allows the prosecution to completely lie about what the law means as long as at one point the actual law is recited during the trial. Weeks’ sentence is upheld even though the State used unqualified charlatan witnesses and lied to the jury.

V. Public Health Effects

HIV criminalization laws have important implications for public health. First, they can increase transmission. Although proponents of these laws state that they have a deterrent effect on HIV transmission by changing people’s behavior, actual data proves the opposite. An analysis by Lee (2015) of testing data during a 7-year period proves that publicization of HIV criminalization cases corresponds with a decrease in testing behavior.²⁹ Texas had at least twenty convictions that were publicized during this period.³⁰ Stigmatizing HIV via criminal penalties decreases the likelihood that someone seeks public health treatment or discloses their status to a sexual partner. This is a clear problem for

²⁶ Day, L. (2006). The Holocaust Lie. https://www.goodnewsaboutgod.com/studies/spiritual/home_study/holocaust_lie.htm

²⁷ Weeks v. State. (1992). 4.

²⁸ Weeks v. Scott. (1995). 7.

²⁹ Lee, S. (2015). Criminal Law and HIV Testing: Empirical Analysis of How At-Risk Individuals Respond to the Law, 14 YALE J. HEALTH POL’Y L. & ETHICS. 199.

³⁰ Lee (2015). 204.

public health; testing and treatment can save lives. PrEPs and ARTs are more effective at reversing the course of HIV/AIDs if they are taken earlier in time when someone's viral load is lower.

Second, these laws can cement health disparities among marginalized groups. Street-based sex workers, who are more likely to be low-income people of color, are more likely to be confronted by the police and convicted under HIV transmission laws. This is especially true for trans sex workers who are more likely to be profiled by the police.³¹ Going into prison impacts both the mental and physical health of people, increasing the chances of suicide and sexual abuse. And inadequate medical care inside prisons increases the risk of dying from HIV/AIDs.³²

VI. Responses to HIV Criminalization

As this essay has shown, legal solutions often fail to stop HIV criminalization. Yet, instead of giving up on change, these approaches should be combined with community-based activism against the prison-industrial complex.³³ Public health officials should follow the scientific consensus on HIV instead of ignorantly assuming that it can be spread by saliva. Lastly, those involved in public health surveillance should pay attention to how their data could be used by the police to wrongfully convict people under these laws. Resisting subpoenas and refusing to testify for the prosecution can help prevent someone from being confined to jail.

Curtis Weeks and Willie Campbell did not deserve to have their lives taken away from them simply because they had HIV and upset an officer. Every time the State of Texas convicts another person based on scientifically invalid laws, they increase the stigmatization that comes from this disease. Public health does not take place purely inside hospitals and clinics, but rather penetrates other institutions, such as the criminal justice system. Scholars should better understand how these laws affect health and how they are used against marginalized populations to cement inequality.

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³¹ Baskin, S., et. al. (2016) Criminal Laws on Sex Work and HIV Transmission: Mapping the Laws, Considering the Consequences. *Denver Law Review*. 93:2. 359.

³² Davis, A. Y., & Shaylor, C. (2001). Race, Gender, and the Prison Industrial Complex: California and Beyond. *Meridians*, 2(1), 9-12. <http://www.jstor.org/stable/40338793>

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“Authentically Bad”: Perceptions of Authenticity in Recorded Classical Music

Julianna Voelker

Introduction

From the birth of recording technology to today, recordings have become an integral part of how society consumes music. As access to music streaming services becomes more widespread and in-person concerts grow scarcer, one is more likely than ever to encounter a piece of music—including classical music—digitally rather than acoustically. Just as recordings in R. Murray Schafer’s discussion of soundscapes can isolate details otherwise missed and preserve sounds threatened with extinction, classical music recordings can highlight the nuances of certain pieces of music, better realize the composer’s intent, and preserve a piece or performance long after it has taken place.¹ As I have found in my own experience as a classical musician, recording is a prominent part of a classical musician’s career, either in the form of studio recordings—done in a special recording studio by audio engineers and music producers—or live recordings—taken while a live performance occurs on stage. In highlighting these two types of recordings, studio and live, I discuss what the distinction is between them and whether one type of recording is better than the other based on that distinction. “Better” is evaluated through two main categories: authenticity and “bad” versus “good.”

In my research, I aimed to explore how perceptions of authenticity and “bad” classical recordings relate to and reflect perceptions of authenticity in live performances and additionally how these perceptions change based on one’s position in the recording process. Authenticity in this paper spans various meanings and interpretations based on the perspectives of my interviewees, but we can generally understand authenticity as “not just ‘a vague sensibility or aesthetic,’ but rather ‘a cultural value anchored in concrete, historical practices of production and consumption.’”² Therefore, each person’s perception of authenticity originates from their own culture, beliefs, and relationship with classical music, as well as from an established set of beliefs within the classical music community. Authenticity can, in fact, be rooted in aesthetic, but that aesthetic depends on one’s expectations of classical music. Similarly, we cannot define “bad” music in any one concrete way; ultimately, “there is no such *thing* as bad music. Music only becomes bad music in an evaluative context, as part of an argument.”³ I will therefore discuss perceptions of “bad” music as they relate to authenticity.

By interviewing participants from various stages of the recording process and combining these interviews with my own experiences, I explored a range of perspectives in order to build a discourse regarding authenticity in recordings. I supplemented my fieldwork and interviews with literature regarding authenticity, recording technology, and “bad” music. My discussion, therefore, involves a detailed explanation of the recording process and a comparison of that process to live performances, upon which we can build discourses of authenticity.

¹ R. Murray Schafer, *The Soundscape: Our Sonic Environment and the Tuning of the World* (Rochester: Destiny Books, 1993), 208–209.

² Kiri Miller, “Schizophonic Performance: Guitar Hero, Rock Band, and Virtual Virtuosity,” *Journal of the Society for American Music* 3, no. 4 (2009): 406.

³ Simon Frith, “What is Bad Music?” in *Bad Music: The Music We Love to Hate*, ed. Christopher Washburne and Maiken Demo (New York: Routledge, 2004), 19. Emphasis in original.

The Recording Process

My fieldwork centered around the structure and culture of studio recording sessions. As an active professional musician, I drew upon my own experiences with performing and recording as well as the experiences of my interviewees to build the framework of a typical recording session and its participant structure. As an insider in this process, I hold my own subjective opinions about the topics that I investigated. However, viewing my professional musical life through the lens of my research has changed the way in which I am “in the world” of musical recording, and thus I have attempted to remain as unbiased as possible.⁴

In our interview, “Jonathan,” a recording technician and music producer, described three stages of a studio recording session: pre-production, production, and post-production. During pre-production, musicians and recording technicians discuss their expectations for the recording session and identify the requisite technology and equipment needed for the project in order to achieve the desired sound. This process also involves budgeting and scheduling; the budget governs decisions regarding sound, such as types of microphones used or effects to be added in post-production, as more technology requires more money. Thorough preparation in pre-production makes the recording process itself—production—run smoothly and efficiently. First, musicians enter the recording studio and the recording technicians set up microphones accordingly. Then, the musicians perform either sections of a piece or the entirety of the piece as many times as they want within the constraints of their session time. In post-production, producers edit, mix, and master these individual performances—called takes—into a single, professional-grade recording. This recording is then published—either as part of an album, individually, or for a specific purpose (e.g., advertisement of a composer’s work)—and listened to by both musicians and non-musicians.

I have thus identified three main participant groups within the studio recording process: performers, recorders, and listeners. Performers produce the music and sounds—vocally or instrumentally—that are then processed, mixed, and listened to once released. Performers often have the final say on how a recording turns out, and each performer has their own specifications and preferences for how they want their recordings to sound. To make the recording session run as smoothly and efficiently as possible, performers put in most of their work prior to the recording session. This involves practicing individual parts, identifying the tonal and expressive characteristics they want to convey in their music, and working with collaborators, such as the composer or other ensemble members, to achieve a cohesive artistic vision.

Recorders consist of audio engineers, producers, and other technicians involved in the actual recording process. Before a performance, recorders set up the microphones and adjust sound levels; after a performance, they edit, mix, and master the music. Recorders put in most of their work following the recording session. They begin building the final product by compiling the takes from the session and isolating—with the input of the performers—the most musically expressive take. Editing involves cutting, splicing, and crossfading audio tracks in order to combine the various takes from the recording session into one “good” composite track for each instrument (although this definition of “good” differs from performer to recorder). Recordors then mix the separate tracks, manipulating the overall sound via techniques such as equalizing, compressing, and adding reverb. Finally, recorders master the combined mixed tracks to create a professional recording that plays well on all speakers.

Listeners can be both active and passive. Active listeners pay attention to specific musical details when listening to a recording. Examples of active listeners are musicians

⁴ Melvin Butler, “Musical Style and Experience in a Brooklyn Pentecostal Church: An ‘Insider’s’ Perspective,” *Current Musicology* 70 (2000): 39.

listening to a recording to inform their own playing and students listening to a recording in class to discern its historical or cultural context. By contrast, passive listeners listen to recordings casually or recreationally, typically as background music while doing another activity. Passive listeners interact with recordings after the entire recording process is finished via streaming services such as Spotify, on CDs, and through other mediums of listening to recorded music. Both types of listeners view the original source of the music from a distance—through speakers or headphones—and are thus disconnected from the visual nature of a musical performance.

Although I have divided them into categories, these participant groups overlap substantially, creating a complex participant structure. Performers may also be recorders; for example, music students often record themselves playing audition and performance excerpts and may edit and mix the recordings. Even if they are separate individuals, performers and recorders work together to create a satisfactory finished project, and they must resolve potentially conflicting perceptions of authenticity and of what makes music good or bad. Additionally, while recorders must take into account artist-facing authenticity (performers' perceptions of authenticity), they also must consider audience-facing authenticity (listeners' perceptions of authenticity). To complicate matters, performers and recorders listen to their own recordings to make alterations or fix mistakes, making them active listeners as well.

“Straight Up Different Art Forms”

The recording process described above looks very different from a live classical performance, beyond simply the ability to perform a piece more than once. Live performances take place in front of audiences in concert halls with an abundance of ambient room noise and contain a visual element that plays a prominent role in the performance. These performances are, to an extent, spontaneous and depend just as much on the environment as they do on the performer. Recorded performances are isolated, with typically only the performers and the recording engineers in the studio when the recording takes place. The question then arises: can we compare recorded performances to live performances?

According to “Jonathan,” we cannot. However, rather than decreasing the authenticity of recordings, he stated that “the editing process is intrinsic to the art form of recording” and further stated:

I think the editing process, is authentic to the process of making a great recording. Now, you can do live recordings, but I think like that is an art form in and of itself. And I think it is, totally authentic and accurate to the, the goal of what a recording is. But, it is not in any way inauthentic, or is not in any way authentic or representative of, their performance in the studio. Like that would be like if you just turn it on and then record them for eight hours doing all the takes, then you let someone hear all the takes, that would be an accurate, performance of that. But that's not what that art form is. It's like, is a movie inauthentic 'cause it's been edited?

I found this comparison of audio recordings to movies particularly compelling because it put into perspective what I had subconsciously been labeling as “authenticity.” I entered this research expecting to explore the relationship between live and classical performances through the lens of authenticity, and to me, that entailed discussing whether recordings are somehow “fake” due to their heavy reliance on editing and mixing to create the “perfect” sound. Instead, I began to understand that comparing live performances to recorded

performances is akin to comparing movies to plays. In short, they are two different art forms entirely.

Mark Katz alludes to this in his discussion of “the work” in his book *Capturing Sound: How Technology Has Changed Music*. In discussing the repeatability of recordings and the subsequent uniqueness of live performances, he states that “live music is ... repeatable, but in the form of works, not performances.”⁵ For a live performance, the “work” is a piece of music—for example, Beethoven’s Fifth Symphony. For a recording, however, the “work” becomes an *interpretation* of a specific piece of music rather than the piece itself. When someone listens to the same recorded performance repeatedly, they internalize the idiosyncrasies of that performance and come to expect the same features in every performance of that piece.⁶ “Agnes,” a graduate saxophone student, described when she had “listen[ed] to a movement of like a, saxophone quartet, *so much*, that [she] had *that* kind of, um, interpretation in [her] mind” and how she was surprised when the live performance differed from that interpretation. The transformation of the “work” from the original piece of music to an interpretation of that piece supports the idea of live performances and recorded performances being separate art forms.

When comparing live and recorded classical music, considering them as separate art forms rather than two manifestations of the same art form casts discourses of authenticity in a different light. When asked whether fixing mistakes in a recording sacrifices authenticity, “Oliver,” a professional saxophonist and educator, stated that fixing mistakes might make a recording an inauthentic representation of a live performance but that recordings are “different animals” than live performances. Therefore, recordings are an “authentic representation of the intellectual concept, *behind* the artist, *behind* the artistry, behind artistic expression,” so we should hold them to a different standard of authenticity than live performances. In “The Work of Art in the Age of Mechanical Reproduction,” Walter Benjamin supports this split in authenticity with his discussion of removing a work of art’s dependence on its original function or environment. He establishes that “the presence of the original is the prerequisite to the concept of authenticity” but that mechanically reproduced art forms such as recordings shift the focus of this authenticity from uniqueness to other criteria, which differ based on the art form.⁷ The live performance is the original, and the recording is the mechanical reproduction; their standards of authenticity cannot be equated.

“Sounding Like It’s Live”

However, despite this distinction between live and recorded performances that I observed in my research, there still seems to be an underlying, subconscious comparison between live and recorded music. As non-musician “Tim” stated, there is still the expectation that authentic recordings should “*sound* like you [are] *sitting* in an orchestra room listening to, a *classical* performer perform.” This inconsistency—that recordings should sound like live music but that recordings are fundamentally different than live music—appeared in nearly every interview I conducted but most prominently in the performers’ interviews. I have connected these conflicting expectations to the concept of the “performance of authenticity” from Matthew Wheelock Stahl’s article “A Moment Like This: American Idol and Narratives of Meritocracy.” This concept involves the idea that a portrayal of authenticity—like the amount of extensive editing and mixing that goes into

⁵ Mark Katz, *Capturing Sound: How Technology Has Changed Music* (Berkeley: University of California Press, 2010), 29.

⁶ Katz, 29.

⁷ Walter Benjamin, “The Work of Art in the Age of Mechanical Reproduction,” in *Illuminations*, ed. Hannah Arendt, trans. Harry Zohn (NY: Schocken Books, 1968[1936]), 220.

recordings to make them sound like they are live—does not reflect actual authenticity. Essentially, listeners expect to hear something that sounds like a live performance—the portrayal—while still recognizing that that portrayal is not authentic to live performances, leading to the divide between recordings and live performances as works of art.⁸

Though the passive listeners I interviewed held the strongest opinions about recorded music “sounding like it’s live,” this mentality appeared in performers’ interviews as well, though typically with the caveat that recordings are still authentic—just not *as* authentic as live performances. “Agnes” stated:

Uh, I have both *live* performances and *recorded* performances, uh, and the recorded performances are not as authentic as like a *live* recital would be because if I, mess something up, I can go over and start over, but I’ve never done any *splicing* or anything like that? So, I would say a live performance would be, a little bit more genuine, more authentic than a, recording session, *because* I can start and stop if I don’t get a good take, but, *each* of them, are authentic in the sense that it’s like, *that* is an exact representation of how I played in that moment? Um, even though in a recording session, I can, I can start and stop that is *still*, a genuine representation of however, long that piece was however, it happened in the moment.

“Oliver” echoed this in his description of his quartet “elect[ing], to keep key clicks *in* because that’s more *authentic* to live playing [...] so it sounds like people are actually performing” and his later statement that “I don’t know if I could say that [recordings are] any less *authentic*. It’s just a different *kind* of authen, authenticity.” Both performers asserted that recordings are, in part, meant to emulate live performances, but both also claimed that we cannot hold recordings and live performances to the same standard of authenticity.

Some of the desire for recordings “sounding like they’re live” comes from a familiarity with a certain instrument timbre, performance style, or sound that is lost in recordings. Matt Sakakeeny in his book *Roll with It: Brass Bands in the Streets of New Orleans* describes a recording session of a brass band where “the band’s initial performance was augmented with tambourines, cowbells, clapping, and vocal whoops and hollers that recontextualize the recording out of the studio and into the streets and intimate spaces of live performance.”⁹ This augmentation brings the listener into the streets of New Orleans by creating a recording as similar to a live performance as possible. Additionally, undergraduate saxophone performer “Peter” stated that when you overmix a recording, “it *doesn’t* sound like a saxophone anymore” and “that’s *not* authentic, like *you* played the saxophone doing it, *somebody* played saxophone doing it, and it *doesn’t* sound like a saxophone...”

Regarding timbre, some interviewees also perceived an inherent inauthenticity within the recording process. Sakakeeny hints at this with his description of the brass band The Soul Rebels both “constructing songs that are intentionally produced for recordings” and creating an “overdub-free,” acoustic version of their album *Rebellion*.¹⁰ The need for an album that “sounds like it’s live” indicates an inherent inauthenticity within the recording process, an idea that is reflected in “Peter’s” claim that “if [a microphone is] not capturing the sound you *hear*, when you play, then it can’t be authentic.” When combining this

⁸ Matthew Wheelock Stahl, “A Moment Like This: American Idol and Narratives of Meritocracy,” in *Bad Music: The Music We Love to Hate*, ed. Christopher Washburne and Maiken Derno (New York: Routledge, 2004), 220.

⁹ Matt Sakakeeny, *Roll with It: Brass Bands in the Streets of New Orleans* (Durham: Duke University Press, 2013), 43.

¹⁰ Sakakeeny, 137.

statement with “Jonathan’s” assertion that “you’re *never* doing a *true* replication of the instrument because you’re trying to replicate it *through* a medium of (xxx) speakers,” we see that recordings—which use microphones rather than the ear to capture sound—simply cannot be as authentic as live performances due to their technological constraints.

Another component of the inherent inauthenticity of recordings regards their disconnect from the visual component of a performance. “You can’t see the look on somebody’s face,” “Peter” said. “You can’t, *feel* the energy that they’re, uh, *exuding* through just their posture, their position.” Non-musician “Georgina” echoed this: “[W]hen you’re listening to a recording at, at *home*, uh, you sort of have to *imagine* what the rest of the experience is.” Kiri Miller describes this disconnect using R. Murray Schafer’s term “schizophonia:” “the split between a sound and its source, made possible by recording technology.”¹¹ In this case, the split affects listeners’ ability to perceive a recording as a live performance, and it often either detracts from a listener’s enjoyment of a piece or necessitates a higher level of expressiveness to keep the listener engaged. Katz echoes this by claiming that “in order for recorded music to be comprehensible, listeners must visualize a performance”¹² as “what we hear is deeply influenced by what we see.”¹³ Similar to the use of microphones, the ability to edit and mix away mistakes, and the repeatability of a certain interpretation, the faceless nature of recordings both separates recordings (and their definition of authenticity) from live performances and strengthens the idea that live performances are the default standard of authenticity—a standard that recordings fall short of.

“Note-Perfect”

In May of 2018, I entered Catlett Music Center at the University of Oklahoma (OU) empty-handed to listen to a saxophone recital and left with a signed copy of Elysian Quartet’s album *Red*. It is not uncommon for collegiate saxophone quartets to record an album before disbanding as they move on to other schools, and given that I had heard Elysian play live many times, I was ecstatic to have a physical copy of their album. One of the songs on this album, *Ciudades: III. Addis Ababa* by Guillermo Lago, features an exceedingly challenging baritone saxophone solo with large pitch jumps into the lower range of the horn.¹⁴ On *Red*, the baritone saxophone player performs the solo note-perfect—meaning that every note is correct, both in rhythm and in pitch. For all the times I had heard the group perform live, I had never heard the solo played flawlessly. I conferred with the other members of OU’s saxophone studio regarding this discrepancy.

The baritone saxophone player had apparently played the solo at a slower tempo in half-second intervals and then spliced it together into a technically perfect recording. For reasons I could not yet put into words, this bothered me. When I mentioned this recording, “Peter” put a name to my feelings of unease: *artistic intent*. He stated:

There *is not intent* behind *each* of those, ‘cause he recorded it beat by beat. And so *each* beat, there was not *intent* behind each of those beats to *make* a flowing line, to do that. There was intent of *only* making it perfect. And like I said, that’s the baseline. And so what they *got* was at least for *that* portion of *that* piece, they got a *baseline* recording...

¹¹ Miller, 400.

¹² Katz, 22.

¹³ Katz, 25.

¹⁴ “Ciudades: III. Addis Ababa,” by Guillermo Lago, track 6 on Elysian Quartet, *Red*, Blue Griffin Recording, Inc., 2018, compact disc.

Like, *how* are you going to, (xxx), the, *how* are you going to artistically have a design, whenever these are like, a *line* that connects for multiple beats, how are you going to play *one* part of a, constant line and *keep* it authentic?

In this, “Peter” establishes that one requirement for overall musical authenticity is artistic intent. For almost every person I interviewed—performer, recorder, and listener alike—correct notes and rhythms were, as “Peter” said, the “baseline.” The true measure of musicality—and thus musical authenticity—comes from what lies beyond the baseline: tonal color, musical expression, and individual interpretations, among others.

Therefore, the question arises: by striving for musical perfection, do we sacrifice musical authenticity and artistic integrity? As “Oliver” and “Peter” stated, “the industry standard of classical music recording is perfection.” Similarly, when I asked “Jonathan” if recordings with technical errors and few edits are more authentic than recordings with no errors and a lot of edits, he said, “You don’t get *paid*, to release authentically bad recordings of authentically bad performances. You *do* sometimes get paid, to release *inauthentically good* recordings of authentically bad performances, however.” It seems, then, that technical perfection supersedes authenticity within the professional recording field.

However, when asking interviewees if they would still consider performances with wrong notes “good,” the near-unanimous response was yes. Interviewees maintained that expressive music that inspires emotion within listeners and conveys the performer’s intent and artistry is good music, regardless of (small) technical errors. As “Oliver” stated, “[S]ome performances have this innate ability to connect with the fabric of our soul, the fabric of our being. That’s why music is as old as language. And I think it’s this like, *unquantifiable* thing that we associate ourselves in our being with certain things. And that’s *opinion*, that’s *aesthetic*. That’s saying I, I, I love how this *sounds*, or, or, or *not*.”

We then circle back to my (and “Peter’s”) disquiet with *Ciudades: III. Addis Ababa*, which is that the solo is technically perfect but the emotion is lacking. “Georgina” said that as someone focuses more on technique, “[they] could become more concerned with perfection, and sort of lose *sight* of the authenticity slash enjoyment.” It appears, then, that perfection and authenticity strike a delicate balance. Pushing for too much musical perfection sacrifices emotional authenticity, and straying too far from musical perfection makes a recording “bad” regardless of any emotional authenticity it may contain.

Simon Frith comments on this balance in his article “What is Bad Music?” He notes that musicians consider “music that is badly played, that reflects inadequate skill, technique and so forth” to be bad music but also that striving for technical perfection can result in a cold, lifeless performance.¹⁵ He continues, “Musicians may be also criticized for emptiness; bad musicians indulge in form at the expense of content, make music that ‘has nothing to say’ but says it elaborately anyway. Their music is not made for any reason except as a display of technical skill”.¹⁶ This concept of technically-obsessed music only serving to show off one’s virtuosity connects directly to the desire for emotional authenticity I found in my interviewees. As “Peter” put it, “[M]y definition of authenticity with that regard, would be? *Do* I get across the *message*, that I am aiming, to get across? [...] I can’t, *play* anything, that’s *not* authentic. That *doesn’t* relate to me. If it doesn’t relate to me, nobody will care. Nobody will listen to it.”

¹⁵ Frith, 27.

¹⁶ Frith, 27.

Conclusion

Through my research, I found that perceptions of authenticity in classical music center mainly around the relationship between live performances and recordings. Understanding that live performances and recordings are two separate art forms casts discourses of authenticity regarding recordings in a different light and allows for the establishment of separate definitions of authenticity for each art form. However, interviewees still expressed the opinion that recorded music should, to an extent, reflect live performances, assigning a level of humanness and artistic integrity through this association with a “real” performance. The need for visualization and adherence to the original instrument timbre and sound play into this desire for live-sounding recordings. The question then arises whether editing recordings to achieve perfection eliminates this connection to live music and subsequently, artistic integrity. Perceptions varied across participant groups but ultimately centered around the desire for music that conveys emotion and expresses the musician’s intentions. In short, people want music that *means* something. “[Y]ou can hear the difference between people who *understand* music and those who don’t,” “Georgina” said. “[M]usic isn’t perfect. And that’s, kind of what, what makes it special.”

Appendix: Transcription Key

comma	brief pause or breath
<i>italics</i>	increased stress/emphasis
?	upward rising intonation
.	downward falling intonation
...	long pause
[...]	omission
(xxx)	inaudible utterance
[word]	transcriber’s addition or alteration, for clarity

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Turbine Trouble

Cricket Kaya

Introduction

I remember the day the turbines came to town. “They look like alien spaceships,” my mom said, as we sat on our front porch and watched them go by. Gigantic white blades and poles strapped to eighteen-wheelers powered past our cottage on Main Street in Kingfisher, Oklahoma. The convoy made quite a spectacle. Trucks linked together for miles, extending from one edge of town to the other. At the time, it felt like a military parade. Neighbors withdrew from their houses to watch, and kids talked about it at school the next day.

For several months, anti-wind yard signs stood around neighbors’ yards, and graphics were shared on Facebook reading “Save Oklahoma! NO wind turbines here.” At the age of 16, I knew that people were angry. It was a feeling you could sense among the small community of 5,000. Wind energy was difficult for me to understand at the time, especially as a young person who was fearfully aware of my future amid the imminent threat of climate change. On our recurring drive to my grandparent’s house in the nearby town of



Piedmont, my parents and I often argued about the turbines as we passed by dozens of them. I could not comprehend how my parents, who bought a Toyota Prius in 2008 to “save the planet,” would possibly protest the development of clean energy. Likewise, many of their friends from the community held membership in the Oklahoma Wind Action association, a local activist group of wind energy opponents.

Five years later, I am a senior at the University of Oklahoma, studying international development with a concentration in environmental sustainability. For my honors thesis, I set out to study the Kingfisher wind conflict. I desperately wanted to know why the community that raised me had been so opposed to wind energy. Was it conservative politics? A competition with oil and gas? Or perhaps, they simply did not like the way the turbines looked? I knew that the support of small communities, especially in rural America, would be integral to an energy transition to fight climate change— so why were they so antagonistic? Throughout my research, I found a surprising shift in my perspective.

As I visited with locals and constructed an archival timeline, I unraveled an enduring narrative. Initially, I blamed the citizens of Kingfisher for deterring development. Yet in a full reversal, I began to see the wind developers as a barrier to progressive change. Rather than manifesting promised opportunities for local growth and partnership, I found that the large-scale developers estranged the community and exploited their resources. Apex Clean Energy Incorporated, the primary assailant, inserted itself into the community as an authoritarian force of corporate greed.

In search of explanations, I encountered a divisive landscape among Oklahoma scholars. Most research from the Oklahoma wind energy literature highlights the positive impact of rural wind energy development. Quantitative research by Mark Geisken, John

Scott Greene, and Becca Castleberry illuminate growth across the state.¹ In contrast, Tanya Woody, and Burch et.al present qualitative work, demonstrating how wind development creates disharmony and confusion in Oklahoma communities.²

Although Oklahoma-centered research offered essential local context, my goal was to situate the Kingfisher case study within a larger conversation of a climate-conscious energy transition. Outside the borders of Oklahoma, I found a plethora of guiding research that articulates the impact of intrusive wind development on rural communities worldwide.

Anthropologist Cymene Howe introduces the fundamental concept of *anthropocenic eco-authority*, a theory that identifies a trending resistance to renewable energy as a consequence of authoritarian power structures in the era of the anthropocene.³ Anthropocene was coined by the biologist Paul Crutzen in 2000, to distinguish the most recent epoch of geologic time characterized by changes in the climate and intricate alterations in the chemical makeup of Earth's soil and atmosphere.⁴ With this guiding perspective, scholars demonstrate how neoliberal strategies of multinational development bleed into the emerging energy transition. Peter Newell and Dustin Mulvaney recognize these power structures, and propose that such systems are not sustainable without the integration of *environmental justice* in the form of a *just transition*.⁵ In practical application, scholars advocate for the pursuit of an *energy democracy*—the movement towards community-led, localized power generation and feedback loops.⁶ In rural communities, the literature offers examples that demonstrate a heightened opportunity for energy resilience, and applies examples of working localized systems.⁷

Though exploratory arguments apply to rural Oklahoma, the existing literature has not yet applied theories and ideas concerning the political economy of wind energy within the larger international energy transition. I argue that wind energy development does not pose a separate, more ethical authority than oil and gas in Oklahoma. Rather, I explain how an existing energy authority prohibits the localized progressive growth of nearby communities, and reinforces an extractive hierarchy rooted in corruption. This paper demonstrates such trends, by synthesizing qualitative literature from the Oklahoma political landscape and the broader discourse of international development theory and applies this framework to the Kingfisher case study.

¹ Castleberry, Becca, and J. Scott Greene. 2017. "Impacts of Wind Power Development on Oklahoma's Public Schools." *Energy, Sustainability and Society* 7 (1): 34.; Greene, John Scott, and Mark Geisken. 2013. "Socioeconomic Impacts of Wind Farm Development: A Case Study of Weatherford, Oklahoma." *Energy, Sustainability and Society* 3 (1): 2.; Castleberry, Becca, and John Scott Greene. 2018. "Wind Power and Real Estate Prices in Oklahoma." *International Journal of Housing Markets and Analysis* 11 (5): 808–27.

² Burch, Claire, Rebecca Loraamm, and Travis Gliedt. 2020. "The 'Green on Green' Conflict in Wind Energy Development: A Case Study of Environmentally Conscious Individuals in Oklahoma, USA." *Sustainability* 12 (19): 8184.; Woody, Tanya. 2020. "'When the Wind Comes Right behind the' ... Sales Pitch: Alternative Views to Wind Energy Development in a Rural Oklahoma Host Community," December.

³ Howe, Cymene. 2014. "Anthropocenic Ecoauthority: The Winds of Oaxaca." *Anthropological Quarterly* 87 (2): 381–404.

⁴ Lewis, Simon L., and Mark A. Maslin. 2015. "Defining the Anthropocene." *Nature* 519 (7542): 171–80.

⁵ Newell, Peter, and Dustin Mulvaney. 2013. "The Political Economy of the 'Just Transition'" *The Geographical Journal* 179 (2): 132–40.

⁶ Weinrub, Al, and Anthony Giancattarino. 2015. "Toward a Climate Justice Energy Platform: Democratizing Our Energy Future | Community-Wealth.Org." Community-Wealth.Org. June 1, 2015.

⁷ Jacquet, Jeffrey B., and Joshua T. Fergen. 2018. "The Vertical Patterns of Wind Energy: The Effects of Wind Farm Ownership on Rural Communities in the Prairie Pothole Region of the United States." *Journal of Rural and Community Development* 13 (2).; Bonnie, Robert. 2020. "Understanding Rural Attitudes Toward the Environment and Conservation in America." Text. Nicholas Institute. Nicholas Institute for Environmental Policy Solutions, Duke University. February 13, 2020.; Bolinger, Mark. 2004. "Community-Owned Wind Power Development: The Challenge of Applying the European Model in the United States, and How States Are Addressing That Challenge," March.

Methods

To narrate the impact of wind development in Kingfisher, Oklahoma, I sought to collect original primary research. The only local, family-owned newspaper, the Kingfisher Times and Free Press, meticulously recorded details of the controversy. After inquiring with the longtime editor of the Press, Christine Reid, I learned that all articles published before 2019 were only accessible on a microfilm archive located at the Kingfisher Public Library. For months, I flipped through all issues of the newspaper between 2013 to 2016 and compiled a longitudinal ninety-page document of every article ever published by the Press regarding wind energy, the wind industry, or wind turbines. Additional primary research includes a handful of interviews, as well as my own experience as a hometown citizen of Kingfisher. In my research, I found a story packed with the mourning for a way of life threatened by large-scale corporate development.

To prelude my findings, the following paper begins with a theoretical and practical literature review, intended to summarize the state of global wind energy scholarship. Then, I narrow my approach with an analysis of the policy landscape surrounding wind energy in Oklahoma. Lastly, I present the longitudinal case study based in Kingfisher, Oklahoma to a discussion from the literature.

Literature Review

Disapproval of wind energy is a growing issue across the United States. In a study conducted by The Institute for Local Self Reliance, John Farrell finds that communities impacted by wind development voice concerns of public health and safety. However, Farrell suggests that such distaste from rural communities stems from an ongoing struggle to preserve local resources from corporate exploitation.⁸ Beyond the United States, Sofia Avila identifies this aversion as a symptom of uneven development. In her comparative research of twenty wind farm projects worldwide, Avila shows how such cycles perpetuate uneven growth, further entrenching systems of inequality.⁹ The following literature engages with this idea. It proposes commodified wind energy as a contradictory actor in the ongoing global energy transition. In response, scholars offer a pathway towards a localized energy transition— one rooted in democracy and justice.

Anthropogenic Eco-Authority

In her study of the Mareña Renovables wind park based in the Isthmus of Tehuantepec in Oaxaca, Mexico, Anthropologist Cymene Howe illustrates the impact of uneven development. She argues that renewable energy transitions radically depend on how implementing actors assert their *anthropogenic eco-authority*, which she defines as

“The series of experiential, scientific, and managerial truth-claims regarding ecological knowledge and future forecasting in an era of global anthropogenic change.”¹⁰

Throughout her research, Howe asserts that large-scale renewable energy projects mimic the behavior of historically corrupt development schemes, bringing empty promises of uneven growth.

From inception, none of the energy produced by the wind park was intended for local distribution. Rather, deals were made with multinational companies to promote

⁸ Farrell, John. 2014. “Report Released: Advantage Local – Why Local Energy Ownership Matters.” Institute for Local Self-Reliance. September 24, 2014. p. 3

⁹ Avila, Sofia. 2018. “Environmental Justice and the Expanding Geography of Wind Power Conflicts.” *Sustainability Science* 13 (3): 599–616. p. 613

¹⁰ Howe, *Anthropogenic Ecoauthority: The Winds of Oaxaca*, 381

greenwashing campaigns, like the carbon offset of Coca Cola and Walmart.¹¹ Indigenous Oaxacans who lead the community describe familiarity with the ongoing harassment by wind development projects. They claimed to have been “tricked and forced to bear the consequences of climate change mitigation and green capitalist aspirations in ways that are all too familiar.”¹² Locals actively protested the construction of the wind park, and expressed that turbines caused issues of environmental degradation. Such protest evolved into violent state-sponsored human rights violations, including assassinations, and the eventual end to the wind park project.¹³

In reflection, Howe argues that true sustainable, renewable energy development calls for the reversal of anthropocenic eco-authority—an approach that integrates the importance of local politics.¹⁴ Her revolutionary ability to recognize and articulate the complexity of this issue is the primary rationale behind this paper’s literature review. She shows that corrupt behavior from commercial wind does little to advance clean energy. Rather, it inhibits development by inspiring divisive protest and violence.

Compared to Howe, Jeffrey Jacquet and Fergen found a more subtle relationship in the impact of local ownership on rural communities in the rural Midwest of the United States. Respondents viewed utility wind developers as outsiders but were more willing to accept the perceived benefits associated with development. Their research suggests that rural communities in the United States are familiar with the practice of local systems-building, owing to a long history of energy, communication, agricultural, and financial cooperatives.¹⁵ Jacquet and Fergen conclude that what is most impactful, is “local context,” meaning the size of the project, patterns of siting, and a community’s history with the turbines.”¹⁶ This demonstrates Howe’s theory of anthropocenic eco-authority, as they found that large-scale development caused a decline in the power of local control.¹⁷ Despite general apathy expressed by rural respondents, most were unable to associate a name with the development of the wind park, demonstrating a loss in the eco-authority of their surrounding environment.

Political Economy and Just Transitions

In their research, Peter Newell and Dustin Mulvaney detail the political economy of our current global energy system and theorize its place in an energy transition. They propose a solution in the form of a “socio-technical” transition, meaning the introduction of

deep structural changes in systems, such as energy, that involve long-term and complex reconfigurations of landscapes with technology, policy, infrastructure, scientific knowledge, and social and cultural practices towards sustainable ends.¹⁸

Through this perspective, Newell and Mulvaney stress the importance of integrating environmental justice in the form of a **just transition**—one that acknowledges

¹¹ Becker-Olsen, Karen, and Sean Potucek. 2013. “Greenwashing.” In *Encyclopedia of Corporate Social Responsibility*, edited by Samuel O. Idowu, Nicholas Capaldi, Liangrong Zu, and Ananda Das Gupta, 1318–23. Berlin, Heidelberg: Springer. Greenwashing was coined in 1986 by environmentalist Jay Westerfield to describe the corporate use of environmental sustainability as a marketing strategy (Becker-Olsen and Potucek 2013). ; Howe, *Anthropocenic Ecoauthority: The Winds of Oaxaca*, 385

¹² *Ibid*, 382

¹³ Ramirez, Jacobo. 2021. “Contentious Dynamics Within the Social Turbulence of Environmental (In)Justice Surrounding Wind Energy Farms in Oaxaca, Mexico.” *Journal of Business Ethics* 169 (3): 387 ; Howe, *Anthropocenic Ecoauthority: The Winds of Oaxaca*, 389

¹⁴ *Ibid*, p. 399

¹⁵ Jacquet and Fergen, *The Vertical Patterns of Wind Energy*, 134

¹⁶ *Ibid* 144

¹⁷ *Ibid* 143

¹⁸ Newell and Mulvaney, *The Political Economy of the ‘just transition’*, 133

the complexity of equal opportunity, uplifts underrepresented identities, and recognizes distributive justice as a core doctrine of structural change.

When positioned into the political economy, Newell and Mulvaney propose that a just transition challenges the current energy world order by centering the preservation and advancement of marginalized communities as a pathway out of exploitative power structures.¹⁹ They predict that without severance from this paradigm, energy hierarchies will decarbonize along similar patterns of prejudice.²⁰ Therefore, the dominating role of commodified energy must be rehabilitated towards a just transition. Newell and Mulvaney suggest that a future in global energy justice could emerge from the complicated and violent political economy of energy if we amend and reflect upon past corruption.²¹

Energy Democracy is the Solution

Weinrub and Giancattarino advocate for decarbonization through a reversal of power. They find contemporary decarbonizing strategies to be highly centralized, with governments funneling money into expensive large-scale wind farms, solar farms, and industrialized carbon-free manufacturing.²² However, their research suggests that a centralized model will not produce long-term change, as it fails to challenge the inherently extractive nature of globalized energy markets.²³ Weinrub and Giancattarino find the solution in the creation of an **energy democracy**—an economic system that defies corporate energy through localization. Weinrub and Giancattarino describe energy democracy as

A way to frame the struggle of working people, low-income communities, and communities of color to take control of energy resources from the energy establishment and use those resources to empower their communities— energetically, economically, and politically.²⁴

Democratization involves the direct stewardship and community-based management of local resources, to uplift communities who are historically left out of energy policy decisions.

Applied to a rural setting, Rob Hopkins argues that the reintroduction of small-scale energy development is *inevitable*. He predicts that a lack of fossil fuels will make transporting goods over long distances extremely expensive, and communities will have to adjust their infrastructure to support more locally sourced goods²⁵. With this revelation, Hopkins looks to the past for guidance. He demonstrates the potential power in reclaiming a smaller community feedback loop— one that values the input of individual members and experiences a connection with the energy and food they consume²⁶. Hopkins claims that revitalizing local energy networks, wherever possible, is an act of liberation for rural communities who have traditionally always viewed the health of the environment and the economy as a reciprocal process.²⁷

¹⁹ *Ibid* 134

²⁰ *Ibid* 136

²¹ *Ibid* 138

²² Weinrub and Giancattarino, *Toward a Climate Justice Energy Platform*, 8

²³ *Ibid* 6

²⁴ *Ibid* 6

²⁵ Hopkins, Rob. 2014. *The Transition Handbook from Oil Dependency to Local Resilience*. Cambridge: Uit Cambridge Ltd.

²⁶ *Ibid* ch. 3.

²⁷ *Ibid* ch. 4.

Why Rural Resilience Works

Traditionally, wind-proponents disregard local opposition as a symptom of a conservative distaste for progressive change. In turn, communities often cling to allegations of adverse health effects and environmental degradation.²⁸ These frustrations are gaslit as ignorant, selfish, and discounted as NIMBY.²⁹ However, given the profit-driven nature of wind developers, opportunities for objection to structural change are rarely admissible.³⁰ Developers have no incentive to give up the power structure that awards them profits. Instead, they blame the incompetence of rural communities in their unacceptance of change. To validate this experience, Avila proposes that wind energy expansion threatens the territorial capacity for political and economic autonomy, a trap that is familiar for rural communities who endure patterns of fiscal uncertainty.³¹

A study conducted in 2020 by the Nicholas Institute for Environmental Policy Solutions, sought to explore the complexities that motivate rural American attitudes towards the environment and climate change policy. Through a series of surveys and questionnaires, the study found that rural Americans make environmental decisions derived from their ability to honor a place-based identity.³² They value community above all else, sourced from a desire for self-governance. The study showed that rural Americans tend to be highly educated and connected with issues of conservation and the environment, but the primary factor in determining a rural voter's support for any project or policy, was their ability to be directly involved at a local level.³³ This longing for resiliency generates skepticism of large-scale corporate or government projects. The study suggests that this is a reaction to inter-generational fears of dismissed input, bringing hardship to the community.³⁴ Overall, the study found that rural Americans highly value the ability to self-govern the fate of their surrounding landscape, because it is integral to their emotional wellbeing and sense of community. Researchers in the study argue that the only pathway towards rural engagement in climate policy is through direct involvement and collaboration at every level.³⁵

In combination with the literature's local call to action, rural communities are extremely well-equipped to launch efficient localization projects in energy democracy. When put into practice, localization has proven more lucrative and economically savvy. Studies show that community ownership of renewable energy accounts for a +50-250% increase in the economic value of energy output, which accounts for long term job growth and local fiscal stimulus.³⁶ Likewise, in the American Midwest, community wind is shifting to supplement farmers income, and aid in the continuation of rural, agricultural life.³⁷

Socio-politically, when communities feel involved in clean energy projects, they are more likely to support their development as a political constituency.³⁸ In a study conducted in Germany between two towns, one with local ownership and one without, surveys showed a +77% increase in approval of the wind farm from the town with ownership. This indicates that there are both economic and political incentives for local democratization of energy.³⁹

²⁸ Avila, *Environmental justice and the expanding geography of wind power conflicts*, 599

²⁹ *Ibid* 599

³⁰ Farrell, *Why Local Energy Ownership Matters*, 3

³¹ Avila, *Environmental justice and the expanding geography of wind power conflicts*, 612

³² Bonnie, *Understanding Rural Attitudes Toward the Environment and Conservation in America*, 4

³³ *Ibid* 5

³⁴ *Ibid* 5

³⁵ *Ibid* 6

³⁶ Farrell, *Why Local Energy Ownership Matters*, 2

³⁷ Bolinger, *Community-owned wind power development* 1

³⁸ Jacquet and Fergen, *The Vertical Patterns of Wind Energy*, 131

³⁹ Farrell, *Why Local Energy Ownership Matters*, 4

Research suggests that localization can also generate savings. A case study in Missouri showed that by switching to in-state wind energy, the economic benefits greatly outweigh total savings proposed by imports.⁴⁰ Put simply, the Missouri study suggests that local power generation creates far more money than the savings promised by specialization (see Figure 1).

The Value of Local Ownership

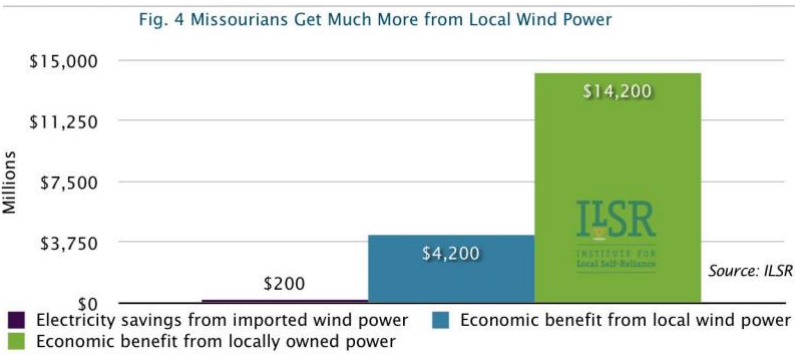


Figure 1. *The Value of Local Ownership*, Farrell, J. (2018, March 12). *Report released: Advantage Local – why local energy ownership matters*. Institute for Local Self-Reliance. Retrieved December 15, 2021, from <https://ilsr.org/report-advantage-local/>

Beyond the United States, European countries have successfully employed small-scale wind energy development for decades. Mark Bolinger shows a correlation with policy incentives. He gives an example from Germany, where laws motivate farmers and residents to apply for turbine installation on their own terms. In contrast, policy in the United States historically focused on the use of the Federal Production Tax Credit (PTC), which gave developers a 5-year tax break to push large-scale wind farms.⁴¹

Additional barriers to democratization in the United States relate to the traditional structure of the electricity grid. Energy lobbying created a legal structure that provides no avenue for local management.⁴² Such incentives give corporate development a leg-up in the energy market, awarding them the earliest opportunity to commodify resources before local communities have the chance to tap in. In essence, there remain many blocks to democratically managed wind energy in the United States.

Policy Landscape of Wind Energy in Oklahoma

Oklahomans recognize a foundational history with oil and gas. They associate statehood with the blessing of black gold, and their self-governed ability to profit from it.⁴³ From the foundations of oil, Oklahoma emerges as a national hub for energy production of all kinds. The geography of Oklahoma is rich with resources ripe for extraction, including coal, wind, and hydropower. Even with such an abundance of raw power, other states surpassed Oklahoma in energy generation. Texas dwarfs all other states, producing a whopping 43% of the nation’s crude oil. Behind Texas, sits North Dakota (10.4%) and New Mexico (9.2%), with Oklahoma coming in fourth (4.1%). Conversely, Oklahoma

⁴⁰ Farrell, *Why Local Energy Ownership Matters*, 5

⁴¹ Bolinger, *Community-owned wind power development*, 1

⁴² Farrell, *Why Local Energy Ownership Matters*, 3

⁴³ Stephenson, Moriah. 2016. “Red Dirt Resilience: Enduring Narratives of Oklahoma Environmental Activism,” May. 40

exceeds in its insatiable thirst for energy, ranking 28th in population, but 10th in energy consumption per capita.⁴⁴

To satisfy its demand for consumption, Oklahoma is pivoting its extraction methods, trading oil and gas development for wind energy. Home to strong winds and flat terrain, Oklahoma’s western prairie provides some of the most ideal conditions for reliable commercial wind development.⁴⁵ In 2001, Oklahoma Governor Frank Keating signed legislation to create the Zero Emissions Tax Credit, setting up years of wind development incentives.⁴⁶ Wind turbines are visible in mass throughout the western part of the state, totaling 3,736 spinning turbines in 2021.⁴⁷ Some argue that investment in wind has paid off– in 2020, wind energy alone served 35% of the state’s power generation, and development exceeded all renewable energy goals set upon implementation.⁴⁸ Over just the past decade, wind has quickly become a significant component of Oklahoma’s energy profile. The following chart compares net electricity generation in Oklahoma from coal, natural gas, hydroelectric, and wind energy, sourced from the U.S. Energy Information Administration. The data set for natural gas shows a consistent boom and bust relationship, while wind moves steadily upwards.

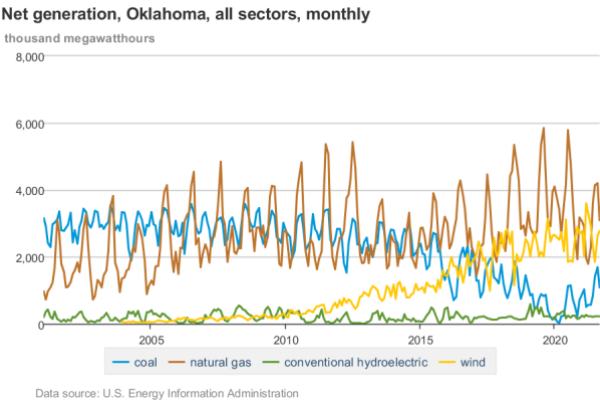


Figure 2. EIA. (2021). U.S. Energy Information Administration—EIA— independent statistics and analysis. <https://www.eia.gov/electricity/data/browser/>

Research suggests that wind energy developments may provide growth to rural Oklahoma host communities. Industry messaging promises economic stimulus, jobs, and development. Dr. John Scott Greene, an atmospheric and geographic scientist from the University of Oklahoma, is a state-wide leader in wind energy who contributes to a wide number of local quantitative literature regarding the impact of wind development. In a study he co-authored assessing the socioeconomic impact of wind on the city of Weatherford, Oklahoma, research showed that the construction of the wind farms had a substantial positive impact on the city. The study found that wind development added employment, both short and long-term for the Weatherford community.⁴⁹ From an economic perspective, the construction phase of the turbines stimulated millions of dollars

⁴⁴ “Oklahoma - State Energy Profile Analysis - U.S. Energy Information Administration (EIA).” n.d. Eia.Gov.

⁴⁵ Geisken and Greene, *Socioeconomic impacts of wind farm development*, 1

⁴⁶ Keating, Frank. 2017. “Frank Keating: I Signed Wind Industry Tax Breaks, and I Was Wrong | Columnists | TulsaWorld.Com.” TulsaWorld.Com. February 24, 2017.

⁴⁷ Corral, Ana. 2021. “Oklahoma Wind Farm Areas.” ArcGIS StoryMaps. May 7, 2021.

⁴⁸ “Oklahoma - State Energy Profile Analysis - U.S. Energy Information Administration (EIA).” n.d. Eia.Gov.

⁴⁹ Geisken and Greene, *Socioeconomic impacts of wind farm development*, 2

and jobs within the community, mostly through local construction contracting.⁵⁰ In addition, interviews conducted with Weatherford citizens reveal an overwhelmingly positive perception of the turbines following the construction phase.⁵¹ Weatherford is the primary example of an Oklahoma community that embraced corporate wind farm development.

One of the most advertised benefits of wind farm development is its potential to bring additional money into local public-school districts. In a study assessing the impact of wind on nearby school districts, Castleberry and Greene found that increased property values linked to the wind turbines can offer self-sufficiency to public schools through ad valorem, or property tax benefits.⁵² Therefore, funds are directed from local sources rather than state or federal funding, resulting in a higher chance of added benefits for smaller rural communities who rely heavily on outside sources.⁵³ However, because Oklahoma public school funding is allocated on a need-based structure across the board, research showed no direct indicator that the turbines reliably added overall funding to the public schools.⁵⁴ The turbines may indirectly localize funding, but there is no consistent promise of an increase in total revenue.

Wind Developer Controversy and Inconsistencies

My research revealed that most published opinions regarding Oklahoma's wind energy centers on its added benefits. In contrast, local studies analyzing the wind industry from a critical perspective are much more limited, despite the prevalence of opposition. The literature provides two in-depth projects assessing the negative attitudes towards wind development. Leading the way, Tanya Woody details the reasons behind complex negative attitudes associated with wind development in the host community of Woodward, Oklahoma.⁵⁵ To supplement, Burch et al. explore opposition to wind development from the perspective of environmentally conscious individuals in Oklahoma.⁵⁶ The following section combines their work to create a detailed explanation as to why wind development faces increasing opposition.

Woody found that Woodward residents expressed disappointment that the promises made by the wind company did not come to fruition as anticipated. Even though the wind farms bring some economic growth, Woody asserts that they often mimic the same oil and gas boom-and-bust revenue cycles that have plagued small rural communities for decades. After the boom of employment and financial stimulus provided by construction, the only mechanism funneling money into the city through the wind industry is through trickle-down dollars from landowner turbine lease payments.⁵⁷ Woody suggests that rural cities may have leftover skepticism from the oil and gas boom and bust cycles.⁵⁸ Without a consistent, noticeable presence of growth in the community, the people of Woodward were left to grapple with a bust period, giving them a sour perception.

In her explanation of a lack of funding, Woody discovered inconsistencies entrenched in tax avoidance schemes. Consequently, she details how public-school financing, which was a primary incentive to support wind development, remains unclear and unseen in many

⁵⁰ *Ibid.*, p. 7

⁵¹ Geisken and Greene, *Socioeconomic impacts of wind farm development*, 8

⁵² Castleberry and Greene, *Impacts of wind power development on Oklahoma's public schools*, 12

⁵³ Dr. John Scott Greene, personal interview, November 24, 2021

⁵⁴ Castleberry and Greene, *Impacts of wind power development on Oklahoma's public schools*, 13

⁵⁵ Woody, When the Wind Comes Right behind the' ... Sales Pitch: Alternative Views to Wind Energy Development in a Rural Oklahoma Host Community," December.

⁵⁶ Burch, Claire, Rebecca Loraamm, and Travis Gliedt. 2020. "The 'Green on Green' Conflict in Wind Energy Development: A Case Study of Environmentally Conscious Individuals in Oklahoma, USA." *Sustainability* 12 (19): 8184.

⁵⁷ Woody, *Alternative views to Wind Energy Development*, 100

⁵⁸ *Ibid.*, p. 13

communities across the state to this day. Early in wind development, property tax problems trace back to State Question 588. It was passed by voters in 1985 to bring economic development to rural communities. Proposed as an incentive for manufacturers, SQ588 offers a 100% ad valorem tax-exemption to wind farms, data centers, and power plants within the first five years of development.⁵⁹ Woody explains that the exemption-reimbursements given to the wind farms were provided by the state, siphoning millions of taxpayer dollars towards the companies. In 2016 the state withdrew the exemptions for any wind farm constructed prior, but the initial profit made from the tax exemptions have not materialized for many communities.⁶⁰

On February 24th, 2017, Former Oklahoma Governor Frank Keating published an article in the Tulsa World titled, “I signed wind industry tax breaks, and I was wrong.” The article offers details regarding the Oklahoma Zero Emissions Tax Credit. Governor Keating affirms the Credit was proposed in 2001 to bring growth and jobs to an emerging wind industry in Oklahoma. Keating says that signing this legislation was “simply a mistake.”⁶¹ At its inception, the project was due to cost \$2 million to the state each year. However, with an uncapped incentive program, multinational, multi-billion-dollar corporations came to Oklahoma to take advantage. Keating says that the tax credit ended up costing the state over \$113 million in 2014, and he predicted billions more in the future. He says that the tax break “warped into a scam costing taxpayers million to the detriment of other publicly funded services.” Even worse, he details that the credits were directly refundable by 2014, and that the state was simply writing checks to the wind companies for 85% of each credit. He calls it the “worst kind of corporate handout.”⁶²

Despite the termination of the 2016 tax exemption, wind farm companies continue to deprive rural communities of full benefits. Dr. Scott John Greene described to me in a personal interview, that wind companies may offer a payment-in-lieu-of-taxes (P.I.L.O.T) to make up for this five-year difference. However, Dr. Greene also informed me that wind developers are actively suing county assessors to lower the property values, leaving millions of dollars in a bureaucratic limbo.⁶³ In 2021, county treasurers in Oklahoma hold up to 80 million dollars in property tax payments due to such disagreements. An article reports that the Minco School District (Grady, Canadian, Caddo Counties), sold bonds to fund much needed academic amenities for their students, after being promised lucrative wind energy benefits. Yet, in late 2020 the wind developers protested the valued assessment made by the county, arguing that the valuation was much higher than necessary.⁶⁴ This means that essential tax money remains inaccessible.

Enduring animosity blends with a lack of community involvement from industry representatives. Woody explains that members of the Woodward community feel distrust in the companies because they don’t appear in the community like oil and gas, both financially and physically.⁶⁵ Moreover, developers seldom involve regional input in the planning process. Such exclusion can greatly impact the judgment of rural communities.⁶⁶ Among other siting issues, Woody suggests that little or no participation from nearby municipalities is a common reason for turbine disapproval in Oklahoma.⁶⁷

⁵⁹ Monies, Paul. 2015. “Oklahoma Legislators Debate Property Tax Exemption for Manufacturing, Wind Farms.” *Oklahoman.Com*. February 10, 2015. ; Woody, *Alternative views to Wind Energy Development*, 106

⁶⁰ Woody, *Alternative views to Wind Energy Development*, 106

⁶¹ Keating, Frank. 2017. “Frank Keating: I Signed Wind Industry Tax Breaks, and I Was Wrong | Columnists | *TulsaWorld.Com*.” *TulsaWorld.Com*. February 24, 2017.

⁶² *Ibid*

⁶³ J. Greene, personal interview, November 24, 2021

⁶⁴ Prather, Megan. 2021. “Oklahoma Schools Left in Limbo Because of Tied up Property Taxes.” *Ardmoreite.Com*. October 15, 2021.

⁶⁵ Woody, *Alternative views to Wind Energy Development*, 95-100

⁶⁶ *Ibid*, p. 48

⁶⁷ Burch et al., *Green on Green Conflict*, 3

Woody's interpretation greatly contrasts with previous scholars' explanations for reasons of wind energy skepticism in Oklahoma. In our interview, Dr. Greene briefly summarized his findings on the subject. He informed me that positive perception of wind energy trends downward over time, pointing blame to NIMBY (not-in-my-backyard), conservative politics, and a historical legacy of oil and gas. Woody associates NIMBYism with claims of reduced property values or health problems or seizures due to a *shadow flicker*, the effect of a moving shadow created by a turbine blade.⁶⁸ Castleberry and Greene have published literature disproving these claims.⁶⁹ However, in recent years NIMBYism has been phased out of scholarship, due to its oversimplification of complex local issues. Contemporary research shifts away from blaming NIMBY, because it fails to consider the sophistication of antipathy.⁷⁰

In a separate analysis, Burch et al. found prevalence of "Green-on-Green" contention throughout Oklahoma, where environmentally conscious individuals maintain their distaste for wind farms.⁷¹ Burch et al. argue that wind energy could bring great benefits to our fight against climate change. However, like many other forms of construction, implementation of the turbines can cause loss in biodiversity and induce change in prairie landscapes.⁷² They conducted a series of interviews to understand why someone who advocates for the health of the environment might be opposed to renewable energy. Their research demonstrated that most respondents prioritized environmental conservation over the perceived sustainability benefits of wind energy development, viewing the cons of large-scale development larger than the pros.⁷³ Therefore, opposition exists beyond the typical NIMBY structure, with criticism coming from both sides of the environmental policy spectrum.

Connecting the Landscape

The policy landscape demonstrates extreme discrepancies between wind developers and rural communities in Oklahoma. Corporate wind developers clearly benefit from existing energy eco-authority, perpetuating cycles of uneven development and limiting opportunity for energy democracy. This persisting dynamic is concerning given the urgency of a just transition, as expressed in the literature review.

Unfortunately, this conflict does not show any signs of resolution. In 2021, federal incentives like the Production Tax Credit (PTC) and the Investment Tax Credit (ITC) offer "1¢–2¢ per kilowatt-hour for the first 10 years of electricity generation for utility-scale wind," according to the Office of Energy Efficiency and Renewable Energy⁷⁴. Such federal tax breaks empower cross-country corporate developers to propose new projects throughout the state of Oklahoma. In October of 2021, Enel Green Power began construction on their new wind farm, the 25 Mile Creek Wind Farm located in the panhandle. The project is the twelfth wind farm developed by the company, promising tax benefits of \$34 million to the local community⁷⁵.

When asked about the possibility of localization, Dr. Greene said it was simply impractical. He expressed that wind farms are multi-million-dollar projects, costing more

⁶⁸ Woody, *Alternative views to Wind Energy Development*, 36

⁶⁹ Castleberry and Greene 2018, p. 1

⁷⁰ Burch et al., *Green on Green Conflict*, 3 ; Devine-Wright, Patrick. 2005. "Beyond NIMBYism: Towards an Integrated Framework for Understanding Public Perceptions of Wind Energy." *Wind Energy* 8 (2): 125–39. ; Wolsink, Maarten. 2007. "Wind Power Implementation: The Nature of Public Attitudes: Equity and Fairness Instead of 'Backyard Motives.'" *Renewable and Sustainable Energy Reviews* 11 (6): 1188–1207.

⁷¹ Burch et al., *Green on Green Conflict*, 1

⁷² Burch et al., *Green on Green Conflict*, 2

⁷³ *Ibid*, p. 19

⁷⁴ "Wind Energy Policies and Incentives." n.d. Windexchange.Energy.Gov. Accessed January 30, 2022.

⁷⁵ "With New Wind Farm, Enel Green Power's Oklahoma Portfolio Exceeds \$3 Billion In Investment." n.d. Accessed February 1, 2022.

than local coops would ever be able to afford to inherit. However, Dr. Greene also indirectly verbalized eco-authority, stating that locally built wind farms wouldn't have a chance, as the corporate wind farms were already built in the optimal locations.

This is exactly what rural communities are scared of, and it is what leading scholars warn us about in the literature review. The following case study is meant to visualize this urgency. Stories gathered reflect the sentiments of a small community living in fear of commodification and the unknown, brought on by the vague conviction of wind farm developers. It demonstrates the yearning for a way out of corporate extraction, and a community's exhaustion of all options to establish local resiliency.

Kingfisher Case Study

“The project has already torn apart our community by dividing neighbors and families against each other,” Brent Robinson, OWAA President said. “It has turned friends into rivals.”

“Rural Oklahomans are fighting a corporate giant, Apex, at our own expense,” Terra Walker said. “We’re seeking injunctive relief for violation of our rights, not monetary damages.”

Plaintiffs of Walker v. Apex
Kingfisher Times and Free Press June 17 2015

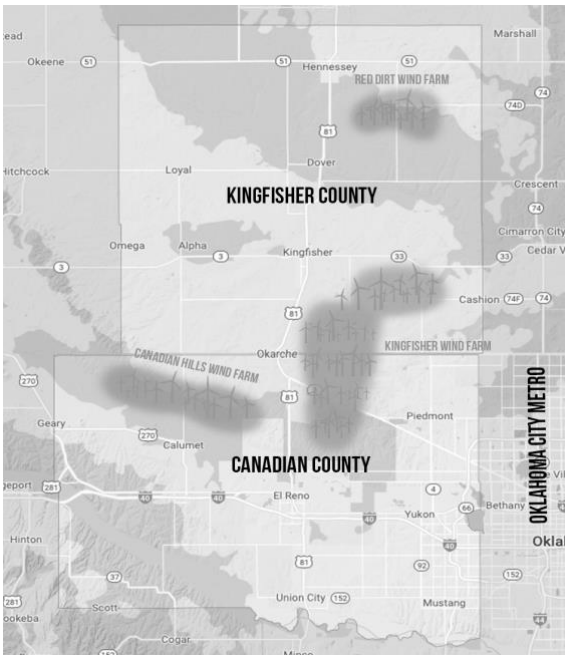


Figure 3. 2021 Map of Kingfisher and Canadian Counties, Oklahoma (Key: Shaded Areas—Rough Estimate of Wind Farm Territory. Turbines are not to scale, and geographic estimates are sourced from Wikimapia⁷⁶ and Open Energy Information.⁷⁷)

⁷⁶ “Kingfisher Wind Farm.” n.d. Wikimapia.Org. Accessed January 30, 2022.

⁷⁷ “Red Dirt | Open Energy Information.” n.d. Openei.Org.

The City of Kingfisher is located in northwestern Oklahoma, about an hour's drive away from the nearest metro of Oklahoma City. It is a small, steady community of about 5,000 people, surrounded by agricultural farmlands on all sides.⁷⁸ The city sits within the larger county of the same name, Kingfisher County, which includes the smaller northern towns of Hennessey, Dover and Loyal. The map provided in **Figure 3** gives a visual guide to the area and its wind farms.

Towns are separated by about a ten-minute drive in either direction. To the southeast is the much smaller town of Okarche, which straddles the Canadian and Kingfisher county lines. Oil and gas have a strong presence in the area and the industry serves as a prominent source of employment for the community. Despite their size, Kingfisher, Okarche, and Hennessey are home to vibrant communities of involved citizens, and the towns often host festivals and holiday celebrations of all kinds. Brian Walter, a local businessman, described in an interview that Kingfisher is the kind of place where families “shop” for a community—where everybody knows everybody.

2013

Apex Clean Energy Incorporated (shortened to “Apex”) is the implementing actor of the Kingfisher Wind Farm. According to their website, Apex is responsible for the development and construction of wind and solar farms across the country.⁷⁹

On February 3rd, 2013, the first article was published in the Kingfisher Times and Free Press regarding Apex Clean Energy Incorporated, titled, “Apex Taking Bids on Wind Farm Construction.” Within only three days, a follow-up front-page article detailed the distress of a couple, Gary Don and Joanne Taylor, who attended a local Rotary Club Meeting to voice their concerns about wind farm construction. The couple distributed maps to the members, claiming that:

“Our concerns are two-fold. Number one, we don’t want them [wind farms] in these areas of high population. And number two, what happens when the government subsidies go away? We’re pretty sure that if there’s no money available from the government, that these things will not be properly maintained, and may simply be abandoned.”⁸⁰

The couple expressed a myriad of other concerns, including noise pollution, blinking lights, and disruption of the rural way of life that Kingfisher people were accustomed to.

After the Taylors voiced their concerns, Apex representatives attended the same club meeting a week later to introduce the Kingfisher Wind Farm on their own terms. Apex representatives told Rotary members that their economic impact study predicted the Kingfisher Wind Farm to add \$3 million to the tax revenue in Kingfisher and Canadian Counties over its 25-year lifespan. As for the benefits for schools, representatives declared that the ad valorem tax would go to Okarche schools and surrounding cities, while Kingfisher schools were unlikely to receive money. They also refuted issues of adverse health impacts, claiming that the turbines would not be located more than 1,500 feet close to any home, which they assured prevents any physical harm.⁸¹

Several weeks later, on March 12th, 2013, Apex held an information session in Okarche to discuss the Kingfisher Wind Project.⁸² Terra Walker, an Okarche local and rural landowner, described the encounter in a personal interview:

⁷⁸ “Census - Table Results.” 2021. Census.Gov. December 10, 2021.

<https://data.census.gov/cedsci/table?q=Kingfisher%20city,%20Oklahoma&tid=DECENNIALPL2020.P1>.

⁷⁹ “About Us.” n.d. Apex Clean Energy. Accessed October 27, 2021. <https://www.apexcleanenergy.com/company/>.

⁸⁰ “Apex Taking Bids on Wind Farm Construction,” Kingfisher Times and Free Press, February 3, 2013.

⁸¹ “Wind Industry Reps Discuss Wind Farm Plans,” Kingfisher Times and Free Press, February 17 2013.

⁸² “Area Windfarm Meetings Set,” Kingfisher Times and Free Press, February 27, 2013.

“When we first heard about the windfarm and Apex, we had no idea who they were or what wind turbines really were. They sent us a few letters in the mail asking us to sign up for the wind farm but we didn’t know much about it. So we decided to go to one of their open houses that they hosted. When we got there, there was a man walking around with a laptop in his hand and asked us what our names were. When we told him he said he knew who we were and proceeded to show us a map of land with highlighted squares on it. He then told us that they’ve been trying to get ahold of us because we were one of just a few landowners who had not signed up with them yet and that all of our neighbors surrounding us had already signed. We left that night with a lot of questions and started researching...it was apparent that they all had the same line to get people to sign. They tell people that their neighbors have already signed, so why don’t you? This led me to look into who had in fact signed. We quickly found out it was not true. They didn’t have very many signed up, and for sure our neighbors that were surrounding us hadn’t. We found out by just asking around and going to the courthouse and looking at the filings.”⁸³

Clearly, these informational meetings did little to calm the nerves of locals. The community expressed skepticism and employed a critical eye from the beginning.

In early articles, the *Press* provided details about an Apex-developed wind farm in the nearby city of Calumet, named the Canadian Hills Wind Farm. **See Figure 2.**⁸⁴ The newspaper interviewed the school treasurer from Calumet, who observed a delay in school benefits from the wind farm. She claimed that disputes in valuation between Apex and the state tax commission were to blame, even though the wind farm is fully operational. The treasurer predicted that it could take up to three years for them to resolve the issue.⁸⁵

Meanwhile, about thirty minutes from downtown Kingfisher, the city of Piedmont worked to ban turbines from sight altogether. The Piedmont City Council, in tandem with the Central Oklahoma Property Rights Association (COPRA), voted on August 28th, 2013 to establish an emergency city ordinance to ban wind turbines built three miles from Piedmont city limits.⁸⁶ The Council later voted to declare the turbines a public nuisance, and threatened legal action against Apex and the Kingfisher Wind Farm. In response to the ordinance, Apex representatives retorted that up to 43 turbines were already planned for construction in the designated buffer zone. In dismissing the ordinance, Apex assured that the company is “committed to working with the Piedmont Council to find resolutions.”⁸⁷

Landowners who signed a 30-year lease with Apex promised up to \$15,000 per year from the turbines on their land. Those who had already signed leases and lived within the Piedmont buffer zone were not happy about the city ordinance. In rebuttal, several landowners filed a lawsuit against the City of Piedmont, arguing that the nuisance claim based on health is a violation of their private land use.

2014

After months of negotiations, COPRA, the Piedmont City Council and Apex agreed to a “no-turbine area” in early December. It did not fill a three-mile buffer but kept the turbines away from neighborhoods and allowed the contracting landowners to continue

⁸³ Terra Walker, personal interview, January 30 2022

⁸⁴ “Area Windfarm Meetings Set,” *Kingfisher Times and Free Press*, February 27, 2013.

⁸⁵ *Ibid*

⁸⁶ “Piedmont OK’s Turbine Ban,” *Kingfisher Times and Free Press*, August 28 2013.

⁸⁷ “Piedmont Council takes Aim at Wind Farm,” *Kingfisher Times and Free Press*, September 1, 2013.

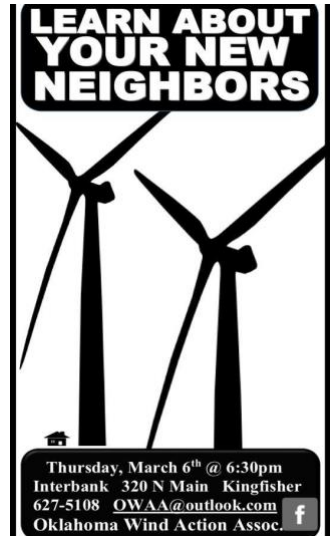
their lease.⁸⁸ While the city of Piedmont found negotiation over the no-turbine zone, other cities impacted by the Kingfisher Wind Farm did not receive the same consideration.

Citizens of Okarche began to voice their concerns. On January 29th, the first Letter to the Editor was published in the *Kingfisher Times and Free Press* authored by Brent Robinson, a resident of Okarche and future President of the Oklahoma Wind Action Association (OWAA). Throughout the articles, Robinson often referred to Apex as “Apex Big Wind” and wrote with the thrill of a passionate advocate taking on the machine. In his first letter, he claimed that Apex was building turbines in areas where they promised they wouldn’t. He called the commercial wind industry a scam and argued that wind energy is only efficient due to taxpayer subsidies. He wrote “We can’t let an out-of-state Big Wind company dictate what our landscape will be forever. Without handouts, I think this town will survive.”⁸⁹

Later that week a “standing-room-only” protest of Okarche residents gathered at the Okarche Town Hall to voice their opposition to the city’s arrangements with Apex Clean Energy. Robinson was referenced in the Press as the “chief spokesman” of the group, alleging that the town should have gotten similar buffer-zone agreements as Piedmont. In response, the Mayor claimed that construction was out of their control, and the city did the best that they could. He offered that their concerns would be more useful at a higher level of government. The Mayor’s response is valuable here. It symbolizes the feeling of hopelessness from local governments in a battle with the turbines, as well as the growing division between landowners and their elected representation. His comment stresses the inability for small, rural Oklahoma communities to assert themselves as important actors amid commercial wind development. The meeting concluded with the suggestion of a Metropolitan Area Planning Commission (MAPC) for surrounding areas to unite in their protest.⁹⁰ This idea was later voted down by the Okarche town board.⁹¹

In response to apathy expressed by Okarche city leaders, Robinson began organizing. He and other concerned citizens formed the Oklahoma Wind Action Association in early 2014 and set out to attract members from Okarche, Kingfisher, and Piedmont. On March 13th, a group of about 45 members gathered in Kingfisher to discuss the turbines. According to the *Press*, members discussed issues of “loss of control over land, disappearance of wildlife around the turbines, destruction of roads and property, decreases in property values, damage to underground oil and gas pipelines and the effects of electricity in the ground and health concerns.”⁹²

On April 6th, 2014, in a Letter to the Editor, a local farmer, Rodney Mueggenborg wrote “I will support no wind towers.” He expressed that as a third-generation farmer, he



⁸⁸ Wertz, By Joe. n.d. “After Year-Long Fight, City and Developer Reach Deal for Piedmont Wind Farm | StateImpact Oklahoma.” *StateImpact Oklahoma | Environment, Education, Energy, Health And Justice: Policy to People* (blog). Accessed January 30, 2022.

⁸⁹ Brent Robinson, “Letter to the Editor,” *Kingfisher Times and Free Press*, January 29, 2014.

⁹⁰ “Turbine Concerns draw crowd at Okarche/Metropolitan Planning Commission Possible Solution,” *Kingfisher Times and Free Press*, January 29, 2014.

⁹¹ “Okarche town board votes against requesting MAPC,” *Kingfisher Times and Free Press*, January 29, 2014.

⁹² “Wind Meet Draws Crowd,” *Kingfisher Times and Free Press*, March 9 2014.

had experienced unique issues with the turbines. Many farmers in Kingfisher are working tenants on other local farms, who use the land for agriculture. When the landowners lease their land to Apex, Mueggenborg explained that it is the farmers who have to deal with the “mess,” even though they didn’t agree to it⁹³. Mueggenborg expressed a complex issue in just one paragraph. In comparison with the Avis-McCune article of the same issue, Mueggenborg’s statement clashes with the condescending nature of her letter. It offers a window into the alienating treatment of community members in the shadow of Apex.

On April 16th, 2014, the Oklahoma Wind Action Association went to a Kingfisher City Commissioners meeting, seeking a federal injunction to pause the development and construction of Kingfisher Wind Farm. Using similar strategies as COPRA, the OWAA pushed to file suit against Apex Clean Energy based on public health impacts, hoping to establish a buffer zone around Kingfisher. Members from all over the community came to the city council meeting to voice their concerns. The *Press* reported that debate occurred for over two hours in a standing-room-only setting. Discussion involved the impact of turbines on property values, beautification, and negative health concerns. Relatedly, one member expressed the concern that due to the turbine’s depreciation over time, the promised benefits to the schools through ad valorem taxes would only go down. The meeting closed with discussion of a proposed formation of a city Annexation Committee, intended to extend the city’s borders so as to prevent turbine construction.⁹⁴

From this point on, things began to move quickly for the OWAA and Apex developers. From April 2014 to the beginning of 2015, the *Kingfisher Times and Free Press* published a series of articles centered on both Apex and OWAA’s presence at Kingfisher City Commissioner meetings. With the OWAA pushing for legal action, Apex attended a meeting bringing Dr. John Scott Greene, formerly mentioned in this paper, as a scientific source to debunk all health concerns related to the wind turbines. He explained research related to the shadow flicker and noise pollution, asserting that any litigation surrounding the health impacts of the turbines would be easily disproved in court. Representatives concluded by offering the city a resolution of negotiation, rather than litigation.⁹⁵

After a push for annexation through August, the OWAA was fed up with waiting. They were determined to set a legal precedent to fight against corporate wind, claiming that it had never been done before. Terra Walker, a named plaintiff for the lawsuit, explained to me her motivation for taking legal action:

“Looking back, I really don’t think we could have done anything else. We started at the city/town level, went from there to county, then to state. We didn’t have any other option but to file suit. We decided to file the lawsuit because we had exhausted all other options...”⁹⁶

Walker and the OWAA filed a federal lawsuit to halt construction of two nearby Apex wind farms, on the condition of impact on property use and value, and adverse health effects— despite its lack of scientific standing.⁹⁷ The lawsuit followed with an announcement that Apex had already sold the Kingfisher Wind Farm to First Reserve, a global investment firm. With this move, Apex began bolstering its financial investment in the wind farm, indicating that they had no intention of backing down.

⁹³ Rodney Mueggenborg, “Letter to the Editor: No Wind Towers,” *Kingfisher Times and Free Press*, April 6, 2014.

⁹⁴ “City Commission Mulls Wind restrictions, OWAA requests injunction, offers to foot legal expense,” *Kingfisher Times and Free Press*, April 6, 2014.

⁹⁵ “Apex to City: Let’s negotiate, not litigate- Wind Company Reps Speak at Special Meeting,” *Kingfisher Times and Free Press*, April 27, 2014.

⁹⁶ Terra walker, personal Interview 30 January 2022

⁹⁷ “Wind farm, federal suit both going forward,” *Kingfisher Times and Free Press*, January 14, 2015.

No turbine buffer zone discussed

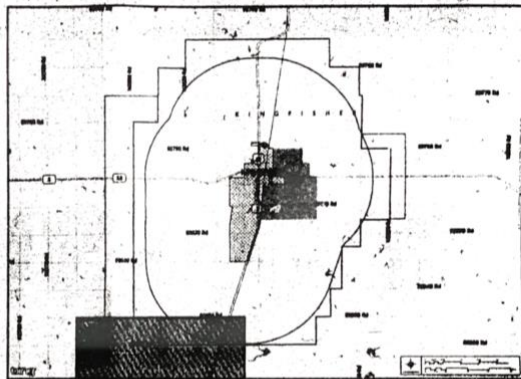
Kingfisher city commissioners voted unanimously to reappoint City Manager Dave Slezickey for another year as part of a lengthy monthly agenda Monday night.

Slezickey is starting the second year of a three-year contract approved by the commission last year, but the city charter still requires an official vote to reappoint him each year.

The city manager was one of five annual reappointments approved after a brief executive (closed) session. Others included City Clerk Bill Tucker and Treasurer Anita James, both salaried positions, and contractual appointments for City Attorney Jared Harrison and Municipal Judge Randy Mecklenburg.

Mayor Steve Richards and commissioners Janet Clark, Roxanne Alexander and Ken Davis all voted to approve the appointments. Commissioner Jeff Hyatt was absent.

Commissioners took no action on an agenda item concerning the police chief, fire chief and municipal buildings official after Mecklenburg said



PROPOSED BUFFER ZONE - Apex Clean Energy presented this map at Monday's city commission meeting outlining the evolution of a proposed no-turbine zone resulting from negotiations with city representatives. The red line represents the company's original offer of an approximate three-mile buffer, the purple line is an expanded zone and the green line represents the final expansion. Commissioners took no action on the proposed agreement.

2015

Apex affirmed that the wind farm would bring money to local school districts, stating in a January 2015 press release that schools in Kingfisher and Canadian counties would receive \$1.5 million per year in new tax revenues.⁹⁸ By the end of January, Apex had requested to dismiss the OWAA lawsuit. But Federal District Judge Timothy De-Giusti denied the dismissal, noting that although the plaintiffs' claims to anticipatory nuisance lacked standing for a federal lawsuit, he granted the plaintiffs time to amend their petition to abide by the rules of a class action lawsuit.⁹⁹

Meanwhile, Apex was busy requesting permission for 49 different road crossings in Kingfisher county, agreeing to bury energy-transmitting polyethylene pipes six feet deep.¹⁰⁰ However, the county tabled its approval after twenty members of the OWAA attended the commissioners meeting, protesting any action that would permit the construction of turbines as their lawsuit was pending¹⁰¹. The OWAA attended the next three county commissioners' meetings to advocate against the permits. As construction proceeds elsewhere, Robinson writes in a Letter to the Editor:

"I received a call from a leaseholder who was very concerned and upset. They asked me if I knew how to get ahold of anybody from Apex and if I could help them. After numerous tries and going to the courthouse they still haven't heard back from Apex. They told me that they had lease agreements for certain parcels of land but Apex also listed land they claim was not agreed to be leased, again... If I ran my business this way I would be ashamed and some heads would roll, or I would let it be known I was very upset. I can't understand how people can defend such a blatant arrogance and bully mentality from any company and them claiming to be good neighbors."¹⁰²

His letter reflects the wind opponents' remaining concerns of corruption and greed associated with Apex.

⁹⁸ "Apex Announces Wind Farm Sale; OWAA questions alleged Illinois payment issue," *Kingfisher Times and Free Press*, January 25, 2015.

⁹⁹ "Wind lawsuit survives motion to dismiss," *Kingfisher Times and Free Press*, February 1, 2015.

¹⁰⁰ "Wind Farm to request 49 road crossings," *Kingfisher Times and Free Press*, January 8, 2015.

¹⁰¹ "Wind farm opponents object to road crossings," *Kingfisher Times and Free Press*, February 4, 2015.

¹⁰² Brent Robinson, "Letter to the Editor; Turbines Discussed," *Kingfisher Times and Free Press*, February 18, 2015.

In March of 2015, Apex threatened to sue Kingfisher County if they refused to approve the road crossings. The city immediately approved all 49 road crossings following the threat. Soon thereafter, Newfield Exploration Energy, an oil and gas company with contracts in the area, filed suit against Apex in hopes of blocking the progression of wind farm construction. They alleged that the company did not give Newfield enough notice before they broke ground. On the issue, the OWAA is supportive of Newfield. They compared the value of oil and gas to that of the wind industry, stating that oil and gas has a long-term effect on local growth, while Apex only has short term interests in mind.¹⁰³ The county commissioners eventually approved the motion, despite a full-house of protestors at the meeting.¹⁰⁴

In response, Robinson returned with another fiery Letter to the Editor, titled, "Apex gets its way again." He claimed that Apex was bullying its way through construction, stating that he's "never seen a more obvious display of a company using threats of lawsuits..."¹⁰⁵

The Newfield suit eventually made its way to the courtroom in late March of 2015. Apex agreed to a "stand-down" and halted construction in certain areas for fifteen days while Newfield reviewed information regarding the turbine project. In their argument, Newfield claimed that Apex sent a two-page notice to local operators and lease owners regarding construction, which did not provide sufficient information for proper review. Apex claimed that they had been in negotiation with Newfield throughout the entire process, and that their notice was sent in a timely manner. However, Apex concluded their argument by listing the financial loss associated with a potential halt in their construction, asserting that:

"\$452 million in private capital already has been invested in the Kingfisher Wind Project, and a 30-day delay would cost an estimated \$900,000 in losses, as well as risking the entire project if the Dec. 31 deadline isn't met to qualify for tax credits."¹⁰⁶

They later state that Newfield's claims are "speculative and nominal," whereas the financial impact of an injunction on their development process would amount to hundreds-of-thousands of dollars in losses.¹⁰⁷

As construction became more prevalent, Kingfisher City Commissioners voted to urge Kingfisher County to establish a MAPC, a Metropolitan Area Planning Commission to help regulate industrial development outside of the city. This came as an alternative to the previously proposed annexation, as it would have turned into a costly venture for the city.¹⁰⁸

By July of 2015, the OWAA requested an expedited hearing on their suite due to the visible construction of the turbines.¹⁰⁹ Meanwhile, another lawsuit entered Apex's radar in the form of an application filed by Merit Energy. The oil and gas company sought to temporarily halt construction of Kingfisher Wind Farm, on the claim that potential leaks in the transmission lines would cause corrosion of their metal pipeline, which is located underneath the proposed lines.¹¹⁰ The application was granted by a district judge, and

¹⁰³ "Wind opponents back at a county meeting, Newfield concerned about impact on oil production," *Kingfisher Times and Free Press*, March 11, 2015.

¹⁰⁴ "County OKs 49 Apex road crossings," *Kingfisher Times and Free Press*, March 2015.

¹⁰⁵ "Letter to the editor: Apex gets its way again," *Kingfisher Times and Free Press*, March 22, 2015.

¹⁰⁶ "Newfield, Apex agree to 15-day 'stand-down': Tuesday hearing canceled; lawsuit still open," *Kingfisher Times and Free Press*, March 29, 2015.

¹⁰⁷ *Ibid*

¹⁰⁸ "City takes new tack to counter wind: City commissioners urge county to consider MAPC," *Kingfisher Times and Free Press*, March 13, 2015.

¹⁰⁹ "Apex opposes expediting federal suite," *Kingfisher Times and Free Press*, June 17, 2015.

¹¹⁰ "Agreement reached on temporary wind delay," *Kingfisher Times and Free Press*, July 12, 2015.

construction in some areas stopped for five weeks until a hearing at the Kingfisher County District Court. This threatened Apex's goals to finish construction by December 31st in order to meet the federal tax credit deadline. By April, Merit filed a motion to dismiss the case.¹¹¹

In December, an Apex representative told the *Press* that construction will surpass the December 31st deadline by three to six months, predicting that the project will be operational by mid-2016. However, since the federal production tax credit was renewed by Congress in 2015 for the next five years, Apex was no longer bound by their original deadline. Wilson concludes that Apex is looking forward to their court date with the OWAA. By the end of 2015, Apex had received three Deal of the Year Awards for their work with Morgan Stanley to sell energy from the Kingfisher Wind Farm to the Southern Company to power a service across the country in Florida.¹¹²

2016

Soon after the Kingfisher Wind Farm had finished construction in mid-2016, Apex began contesting its tax valuations in Kingfisher County. Much like the situation in Calumet in 2013, Apex was up against the county assessor in arguing that their turbines should be valued at much less than what had been proposed. The assessor had originally valued ad valorem tax rolls at \$321,381,200, while Apex disputed that the amount was closer to \$169,331,000. Following the claim and a trial, the Kingfisher County Board of Equalization decided to value the turbines at \$275,839,357. In addition, the board voted to deny Apex the five-year tax exemption from ad-valorem tax payments, which had been renewed by Congress.¹¹³ Apex was not going to take no for an answer, their eco-authority would not be threatened. Within the following week, Kingfisher Wind LLC filed a petition to hold trial to continue to dispute the valuation and allow for the five-year exemption.¹¹⁴

In late September of 2016, the OWAA finally had their day in court. After two years of waiting, the \$425 million Kingfisher Wind Farm turbines were already finished with construction, spinning, and producing energy for the Southwest Power Pool,¹¹⁵ Morgan Stanley, and the Gulf Power facility in Florida.¹¹⁶ The OWAA, which had amassed over 400 likes and 502 followers on Facebook, posted calls to action. They requested that as many people as possible fill the courtroom to hear the judgment on the day of the hearing. And yet, after years of advocating on their behalf to the local governments, the OWAA's pathway to injunctive relief was dismissed mid-October by federal judge De-Giusti, on the claim that the plaintiffs did not show "a reasonable probability" that the turbines would cause adverse health effects, as this was the sole argument they were reduced to.¹¹⁷ Their primary request was to move the turbines at least 1.73 miles away from homes, based on a congressional law passed a year earlier stating that turbines could not be any closer to schools, airports, and hospitals. However, this law did not affect private homes, and Judge De-Giusti ruled that the injuries proposed by the wind farms were "speculative at best."¹¹⁸ He indicated that on the basis of public health, this was all that he was able to rule on. In response, a Walker was quoted in the *Press*:

¹¹¹ "Trial date set in Kingfisher Wind Lawsuit," *Kingfisher Times and Free Press*, August 16, 2015.

¹¹² "Kingfisher Wind Wins Platts Financial Deal of the Year | Apex Clean Energy." n.d. Apexcleanenergy.Com. Accessed October 1, 2021.

¹¹³ "Wind farm loses local tax appeal: Equalization board denies exemption, upholds valuation" *Kingfisher Times and Free Press*, August 3, 2016.

¹¹⁴ "Wind project asks court to allow 5-year exemption," *Kingfisher Times and Free Press*, August 10, 2016.

¹¹⁵ "Wind Farm, Lawsuit both move forward," *Kingfisher Times and Free Press*, December 27, 2015.

¹¹⁶ "Wind Challenge Still Spinning: Tuesday hearing may (or may not) end 2 year battle," *Kingfisher Times and Free Press*, September 25, 2016. ; Apex Clean Energy. (2021, October 1). *Kingfisher wind wins Platts Financial deal of the year*. Apex Clean Energy.

¹¹⁷ "Judge dismisses lawsuit," *Kingfisher Times and Free Press*, October 16, 2016.

¹¹⁸ *Ibid*

“To say that we are extremely disappointed is putting it mildly. This is an injustice to the people of Oklahoma who need protection from massive corporate wind companies who can do whatever they want.”¹¹⁹

Upon later reflection, Walker expressed to me in an interview,

“We were devastated. I knew the court system took time, but I also feel Apex hurried up and finished to make it harder for a judge to take them down versus just halt construction.”¹²⁰

With the decision granted by the Judge, the OWAA had fully exhausted their last possible mechanism for protest, and no precedent had been set. Less than a week after the ruling, the *Kingfisher Times* and *Free Press* reported that work had begun on another wind farm northeast of Kingfisher— the Red Dirt Wind Farm— developed by Tradewind Energy and Enel Green Energy.

2021

On January 12th, 2022, an Apex wind turbine engine in the Kingfisher Wind Farm caught fire.¹²¹ As of right now, Apex is still working on an explanation.

Despite the occasional turbine fire, most of the blades are still spinning. 149 wind turbines scatter the Kingfisher Wind Farm¹²², 135 in Canadian Hills¹²³, and 95 in the Red Dirt Wind Farm. Lack of funding to local school districts remains uncontested in courts, after seven years of delays. The *Press* reports that Hennessey Public Schools are still owed \$1.8 million in protested energy tax dollars,¹²⁴ while the broader Kingfisher County is owed over \$6.1 million.¹²⁵



TURBINE FIRE — A wind turbine caught fire sometime Saturday at Kingfisher Wind Farm southeast of Kingfisher at the intersection of KS 2929 and E24 34th roads. Cherokee Fire Department was notified of the fire shortly after 12:30 p.m. and responded with five firefighters and three units. Chief Steve Lisle told the *Times & Free Press*. Trucks from Big 4, Kingfisher and Cashion also were dispatched but turned back when it was determined they weren't needed. Lisle said representatives of Apex, Green Energy also were at the scene. The fire was mostly confined to the engine housing but also partially burned the blades and about three acres of grass below. Two similar fires have occurred at the wind farm near Calumet, but Lisle said this was the first reported at the Kingfisher farm. An Apex representative quoted in the *Grid News* said the turbine was taken offline and the cause of the fire is under investigation. (Photo Credit: Charles Jirinec)

Conclusion

The Kingfisher case study demonstrates ongoing efforts by the local community to establish their sense of eco-authority. Local non-profit advocacy groups, in tandem with local government, seemingly used every tool at their disposal to prevent wind farm construction. They organized populous coalitions, attempted annexation, and a Metropolitan Area Planning Committee, and even brought a federal suit with no precedent. Every attempt to establish their rural resilience was turned down by a government that

¹¹⁹ *Ibid*

¹²⁰ Terra Walker personal interview 30 January 2022

¹²¹ Reid, Christine. 2022. “TURBINE FIRE.” *Kingfisher Times & Free Press*. January 12, 2022.

¹²² “Kingfisher (USA) - Wind Farms - Online Access - The Wind Power.” n.d. Thewindpower.Net. Accessed January 30, 2022.

¹²³ “Canadian Hills Wind (USA) - Wind Farms - Online Access - The Wind Power.” n.d. Thewindpower.Net. Accessed January 30, 2022.

¹²⁴ Walter, Brian. n.d. “Hennessey School Has \$3.5 Million Carryover, Is Owed \$1.8 Million in Wind and Oil Back Taxes | *Kingfisher Times & Free Press*.” *Kingfisherpress.Net*. Accessed January 30, 2022.

¹²⁵ Reid, Christine. 2019. “Ongoing Tax Appeals Hold Hostage over \$6.1 Million | *Kingfisher Times & Free Press*.” *Kingfisherpress.Net*. September 25, 2019.

refused to oversee the corruption they were incentivizing. As observed, the eco-authority of the wind industry squashed any attempt at resistance. No consideration was given to the legitimate concerns brought by the opponents, and construction continued like business as usual. By the time state actors started to understand the taxpayer disaster they caused, it was too late. The lawsuit was dismissed, and the turbines continue to spin.

The behavior of Apex structurally reinforces unequal power structures in several ways. Their willingness to sue the county, and their disregard for the wellbeing of the community shows the uncapped power and eco-authority of the commercialized wind industry in Oklahoma. Suits brought against Apex by Newfield and Merit Energy to slow construction, only further entrenched the regional preference for oil and gas. Their presence only strengthened oil and gas ties, rather than offering sustainable, mutually beneficial clean energy solutions. Throughout construction, Apex contradicts the precarious nature of state and federal tax incentives, a consistent concern voiced by locals. These incentives, such as the Oklahoma Zero Emissions Tax Credit, were formally dismissed by its guiding legislators as a scam. And yet, Apex persisted in its ill-promise of local benefits.

The actions shown in my case study demonstrate that there is no present avenue for legitimate protest commercial wind development in Oklahoma. With the growing need for a just energy transition as detailed in the literature, such large-scale development serves as a barrier to localized democracy. In a community where members have demonstrated the full capability to organize and grow under closed feedback loops, energy democracy shows extreme potential. Yet, with the rhythmic growth of centralized wind development and a strong historical eco-authority, progressive resilience may never be an option for rural Oklahoma.

Further, this narrative threatens the future of essential climate change mitigation. The literature suggests that as we begin to question the power structures that placed us in precarious anthropogenic conditions, we will begin to see the causation in centralized energy-extraction methods. With the literature proposing the most reliable solution in localized energy democracy, the work of Apex and incentivizing state actors are actively prohibiting any opportunity for the restoration of rural resilience.

Suggestions for Further Research

This research begs for a deeper look into the potential for rural Oklahomans to stand up against the wind industry's eco-authority. A study exploring the political and historical motivations behind environmental skepticism in the rural Great Plains would be an interesting addition to this research. Further methods should be established for how to introduce rural communities to the concept of energy democracy. How could localization efforts begin? What is the best way to motivate the return of local growth, through the structural reversal of an energy transition? How would this notion be challenged by those who are skeptical of environmental policy? Most of all, future research calls for the explicit integration of rural identities into the conversation of energy transition, because this literature has shown the detriment when local input is ignored.

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To the kind ladies at the Kingfisher Public Library for helping me sort through the piles of newspaper archives, teaching me how to use microfiche, and for keeping me company during those long hours.

Christine Reid, the Editor of the Kingfisher Times and Free Press, for your endless support in my education, and for giving me a starting point for this paper.

Dr. Colven, for your graceful leadership and motivating spirit. Thank you for encouraging me every step of the way.

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Kamryn Yanchick is in her senior year at the University of Oklahoma earning dual degrees in Political Science and Native American Studies with an emphasis in tribal governance and policy, pre-law. Kamryn is a proud citizen of the Seminole Nation of Oklahoma and a descendant of the Muscogee Nation, and she hopes to find a meaningful career advocating for the rights of Native peoples and the sovereignty of tribal nations. She serves as the current President/Clan Mother of Gamma Delta Pi, Inc., Director of Philanthropy and Director of Diversity and Inclusion for the Oklahoma Intercollegiate Legislature, and as a Student Advisory Board member for Campus Vote Project.

About the Editors

Eleanor Mendelson is a senior from Overland Park, Kansas majoring in Environmental Studies with minors in Spanish, History, and Biology. She currently serves on the editorial board of the student arts magazine *The Aster Review* as well as working in agricultural disaster assistance and as a high school debate coach. She is moving to D.C. after graduation for a job in conservation program development. In her free time she enjoys crocheting, gardening, and hanging out with her cats.

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