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American Indian Genes in the Media: Representations of the Havasupai Indian Tribe in Their Case against Arizona State University

Raymond I. Orr, Justin Reedy, Dalaki Livingston, and Paul Spicer

Media accounts about the Havasupai Tribe often begin with their reservation's geographic remoteness and beauty. Since the Havasupai Indian Reservation is located at the bottom of the Grand Canyon, with outside supplies and mail being delivered by donkey, often these descriptions first juxtapose the red walls of the Grand Canyon with the turquoise color of Havasu Falls, a sight which rewards visitors able to hike that far. To visit the waterfall and camp overnight requires applying for a permit from the Havasupai Tribe, a yearly process that typically opens in mid-February. Due to high demand and the desire to keep the traffic over the waterfall light, the overnight permits are limited and typically are gone the same day they are made available.¹ According to the tribal website that administers permits, in applying for a

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permit and entering Havasupai Indian Reservation and Havasu Falls, participants are consenting to the civil regulatory and adjudicatory jurisdiction of the Havasupai Tribe. Presumably, participants may see no problems with consenting to tribal authority, may not understand what tribal authority means, or may not be concerned simply because Havasu Falls is so attractive.

The tribe's permit system that controls these lands and who might occupy them, even temporarily, harkens to its sense of stewardship. This stewardship comes from a spiritual obligation to protect the land and to exercise that authority, and in addition, likely a sense that tribal land had been violated and appropriated in the past and the importance of preventing that from happening again. However, another form of violation and appropriation has become associated with the Havasupai people: the unauthorized use of their genetic material samples by researchers at Arizona State University (ASU).² Originally, Havasupai had consented to researchers' use of their genetic material to better understand the link between their genes and diabetes—yet in 2003, a tribal member revealed that she had provided the blood sample for a study on diabetes more than a decade earlier and that ASU had used the extracted genetic material later, outside of that study and without her consent.3 The violation of Havasupai consent and breach of ethics in this case has been explored through multiple perspectives. These include how basic medical ethics were violated,4 how this violation fits within a pattern of violence against minority research participants,5 how issues surrounding trust for researchers are prevalent, and how American Indian and Alaska Native tribes and peoples should take further control over research that uses their information or participation.6

In contrast, how media have framed the facts of this case has not generated much investigation or analysis. This paper, therefore, explores the case brought against ASU through the lens of print media. Extant research on how Native peoples are depicted in media accounts finds a bias in reporting events in terms that diminish the political authority of Native peoples and minimizes the seriousness of settler-caused violations. Specifically, we are interested in whether the case against ASU was framed by print and electronic media as a violation of ethics, an overlooking of tribal sovereignty, an issue of tort law or the committal of a crime and hence criminal law. We are also interested in how Havasupai and other American Indian and Alaska Native peoples are given the opportunity to represent themselves in media accounts.

THE HAVASUPAI, GENOMIC RESEARCH INTEREST IN INDIAN COUNTRY, AND MEDIA COVERAGE

Havasupai means "people of the blue-green water." The Havasupai people have lived near the Grand Canyon for at least eight hundred years. The Havasupai Reservation was established in the 1880s, and throughout the next decade, the tribe had been forced to give up the vast majority of their lands (originally 1.6 million acres) and dwell on approximately five hundred acres. Some of the lands taken were used by the National Park Service and others to expand the railroad system. In the later twentieth century, the Havasupai successfully petitioned to regain nearly 190,000 acres that had

been taken. As of 2021, the tribe has approximately 630 members and the headquarters is in Supai, Arizona, at the bottom of the Grand Canyon.⁸ The tribe's economy is primarily based on tourism and generates revenue from visitors to Havasu Falls and Skywalk.⁹

In 2003, Havasupai tribal member Carletta Tilousi found that the genetic material sample she provided for a study on diabetes more than a decade earlier had been used by ASU outside of the study to which she had consented. While a student at ASU, Tilousi was alerted to the consent violation when she saw a public presentation about a Havasupai genetics study not related to diabetes. These studies included topics such as inbreeding and types of mental illness that are taboo to the Havasupai. Approximately four hundred Havasupai tribal members had their genetic material collected by ASU researchers starting in the early 1990s. Due to the tribe's geographic remoteness, Havasupai samples were especially valued because of the potential inferences that could be made. The initial study on diabetes failed to find a link between the condition and genes, and the genetic samples were stored. Despite the original consent limiting the samples to studies on diabetes (though the written consent includes studies on "behavioral/medical problems," participants were told the focus of studies would be on diabetes), these samples were made available to researchers engaged in non-diabetes studies.

A year after Ms. Tilousi found that samples had been used outside of the original intent of the study, the Havasupai Tribe filed a lawsuit against the researchers and Arizona Board of Regents. The investigation into the misuse of Havasupai biological material revealed instances in which researchers violated the parameters of the original study and engaged in unprofessional behavior. In one example of the misuse of Havasupai material, an ASU researcher conducted clandestine studies at night when the lab was unoccupied by other researchers. The researcher also slept and lived in the lab to accomplish his studies. A complete report of the events surrounding the missue of Havasupai biological material can be found in Stephen Hart and Keith Sobraske's investigation submitted to the Arizona Superior Court.

The Havasupai Tribe sought twenty million dollars in damages. When in 2010 the case was resolved by a settlement, among the terms was an award in compensation to tribal members whose samples were used—access to \$700,00—and the tribe received funding for a health clinic and school. Significantly, the genetic samples were returned to the tribe. Biological materials are often sacred to many Native American peoples and for many tribal members, return of the samples was considered the most important outcome. In

The fallout from the case brought against ASU by the Havasupai Tribe was significant. One consequence was that tribes were reluctant to participate in genomic-based research and took steps to stop researchers from recruiting.¹⁷ The National Congress of American Indians, a national lobbying group for many tribes, passed a resolution supporting the Havasupai Tribe.¹⁸ The Navajo Nation already had in place a moratorium on genomic research on Diné land, even before the case brought against ASU. For tribes that had already moved toward restricting genomic research, such as the Navajo Nation, the Havasupai Tribe's case against ASU confirmed their concerns.¹⁹

The case also initiated a discussion among stakeholders of how genomic research does not necessarily benefit American Indians and other minority groups despite their participation, or benefits them unevenly.²⁰ It is unclear what exact effect the case had on population health researchers, but it likely altered the ways that researchers approached marginalized communities in multiple ways. For instance, interviews with institutional review board members found that the incident raised awareness of the need to properly work with American Indian and Alaska Native peoples to appropriately gather informed consent.²¹ Grants funding research on American Indian and Alaska Native understandings of genomic research and regulations of such research have undoubtedly been facilitated by the attention garnered by the case against ASU brought by the Havasupai Tribe.

As the research in our study and others show, the case was covered by high-profile news outlets such as *The New York Times*, as well as scientific outlets such as the *New England Journal of Medicine* and *Nature*. ²² Whereas previous studies focused on the impact that the case had on scientific researchers at the level of institutional review board, ²³ our study explores how these issues are represented in more mainstream print media outlets.

Although the case has been analyzed from multiple perspectives, how media accounts portray or "frame" the event has not been explored. In using the term *frame*, we borrow from Goffman's influential work on frame analysis, whereby he argued that the same event might be understood in multiple possible ways.²⁴ Like most complex events that draw media attention, the case against ASU brought by the Havasupai Tribe, and particularly the misuse of genetic material, could be fitted into multiple frames.

Previous research on Native American and Alaska Native peoples identifies a pattern whereby stories involving tribes are likely to ignore or trivialize what is typically termed as "sovereignty," the political authority of tribes. One interpretation suggests that ignoring American Indian and Alaska Native peoples' political existence fits within a larger project that constructs Indigenous peoples and their cultures, identity, and political authority today, writ large, as eroded beyond worthwhile mention.²⁵ In addition, another interpretation is that the general public poorly understands the sovereign status and political power of tribes.²⁶ Our study asks how print and electronic media accounts of the case against ASU brought by the Havasupai Tribe potentially frame the case. Does the media portray the misuse of the genomic material as an issue of ethics, science, or crime, for instance, or one involving the political sovereignty of tribes? Further, we are interested in the presence of Native American and Alaska Native voices in these studies. Do media accounts privilege the voices of scientific researchers, or Native peoples?

METHOD AND ANALYSIS

To better understand the nature of media discourse around the case against Arizona State University, we conducted a quantitative content analysis of news articles, news analysis, and editorial articles related to the case. We sought to create a corpus that

captured all such relevant print news media items from early 2004, the beginning of the case, through 2019. We searched the Lexis-Nexis newspaper database, which includes news outlets throughout the United States and the world (e.g., The New York Times, The Independent (London), Business Day [South Africa]), and retained articles from this search that we deemed as relevant to the topic of the case against ASU brought by the Havasupai Tribe. In addition, we supplemented this by searching local/ regional news outlets in Arizona via their own archives (e.g., the Arizona Republic and Phoenix New Times) and the Newspaper Source Plus database (e.g., Arizona Daily Star), which yielded eighteen articles from outlets around the state, as well as major scientific publications (e.g., news and perspective articles in Science and Nature, two leading outlets in biomedical research), which yielded twelve articles. We removed articles that did not substantively discuss the case against ASU brought by the Havasupai (for example, articles that mentioned the Havasupai Tribe, but not this case brought against ASU or related research ethics issues). This resulted in a corpus of fifty-nine articles that were relevant to the study by being primarily or partially about the case against ASU brought by the Havasupai Tribe (see table 1).

Following methods established by similar studies of media coverage of controversial issues,²⁷ we developed a content analysis codebook that aimed to identify the *topics* covered in each article, as well as what *sources* were given voice in each article. Both sets of codes (topics and sources, respectively) were developed by the authors based on our initial exploratory reading of media coverage of this specific case, as well as close reading of similar cases involving research ethics, vulnerable research populations, and

TABLE 1. CONTENT ANALYSIS CODEBOOK

Source/Speakers	Topics
Native voice: Claim or statement made directly by a Native speaker (Havasupai or other), or attributed to a Native speaker or group (Havasupai or other)	Science/Health: Discussing the scientific aspects of the story, including the genetic and medical components of the research.
	Ethics: Discussing the ethical implications of the story, or the ethical considerations raised by this incident.
Native expert/elite: Claim or statement made directly by or attributed to a Native speaker (Havasupai or other) who is identified as a scientist or other expert on the case, or as a leader in the Native community (e.g., political figure)	Crime: Discussing the criminality of the study or research conduct – e.g., this was a violation of state or federal law, not just grounds for suing.
	Legal: Discussing the study or research conduct as grounds for suing; could also be focused on the legal details or progression of the case (e.g., lawsuits and related news; judicial rulings; court filings). Politics/Sovereignty: Discussing the political conflict and tribal sovereignty aspects of the story.
Scientist/researcher/university: Claim or statement made directly by (or attributed to) a scientist, researcher, or university official	History/Other Groups: Other groups that have been exploited or mistreated; other tribes or groups. Could include non-Native groups that have been exploited or mistreated (e.g., Tuskegee study).

genetics and Indigenous rights, as well as the articles cited previously analyzing news coverage of controversial issues. The authors first worked independently on this close reading of news content and then worked collaboratively to develop the final list of coding categories and codes. More specifically, we were interested in determining how often this case was covered as a science and health or research ethics story, relative to being covered as, say, a story of continued problems with violating tribal sovereignty or exploiting vulnerable populations.

Recall that we also aimed to understand what sorts of voices were being represented in media discourse on this case—for example, were Havasupai citizens or other everyday people in Indigenous communities being represented in the media, or were more privileged voices like Native leaders and scientists and non-Native scientists and officials being represented in articles? Our topic codes included science and health, ethics, crime (i.e., criminal violation of law), legal (i.e., civil liability), politics and tribal sovereignty, and history of other groups exploited by research. Our source codes included Native voices (i.e., Havasupai tribal members or other Indigenous sources), Native experts or leaders, a well as non-Native scientists/researchers or university sources. Each article could receive multiple topic and source codes, and in practice most articles did indeed include multiple codes for each of those two categories (see table 1 above).

Three of the authors of this article trained together on using the codebook and ensuring reliable coding results. An initial round of coding focused on ten of the articles, and resulted in satisfactory (90.6%) agreement among the three coders, and a secondary test focused on another ten articles, also resulting in satisfactory agreement (88.9%). One of the authors then became the primary coder, coding all of the remaining articles. The other two authors split the remaining sample in half and coded

TABLE 2. PERIODICALS INCLUDED IN NEWS CORPUS

Anchor (Rhode Island College)	Sarasota Herald Tribune (FL)
Associated Press Online	Science
Arizona Daily Star (Tucson)	St. Paul Pioneer Press (MN)
Arizona Republic	Tampa Bay Times (FL)
Business Day (South Africa)	The Canadian Press
Dakota Student (University of N. Dakota)	The Independent (London, GB)
Deseret Morning News (Salt Lake City)	The International Herald Tribune
East Valley Tribune (Mesa, AZ)	The New York Times
Indian Country Today	The Salt Lake Tribune (UT)
Nature	The State Press (Arizona State University)
News & Observer (Raleigh, NC)	The Toronto Star (Canada)
National Public Radio	The Vancouver Sun (Canada)
Ottawa Citizen (Canada)	Yukon News (Yukon)

Phoenix New Times (AZ)

them to provide for inter-coder reliability testing and to ensure that all articles were coded by at least two people, a preferred practice in content analysis. After the coding was complete, inter-coder reliability was tested using ReCal, an online reliability testing tool created by a social scientist. The full sample had very strong agreement between the coders (88.0% pairwise agreement), and good reliability (Krippendorf's alpha = 0.760, Cohen's kappa = 0.759).

RESULTS

The results of our content analysis show a rather striking pattern in the topics covered in news discourse on the case against Arizona State University brought by the Havasupai Tribe. News articles and analysis/opinion articles seem to have overwhelmingly covered this case as a science and health story (96.61% of articles), a research ethics story (100%), and a legality and legal proceedings story (89.83%; see fig. 1). Many articles explained that the original Havasupai study by ASU researchers was aimed at understanding the prevalence of diabetes in the tribe. Every article discussed the ethical components of this case, many of them mentioning at least briefly the problems of ASU extending their research under questionable, invalid consent from the population. For instance, in March 2005 the *Arizona Daily Star* of Tucson, Arizona, noted the potential ethical violations in both an article's headline, i.e., "Indian tribe Sues University of Arizona Researcher for Alleged Breach of Trust," and its text, reporting "The tribe says [former ASU lead researcher Therese] Markow and other researchers took blood under the pretense of helping the Havasupai fight a diabetes

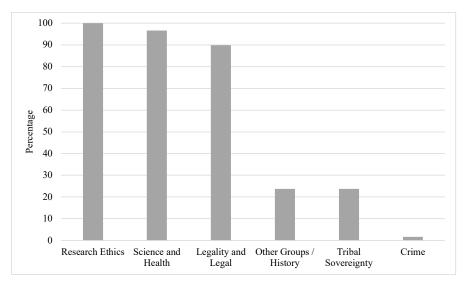


FIGURE 1. Topic framings (by percentage of articles focusing on each topic) in media coverage of case against Arizona State University brought by the Havasupai Tribe (2004–2019) (N=59)

epidemic—and later used it to pursue scientific curiosities about schizophrenia and genetics among tribal members."30

Clearly the lawsuit's legal proceedings often were the news hook for journalists covering this case, as these are mentioned in the vast majority of articles. For example, in May 2007, an Associated Press article titled "Tribal Suit Over Blood Samples Dismissed" notes how the Havasupai faced a setback (the case was later reinstated before being settled out of court).³¹ Only one article mentions that the ASU researchers' actions were potentially criminal, with the others instead focusing on the civil liability from the potential ethics violations. In some instances, potential criminality came up metaphorically, rather than literally. "When Two Tribes Go To War," a July 2004 Nature article, reports that the Havasupai plaintiff "says she feels mentally 'raped' by the project." 32 Others report the potential criminality in vague terms, such as noting that the Havasupai had alleged that ASU had violated federal law. Only a handful of articles detail a disturbing aspect that was a potential crime: an ASU researcher, who was staying in the Supai Health Clinic during the collection of the original blood samples, used their time after work hours to search the clinic's medical files to look for signs of schizophrenia in the population to justify a study in this area. A March 2004 Arizona Republic article, "ASU Vows to Fight Havasupai Lawsuits," is one of the few to note this potential criminal action.³³

The history of research exploitation of Native groups and other vulnerable populations was covered much less often (23.73% of articles; see fig. 1), though the notable exceptions provided important details to readers. For example, a March 2004 Arizona Republic news analysis, "The Ethics Involved in Those Ties That Bind," notes that academic researchers have long studied Native populations while giving little back to benefit those groups or adequately address their health issues.³⁴ That same month, another article "ASU Law Prof Denounces Collecting Havasupai DNA," also reports this history of exploitation, but also provides the counterexample—namely, a biomedical research institute that was partnering with the Salt River Pima-Maricopa Indian community and provided valuable funds as compensation for the research.35

Tribal sovereignty was also mentioned much less often (23.7%) than the other main topics, as news coverage typically did not delve into the details of how Native American tribes like the Havasupai have rights as sovereign nations (see fig. 1). Some articles dealing with sovereignty focused primarily on tribes as entities that can negotiate for material benefits for their community, as seen in some discussions of the settlement with ASU. One example is the April 2010 Arizona Republic article "Tribe Ends Regents Suit with Burial," which appeared shortly after the lawsuit was settled and blood samples and related data were to be returned to the Havasupai. It listed other settlement terms with ASU: "Also, the board is to collaborate with the tribe on several projects, including university scholarships, teacher preparation, a high school and dormitory, health and nutrition programs, economic development and a health clinic."³⁶ Other articles that addressed this topic often noted the rights and protections that tribal sovereignty can afford Native populations, particularly in the aftermath of this case against ASU. For example, a Nature news article from 2018, "How Three Research Groups Are Tearing Down the Ivory Tower," reports that some researchers

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are learning to collaborate with underserved and vulnerable communities to bring about mutual benefits for researchers and community members. Working with Native communities, the article explains, often entails "dealing with sovereign governments, some of which have their own institutional review boards," and additionally, that such mutually beneficial relationships are starting to become "mandatory" as tribes exert their sovereignty and control over research.

In addition to the patterns noted above, we also noted some differences in topics covered by different kinds of news outlets. Most notably, science journals (*Science* and *Nature*) and national news outlets (e.g., *The New York Times*, where the case was mostly covered by science journalists) more frequently covered the topic of the history of research exploitation of Indigenous and other groups (41.7% and 33.3%, respectively), in comparison with Arizona news outlets (16.7%) and local/regional papers in other states (22.2%). The topic of tribal sovereignty was also much more frequently covered by science journals (41.7%), national news outlets (22.2%), and international news outlets (33.3%) than Arizona news outlets (11.1%) and local/regional outlets elsewhere (11.1%).

Our analysis of sources in articles on the case against ASU brought by the Havasupai Tribe also revealed some important differences in who was quoted and named in coverage of this story (see fig. 2). The most frequently mentioned source was the category of scientists, researchers, or university figures (61.02%). Many of these instances included representatives of ASU, the main defendant in the lawsuit filed by the tribe. Some stories also quoted the primary researcher in the Havasupai

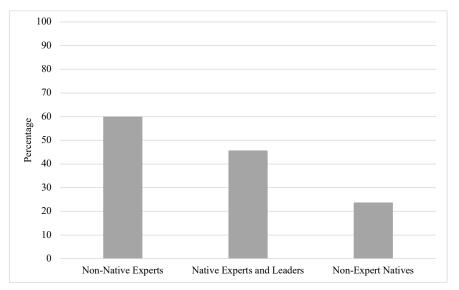


Figure 2. Source types (by percentage of articles focusing on each source) in media coverage of case against Arizona State University brought by the Havasupai Tribe (2004–2019) (N=59)

study, Dr. Therese Markow, who had moved to the University of Arizona, providing space for Markow to defend her research practices and counter the tribe's claims. For example, the Arizona Daily Star article reported, "Markow has said in statements released through her attorney, Michael Rusing of Tucson, that she was only trying to understand 'the biological underpinnings of the health issues of the Havasupai.' She called the tribe's allegations 'hysterical.""37

In some cases, other researchers and scientists quoted expressed worry that this ethical and legal dispute was going to disrupt research with Native communities and have a chilling effect on studies of Indigenous genetics. In one of the more galling examples, an editorial from the journal Nature argued that many Native communities that possessed newfound economic resources and seemed to be using such resources for litigation rather than the more important goal of addressing diseases and illnesses. The editorial cites anonymous researchers in Arizona in its argument: "In Arizona, sensitive, caring scientists are privately saying they do not want to go anywhere near a reservation after recent events in the Havasupai case. Given the broader potential benefits of research, this cannot be a climate that tribes wish to foster."38

In contrast, many other scientists and researchers were quite critical of Markow and the study, and suggested that research practices with Indigenous communities and other vulnerable populations needed to change to prevent similar ethical breaches. A 2010 news article in the journal Science, "DNA Returned to Tribe, Raising Questions about Consent," reports on the resolution of the case but also the implications for future genetics research on tribes and in other communities. A law professor quoted in the article, Hank Greeley, argued that "consent is not a form, it's a process," and said that similar violations of trust and consent could happen not only to tribes, but anyone.39

Native experts and leaders were also quoted in many articles on the case, though notably, this was less often (45.76%) than non-Native scientists and researchers (see fig. 2). In many instances, this was in the context of the lawsuit, and the main claims of ethical and legal violations were voiced by, or attributed to, tribal leaders or their legal representatives. In some cases, other Native experts served as sources, often arguing in favor of greater protections for research participants and even co-ownership of genetic information and data. The 2010 Science article cited above, for example, featured Indigenous scholar Kimberly TallBear making this argument. 40

The voices of Native people who were not experts or leaders were much less common (23.73%) in media coverage of the case, however, and the vast majority of those were people connected to the case (see fig. 2). One source, Havasupai tribal member Carletta Tilousi, the ASU student who was alerted to the consent violation, was mentioned multiple times as the lead plaintiff due to her connections to the case. Journalists typically used Native voices like Tilousi's to humanize the case and provide cultural background to the tribe's concerns about retained blood samples, which for Havasupai people are seen as extensions of one's body. After the case's resolution, for instance, a 2014 National Public Radio article, based on a radio interview, "Blood Victory' in Medical Research Dispute,"41 quoted Tilousi on the relief felt by tribal citizens: "And I believe that we owed it to our ancestors to obtain these blood samples back, bring them home and properly bury them. When that was done, I was happy." Though rare, there were also some comments from Native voices in discussing the implications of the case for future research practices. A *Science* article on the case, for example, also quoted Tilousi (not identified as a tribal leader) about doing research the "right" way: "I'm not against scientific research. I just want it to be done right. They used our blood for all these studies, people got degrees and grants, and they never asked our permission."⁴²

As with the topics covered, several notable differences appear among the sources different news outlets will feature as voices. Interestingly, Arizona news outlets (77.8%), national news (77.8%), and international outlets (66.7%) were more likely to include comments from scientists and university leaders than were science journals (41.7%) and local/regional news outlets in other states (22.2%). A similar split was seen in quotes of Indigenous experts and leaders, with Arizona outlets (61.1%), international news (55.6%), and national news (44.4%) being more likely to quote such sources than science journals (25%) and local/regional outlets elsewhere (22.2%). There was less variance in the quotes of Indigenous (non-elite) voices, though international outlets quoted such sources the most (44.4%), with Arizona news (22.2%), national news (22.2%), local/regional outlets elsewhere (22.2%), and science journals (16.7%) turning to these sources less often.

DISCUSSION, LIMITATIONS, AND CONCLUSION

Our study confirms previous work indicating that print news media rarely engages the topic of tribal sovereignty. Specifically, we find a pattern in stories on the Havasupai and ASU that follows Landsman's account of Native political and sovereignty issues being framed outside of the realm of politics or the authority of Native tribes.⁴³ Yet we also see a different pattern emerge: unlike Landsman's account, which found that sovereignty issues were framed as "crime," reports on the misuse of consent and genetic material was rarely framed as crime. Rather than fraudulent or criminal acts, newspaper accounts were most likely to include discussions of ethics and consent. It is also apparent that few American Indian and Alaska Native peoples are given "voice" in these stories compared to scientists or experts. This might be understood as a function of bias in reporting and following similar patterns in which American Indian and Alaska Native are not given control over how they are portrayed around issues pertaining to them. Such a disparity in representation and voice also might stem from, or be compounded by, lack of knowledge on whom to speak with in American Indian and Alaska Native communities compared to those in the scientific community.

Print media's minimal contact with issues of self-determination and sovereignty in accounts of the case against ASU by the Havasuapi Tribe is concerning. As early as the 1970s, scholarship began to identify the need for "emancipatory" approaches to research design and, by the 1980s, there were calls for "community-based participatory research." Both emancipatory and community-based research held assumptions that peoples who were the subjects of inquiry had autonomy in directing knowledge efforts within their locality. This is particularly true for Indigenous communities, which had

been the focus of extractive forms of research.⁴⁵ Furthermore, unlike other communities, Indigenous communities are recognized as "self-determining," which has led to a growing acknowledgment of their collective political autonomy since the 1970s.⁴⁶ Regard for Indigenous communities for research purposes is often assessed "through an understanding of aboriginal social, political and cultural structures," as Laura Arbour and Doris Cook put it.⁴⁷ Yet because the autonomy of Indigenous peoples was not prominently represented in these print media accounts on illicit research conducted on the Havasuapi Tribe, the coverage excludes understandings of many of the aforementioned structures that might connote understanding and respect. There are many possible reasons why news articles in this case are framed in these particular ways. It could be that issues of sovereignty, autonomy, and self-determination are difficult to convey to the general public in such short form. Likewise, reporters might work within frames with which they themselves are comfortable, such as ethics violations or court cases.

Though our current research design offers a sense of breadth in this single case, it does not provide a cause of the pattern directly, nor does it allow us to make claims about the treatment of the case of the broader media. The use of a single event limits the generalizability of our claims toward how the media might more broadly frame Indigenous issues. The use of print media, rather than other forms, also gives us only perspective on one medium. It is possible different results would have been obtained if we examined material from radio, television, or podcasts. Despite the limitations of this study, a better sense of the discourse surrounding or generated by news media is gained in this analysis. Analysis of print media provides important insight into to how American Indian and Alaska Native genomic issues are being framed.

In a way that has not, to our knowledge, been done previously, this study also combines two areas of interest in Native studies: news representations and genomic research. By looking at the framing of the case against Arizona State University brought by the Havasupai Tribe, we see that issues of ethics are foregrounded ahead of issues around sovereignty as well as non-Native voices taking precedence over that of American Indian and Alaska Native peoples. This also adds to our understanding of how the media might be inclined to frame certain stories as crimes, but others as not. We see further research, perhaps including interviews with journalists who covered this case, as a pathway to understanding why the news stories did not report on sovereignty and were framed otherwise. Such a study would be important for identifying further information journalists might need to convey how Native tribes are situated within the American political system.

Acknowledgment

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NOTES

- 1. Amy B. Wang, "It's Nearly Impossible to Get a Permit for the Havasupai Waterfalls. Here's Why," *The Republic*, May 4, 2017, https://www.azcentral.com/story/news/local/arizona-best-reads/2016/05/22/nearly-impossible-get-permit-havasupai-falls-heres-why/84462922/.
- 2. Nanibaa' A. Garrison and Mildred K. Cho, "Awareness and Acceptable Practices: IRB and Researcher Reflections on the Havasupai Lawsuit," AJOB Primary Research 4, no. 4 (2013): 55–63, https://doi.org/10.1080/21507716.2013.770104; Nanibaa' Garrison, "Genomic Justice for Native Americans: Impact of the Havasupai Case on Genetic Research," Science, Technology & Human Values 38, no. 2 (2013): 201–23, https://doi.org/10.1177/0162243912470009. We phrase this event as "the case brought against Arizona State University by the Havasupai Tribe" rather "the Havasupai case," which is how it is typically recorded. We do this to be accurate to the event, but also to avoid essentializing the Havasupai tribe or people as bound to this case.
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