

FRAMING PSYCHEDELICS: A THEMATIC ANALYSIS OF PSYCHEDELIC
COVERAGE IN U.S. NEWSPAPERS

BY

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A Thesis Submitted to the Graduate Faculty of

WAKE FOREST UNIVERSITY GRADUATE SCHOOL OF ARTS AND SCIENCES

in Partial Fulfillment of the Requirements

for the Degree of

MASTER OF ARTS

Communication

May, 2024

Winston-Salem, North Carolina

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Acknowledgments

My interest in exploring the intersection of media, drugs, and public education was sparked by the docuseries Hamilton's Pharmacopeia, and was shifted and expanded to include politics as a result of my involvement in grassroots drug policy reform with Students for Sensible Drug Policy. My belief that drug use should be handled through a compassionate health care lens is thanks to witnessing the paths tirelessly pathed by those advocating for drug user's rights. Given the U.S.'s decades long War on Drugs, the media plays a crucial role in **what** we see and **how** we view it, but also in painting a picture of what a better world could look like and what it takes to get there. I cannot thank my fellow advocates and mentors enough, a few of which are: Vilmarie Fraguada Narloch PsyD, Jason Ortiz, Evan Nison, Jonathan Lubecky, Kat Murti, and many more.

I would not have been able to pursue grassroots policy reform, a media career, and a Master's in Communication simultaneously without the relentless support of my best friend, Ellis Burke. Not a single person has had as much conviction in me and my potential as Ellis, and he has worked everyday to ensure that I have whatever I need to make my dreams a reality. It is a rarity to receive this level of unconditional love and support, and I'm eternally grateful.

To my committee members, thank you for your dedication to this project, me as a researcher, and my growth as a young professional. Dr. Krcmar, your systematic approach to research methods strengthened my skills and confidence in my ability to carry out this project. I will miss our small group sessions in your office. Dr. Gill, your creative eye, problem solving abilities, and enthusiasm has made it an absolute pleasure to work with you. The Department of Communication is lucky to have you.

To my advisor Dr. Giles, it has been a complete honor to work with you on the Drugs and Media class and to have you as a mentor throughout my graduate school experience. I deeply admire your approach to mentorship, teaching, and research, particularly in your ability to relate to your students. It takes a special ability to effortlessly educate your students in a way that both empowers and entertains them. If I take anything away from our advisorship, it is the importance of meeting others where they are at. I look forward to staying in touch.

A special thank you to my undergraduate research assistant, Lisi Chapin. I still cannot believe you agreed to help me with my thesis while you were studying abroad in Spain. The completion of the content analysis would not have been possible without you. I still owe you a Chai.

Lastly, this program and thesis has stretched the limits of what I thought I was capable of accomplishing, but also shattered many preexisting beliefs I held about the world. I am humbled to have learned from and gone through the experience with the brilliant and hilarious friends I have made in this program. You all inspire me more than you know.

Table of Contents

List of Tables and Figures.....	vi
List of Abbreviations.....	vii
Abstract.....	viii
Chapter 1: Introduction.....	1
Chapter 2: Review of Literature.....	6
A Brief History of Psychedelics in The United States.....	6
Shamanic and Indigenous Practice Origins.....	6
The Psychedelic 60s, The Controlled Substances Act of 1970, and The War on Drugs.....	8
The Psychedelic Renaissance and 'Hype Bubble'.....	10
The Pollan Effect	10
Clinical Trial Process of FDA Approval of MDMA-Assisted Therapy for PTSD.....	11
FDA Breakthrough Therapy Designations.....	12
Johns Hopkins University and Imperial College London Psychedelic Research Centers.....	13
Oregon and Colorado Legalize Psychedelic Services.....	14
The Business Boom.....	15
News Reporting.....	16
Drug Messaging.....	17
Thematic Drug Content Analyses.....	18
Psychedelic Media Portrayals and Mental Health Implications.....	20

Psychedelic News and Stigma.....	20
Agenda-Setting Theory.....	21
Framing Theory.....	23
Summary and Aim.....	25
Chapter 3: Methodology.....	26
Methods.....	28
Sample.....	28
Procedures.....	30
Analytical Process.....	35
Chapter 4: Results.....	37
Research Question 1: Trends in the Volume of Psychedelic News Articles.....	37
Research Question 2: Predominant Themes and Subthemes.....	41
Research Question 3: Evolution of Frames and Themes.....	53
Research Question 4: Differences in Reporting Among News Outlets.....	54
Chapter 5: Discussion.....	56
Theoretical Considerations.....	57
Agenda-Setting Theory.....	58
Framing Theory.....	60
Implications.....	64
Policy Reform and Access.....	64
Drug Education and Stigma.....	66
Cultural Considerations.....	68

Study Limitations and Future Research.....	69
References.....	72
Curriculum Vitae.....	97

List of Tables and Figures

Table I. Operationalization of Themes and Subthemes.....	32
Table II. Frequency and Percentage of Themes and Subthemes in American Newspaper Articles, 2017-2023.....	42
Table III. Frequency and Percentage of Each Theme, 2017-2023.....	54
Table IV. Frequency and Percentage of Theme by Political Leaning of Newspaper.....	55
Table V. Frequency and Percentage of Frame by Political Leaning of Newspaper.....	55
 Figure 1. Frequency of Articles Published, 2017-2023.....	 38
Figure 2. Frequency of Article Frames, 2017-2023.....	39
Figure 3. Frequency of Title Frames, 2017-2023.....	39
Figure 4. Frequency of Article Themes, 2017-2023.....	40
Figure 5. Frequency of Title Themes, 2017-2023.....	40

List of Abbreviations

DMT	Dimethyltryptamine
FDA	Food and Drug Administration
LSD	Lysergic Acid Diethylamide
MAPS	Multidisciplinary Association for Psychedelic Studies
MDMA	3,4-Methylenedioxymethamphetamine
PTSD	Post-Traumatic Stress Disorder

Abstract

News media plays an important role in shaping public perceptions of psychedelics and influencing relevant policies. News thematic analyses have been conducted for marijuana, e-cigarettes, opioids, alcohol, and prescription drugs, but not for psychedelic substances (Lyu et al., 2021; Webster et al., 2020; Lynch, 2020; Kersbergen et al., 2022; Almomani et al., 2023). This qualitative thematic analysis and quantitative content analysis employed Framing Theory and Agenda-Setting Theory to identify and describe the prominent themes and subthemes in highly circulated American newspapers' reporting on psychedelics, due to their resurgence into mainstream healthcare, research, pop culture, and politics. Psychedelic news articles from 2017 to 2023 ($n = 212$) were analyzed to assess article themes and frames, along with their frequencies. Seven themes were found: Health and Wellness; Pop Culture and Recreation; Science and Technology; Sacred Usage; Business and Industry Development; Law; and Safety and Education, with Western Renaissance as a metatheme. Results revealed Pop Culture and Recreation to be the most widely reported theme, closely followed by Law. The analysis did not see a change in salience of article themes at different time periods, but rather, all seven themes were more frequently reported in 2022 and 2023. The types of news reporting and their escalated frequency may have implications for policy reform, perception change, indigenous reciprocity, fact-based drug education, and greater accessibility for those looking to improve their mental, physical, and spiritual wellness. Findings of the study suggest real-world applications for understanding the ways in which psychedelics are being filtered through a Western lens. Future research should explore this topic with a greater scope of psychedelic articles over a longer period of time.

Chapter 1

Introduction

Psychedelics (also known as hallucinogens) are a class of psychoactive substances that include both naturally-occurring and synthetic drugs that produce changes in perception, mood, and cognitive processes. This class includes classic psychedelics—Lysergic Acid Diethylamide (LSD), psilocybin, Dimethyltryptamine (DMT), and mescaline— and non-classic psychedelics—3,4-Methylenedioxymethamphetamine (MDMA), ketamine, *Salvia divinorum*, 2C-B, and 5-MeO-DMT.

In recent years, news coverage of psychedelics in scientific, political, pop culture, and financial contexts has become increasingly prevalent. Unlike the hippie portrayals of psychedelics in the 1960s and 1970s, psychedelics are now being investigated for their clinical implications in treating major depressive disorder, post-traumatic stress disorder (PTSD), substance use disorder, anxiety, eating disorders, cluster headaches, and more (Agin-Liebes et al., 2020; Bogenschutz et al., 2015, Davis et al., 2020; Griffiths et al., 2016; Johnson and Griffiths, 2017; Luoma et al., 2020; Swift et al., 2017). Additionally, psychedelic policy has shifted, most notably with Oregon and Colorado legalizing some psychedelic services and decriminalizing a range of psychedelics, in 2020 and 2022, respectively (Peipert, 2022). However, although psychedelics are demonstrating therapeutic potential and many are in the Food and Drug Administration (FDA) clinical trial approval process, numerous people believe psychedelics are deadly, addictive, and have no therapeutic potential, given their federal Schedule I status. As such, the continuation of these negative attitudes may slow scientific progressive, perpetuate mass incarceration, and slow treatment accessibility for those in need (Yaden et al., 2022).

Given psychedelics' advancements in clinical trials (e.g. the FDA granted MDMA-assisted therapy for PTSD priority review), these substances have attracted the attention of media outlets, including The New York Times, The Washington Post, BBC, and The Wall Street Journal. However, news coverage of psychedelics has still been extreme, ranging from touting psychedelics as dangerous, to claiming they can “cure” mental health disorders (Yaden et al., 2022). Unsurprisingly, news media has occupied an important role in the process of influencing public perceptions of psychoactive drugs and setting the public opinion. As such, research has found a strong association between media reporting and an increase in the use and misuse of psychoactive substances (Dasgupta et al., 2009). With about 50% of Americans age 12 having used an illicit drug at least once, the media is expected to practice socially responsible reporting (Fan, 1996; Netherland & Hansen, 2016). Regarding the topic of psychedelics, journalists have grappled with how to accurately frame –call them drugs, substances, hallucinogens, etc.– since new scientific evidence is emerging regularly and psychedelics are powerful substances whose effects are highly set and setting dependent (Yaden et al., 2022).

Research on psychedelics in the media is limited, but research on drug portrayals in general has focused on several main findings, many of which conclude the media’s glamorization of alcohol and smoking contributes to excess usage and favorable attitudes towards substances that are framed in entertaining contexts (Hanewinkel et al., 2014; Osberg et al., 2012). Additionally, scholars have suggested that news reporting on drugs increased abuse of amphetamine in the 1950s, methamphetamine in the 1960s, crack and cocaine in the 1980s, ecstasy in the 1990s, and in the early 2000s, prescription painkillers (GAO.gov, 2006). Therefore, large scale attempts to use the media to reduce drug use

have been documented. Between 1998 and 2006, the federal government allocated \$1.4 billion into anti-drug advertising campaigns, targeted to youth (GAO.gov, 2006). While studies have shown that this anti-drug advertising was successful in reaching target audiences, getting their attention, and shifting public sentiment, the ads did not appear to decrease drug use (Orwin et al., 2006).

Historically, most anti-drug advertising has skewed negatively to be abstinence-based and fear-based, and while research shows this changes attitudes, it does not always reduce harmful drug use behaviors (Ruiter & Kok, 2012). This emphasis on fear, rather than on evidence-based portrayals that aid in developing self-efficacy behaviors, harm reduction practices, social skills, and education building, can lead to negative health outcomes and an avoidance of threatening messaging (Ruiter & Kok, 2012; Griffin & Botvin, 2010). On the other hand, research has shown that drug messaging is most effective when it is fact-based and evidence-based—emphasizing interactions, skill building, and implementation over multiple years (Griffin & Botvin, 2010). A recent study found that increased media coverage has been partially responsible for the use of psychedelics increasing from 0.9% to 4.0% from 2002 to 2019 (Livne et al., 2022). But while increased drug coverage may be increasing usage, this does not suggest that young people are using drugs more safely or are gaining more scientifically-backed information. This disparity in usage and education begs the question: How are psychedelics in the media being portrayed and can any information be gleaned from trends on their reporting?

Research on psychedelics, in the media specifically, has been extremely limited in scope. For example, Barnett, Siu, and Pope (2018) explored the acceptability of

psychedelics among psychiatrists, demonstrating that overall psychiatrists perceived psychedelics as hazardous and “appropriately illegal,” yet many expressed optimism about the future use of psychedelics in psychotherapy. Davis et al. (2021) investigated psychologists beliefs and attitudes about psychedelics, while Karthik (2020) examined the general public’s attitude towards psychedelic substances and usage. These two studies suggest that media narratives aid in maintaining a more negative attitude towards psychedelics, but that those with experience using psychedelics or those that have researched their effects more heavily endorse positive attitudes. Although some past research has investigated attitudes towards psychedelics within the scope of media, there are no media content analyses that have been conducted on the subject.

Due to variation in news reporting and extreme ranges in understanding of psychedelics, previous drug framing research suggests the need for news reporting that centers on neutral reports, without devaluing antidepressants, all while demonstrating the legitimization of psychedelics in a medical context (Zhang et al., 2017; Yaden et al., 2022). However, past research has not tested what these psychedelic frames and themes look like or how the characterization of their dynamic nature may function as a mechanism for altering psychedelic access and political reform.

According to Agenda-Setting Theory, the media, through its ability to identify and publicize issues, plays a pivotal role in shaping the issues that attract attention from governments bodies and direct public opinion towards specific issues (Brosius & Haas, 2011). It is predicated on the notion that most individuals only have access to one source of information on most issues: the news media. While there are now numerous ways to access news and emerging stories, news media is the preferred source for decision-

makers and stakeholders. Since the news has some role in establishing the agenda, often driven by the media's bias on subjects such as politics, economy, and culture, its content may affect how important topics and stories are seen to be (Brosius & Haas, 2011). Thus, there is an eternal feedback loop between media, politics, and public opinion that alters reality and perceptions.

Given the limitations on previous research regarding psychedelic media themes and frames, this will be a multi-part study that begins with establishing the various psychedelic news themes, subthemes, and frames, along with their frequencies, from the period of 2017 to 2023. Through the lenses of Framing Theory and Agenda-Setting Theory, the present study aims to add a complementary yet independent contribution to the literature on thematic content analyses of drug news reporting.

Chapter 2

Literature Review

Before exploring the conceptual and theoretical communication constructs related to framing and agenda-setting of psychedelic media, it is important to understand the larger social context to which they are and will be applied.

A Brief History of Psychedelics in the United States

The history of psychedelic usage, modern research studies, and their potential clinical applications addressing mental health disorders evolved through a complex string linking ancient cultures, modern scientific discoveries, pop culture, national and international politics, and a media frenzy. In the context of this history, we have been witnessing a 21st century resurgence of psychedelic-assisted therapy, research, and policy reform within the limitations imposed by The War on Drugs and our country's emerging and persistent mental health crisis (Belouin & Henningfield, 2018). Albeit it appears in our Western culture that psychedelics are a “new discovery” from the 1900s, their true use dates back millennia.

Shamanic and Indigenous Practice Origins

The story of psychedelics in the United States draws from the practices of various ancient cultures, indigenous people, and Eastern schools of thought. Plants and plant-derived substances producing psychedelic effects and altered states of consciousness have been used for millennia across the world for their healing powers, in rituals, and for recreation (Nichols, 2004; Strassman, 1995). Long before the rise of Western interest, shamanic and indigenous practices recognized the profound spiritual and healing potentials of psychedelics. In the Americas, substances like psilocybin mushrooms,

peyote, and ayahuasca were, and still are, sacred medicines, facilitating personal and communal healing, contact with the divine, and offering insights into the depths of the human psyche (Belouin & Henningfield, 2018). These practices, intimately embedded in the cultural fabric of many indigenous communities, highlight a millennia-old understanding of psychedelics' transformative power that encompass effects beyond the medical.

Use of psychoactive substances in healing practices is often associated with “shamanism”, although the application was so prevalent in the ancient world that it was essentially normative. Ritual drug use has often been associated with hunter-gatherer cultures around the world—from the Americas, to Eurasia, Australia, and Africa, but extends far beyond that (Walter and Fridman, 2004). The ancient Greeks—and later the ancient Romans and agrarian societies—held seasonal religious rites that included ritual ingestion of a psychoactive drink called kykeon, which potentially was an ergot fungi containing LSD-like alkaloids (Samorini 2019; Wasson et al., 1978; Ouvaroff, 1817). Additionally, the soma drink described in the Rigveda refers to a non-alcoholic psychoactive substance (Staal, 2001). Moreover, Ancient American societies also embraced psychoactive ritualism to a remarkable degree (Dobkin de Rios, 1974). Remnants of the pre-Inca Tiwanaku civilization artifacts revealed traces of psychoactive compounds—benzoylecgonine (a metabolite of cocaine), bufotenine (an alkaloid in psychedelic snuff powder), psilocin (the active compound in psilocybin mushrooms), and DMT (the active ingredients in the psychedelic brew, ayahuasca) (Miller et al. 2019). Given psychedelics' rich history in ceremony, community, and religion, it is no surprise

that these powerful substances found their way into modern culture, particularly in a time where people are on a quest for meaning.

The Psychedelic 60s, The Controlled Substances Act of 1970, and The War on Drugs

As the 20th century unfolded, the allure of psychedelics reached the U.S., culminating in the 1960s—a decade marked by social upheaval, artistic expression, and the journey for altered states of consciousness. Prior, psychedelics such as MDMA and LSD were prescribed with therapy in attempts to treat thousands of patients for alcoholism, neurosis, autism, schizophrenia, and psychopathy (Costandi, 2014). A document by the U.S. Drug Enforcement Administration (DEA) reported that from about 1950 to 1965 “research on LSD and other hallucinogens generated over 1000 scientific papers, several dozen books, and 6 international conferences, and LSD was prescribed as treatment to over 40,000 patients” (Drug Enforcement Administration, 1995). But after a little over a decade, the research came to an abrupt halt. In 1962, the U.S. Congress passed new drug safety regulations, the FDA designated LSD as an experimental drug, and research on its effects were minimized (Costandi, 2014). The following year, LSD entered the streets in the form of liquid soaked onto sugar cubes; it grew in popularity and the hippie counterculture was at its height by the summer of 1967.

Prominent figures like Timothy Leary (former Harvard University Clinical Psychology professor) championed the use of LSD, coining phrases such as "turn on, tune in, drop out" that became rallying cries for a generation seeking spiritual liberation and societal change. At the time, LSD in particular was entering popular culture as a “mind-altering” and “mind-enhancing” drug associated with various social and political subculture movements, including the rise of hippie culture and psychedelia. These social

developments contributed to an emerging unfavorable reputation of psychedelics and psychedelic culture among numerous political and medical leaders (Drug Enforcement Administration, 1995; Hofmann, 1980). During this period, LSD came to be progressively viewed as a drug of abuse (Costandi, 2014). It also became closely associated with student anti-war riots, and ultimately was outlawed by the U.S. government in 1968. There is little question that the celebrity status garnered by Professor Timothy Leary during this decade contributed to both the popular cultural rise of LSD and, in turn, to its stigmatization and adverse political repercussions (Doblin, 2001; Dyck, 2006; Mansnerus, 1996).

This complex and rapidly evolving period of psychedelia undeniably contributed to political backlash. Certain aspects of the design and content of the U.S. Controlled Substances Act of 1970 codified harsh penalties for manufacture, possession, and use of many psychedelics, which hindered their research and medicinal development (Doblin, 2001; Dyck, 2006; Mansnerus, 1996). This legislation classified many psychedelics as Schedule I substances, defined by a high potential for abuse, a lack of accepted safety for use under medical supervision, and no currently accepted medical use in treatment in the United States. This classification not only halted most research into their potential benefits, but also symbolized a growing divide between the government's stance and the public's perception of psychedelics.

The declaration of the War on Drugs by President Richard Nixon in 1971 further entrenched the government's position. This era saw psychedelics and their users demonized, often portrayed as threats to societal order and public health. Media representations frequently framed psychedelics within narratives of madness and moral

decay, sidelining discussions of their spiritual and therapeutic potentials (Roberts, 2022). This framing served to justify stringent drug policies that have persisted for decades, deeply impacting public opinion and hindering scientific exploration.

The Psychedelic Renaissance and 'Hype Bubble'

Despite the War on Drugs and the Schedule I status of most psychedelics, the world has seen a modern psychedelic revival, beginning with research studies conducted in the early 2000s that were primarily funded by wealthy individuals. This increase in research gave way to increased popularity in other avenues, such as a rise in psychedelic-related startups, legislation that expands access to certain psychedelics, the formal creation of psychedelic research and therapy centers, and prominent figures and celebrities retelling their own mystical experiences. This rise in interest and usage has also led to a media frenzy, distinctly referred to as a “psychedelic hype bubble” (Yaden, et al., 2022). According to Yaden et al., psychedelic headlines have turned from presenting alarmist, extremely negative views of the drugs (approximately 1960s to 2000s) to acknowledging their positive potential (2006 to the present). But, in the past few years, a large number of articles have touted psychedelics as a “cure” or “miracle drug”, as well as disclosing the investment potential of psychedelics reaching billions of dollars (Yaden, et al., 2022). Researchers worry that these extreme shifts in perception may create impediments to rigorous science and reasonable clinical applications (Yaden, et al., 2022). Regardless of these concerns, the bubble has yet to burst. The next few subsections will detail some of the major turning points that have fed the growing psychedelic ecosystem.

The Pollan Effect

Michael Pollan's 2018 influential book, *How to Change Your Mind*, has significantly contributed to the mainstream acceptance of psychedelics, a phenomenon now referred to as the "Pollan Effect" (Noorani, 2020; Brooker 2022). Pollan's exploration of psychedelic substances through a blend of personal narrative and rigorous research demystified these compounds for a broad audience, emphasizing their potential for psychological healing and personal growth. His book, and subsequent 2022 Netflix docuseries, not only educated the public on the historical and scientific context of psychedelics, but also played a pivotal role in shifting societal perceptions. However, critics argue that his rendition of the "psychedelic renaissance" starkly lacks inclusion of a complex perspective that features the industry's growing issues: the embellishment of data; physical, emotional, and sexual abuse in psychedelic therapy; the increasing corporatisation of psychedelics; and equity of access concerns (Brooker 2022). Although important to note, much of this pushback has come from members of the psychedelic community, not the mainstream. Ultimately, the Pollan Effect underscores the power of well-articulated, accessible writing in transforming public discourse, catalyzing increased interest in psychedelic research, and influencing a more open-minded consideration of these substances for therapeutic uses, but with room for added nuanced discussion.

Clinical Trial Process of FDA Approval of MDMA-Assisted Therapy for PTSD

A landmark in 21st century psychedelic research has been the clinical trials assessing MDMA-assisted therapy's efficacy in treating PTSD, along with the push towards FDA approval of this therapy. Lykos Therapeutics, formerly known as the Multidisciplinary Association for Psychedelic Studies (MAPS) Public Benefit Corporation, began their clinical research investigating the efficacy of MDMA-assisted

therapy for PTSD over 30 years ago. Most recently, this organization filed their New Drug Application to the FDA in November 2023 and expect their application to be accepted on or around November 2024 (MAPS, 2024). If accepted, this would be the first time that a psychedelic therapy receives FDA approval.

These trials included data from two published Phase 3 studies, as well as numerous earlier trials. One of the Phase 3 clinical trial's most striking findings was that 67% of MDMA-assisted therapy patients no longer qualified for a PTSD diagnosis after three sessions (Mitchell et al., 2021). Overall, these studies have shown promising results, indicating that MDMA-assisted psychotherapy could offer significant benefits for individuals with treatment-resistant PTSD. This process not only exemplifies the potential of psychedelics to address profound mental health challenges, but also reflects the shifting culture and regulatory landscape, as well as a willingness to reconsider the therapeutic value of substances previously dismissed under prohibitive drug policies.

FDA Breakthrough Therapy Designations

The FDA's designation of MDMA, psilocybin, and a LSD-like compound as "Breakthrough Therapies" for PTSD, depression, and generalized anxiety disorder, respectively, represents a pivotal moment in psychedelic medicine. A Breakthrough Therapy status designation is appointed to expedite the development and review of drugs that are intended to treat a serious condition, where preliminary clinical evidence indicates that the drug may demonstrate substantial improvement over currently available therapies (Commissioner, 2018; MAPS, 2017). In 2017, the FDA granted Breakthrough Therapy Designation to MDMA (MAPP1) for the treatment PTSD, in 2018 Psilocybin (COMP360) for treatment-resistant depression, in 2019 Psilocybin (PSIL201) for Major

Depressive Disorder, in 2024 LSD (MM120) for Generalized Anxiety Disorder, and 2024 Psilocybin (CYB003) for Major Depressive Disorder (Albert & Velkova, 2024).

Such recognition by a major regulatory body not only validates the therapeutic potential of psychedelics, but also signals a significant shift in the medical and regulatory approach to these substances, encouraging further research and development in the field.

Johns Hopkins University and Imperial College London Psychedelic Research Centers

The establishment of psychedelic research centers at prestigious institutions like Johns Hopkins University and Imperial College London marks a significant milestone in the academic study of psychedelics. In April of 2019, Imperial College London opened the world's first psychedelic research center, titled 'The Centre for Psychedelic Research'. Additionally, in September of 2019, Johns Hopkins Medicine launched the Center for Psychedelic and Consciousness Research (Carey, 2019). The development of these centers and studies was supported by the philanthropy of various donors, as psychedelics cannot be studied with government funding due to their Schedule I status.

These centers are at the forefront of exploring the effects, mechanisms, and therapeutic applications of psychedelics, contributing to a growing body of evidence supporting their potential benefits for conditions such as anorexia nervosa, cognitive impairment, substance use disorders, and more (Carey, 2019). Since the early 2000s, research exploring the potential of psychedelics and other recreational drugs for psychiatric problems has reemerged. Early reports have demonstrated a positive stream of clinical findings, despite these drugs' history of being deemed as having no therapeutic applications (DEA, 2024). Despite advancements, many questions still remain unanswered about how to most effectively and ethically conduct psychedelic-assisted

therapy clinical trials, and the scientists doing the work acknowledge as much. However, researchers believe that the new infusion of funding will help clarify which psychedelics help which types of patients, and when the altered states are ineffective, or potentially dangerous (Babaian et al., 2023). This research may not only enhance our understanding of psychedelics, but also play a crucial role in legitimizing and mainstreaming the study of these substances within the scientific and health communities.

Oregon and Colorado Legalize Psychedelic Services

The legislative changes in Oregon and Colorado, legalizing certain psychedelic services, signify a monumental shift in drug policy, public health, and attitude towards psychedelics. In November 2020, through a ballot initiative, Oregon became the first state to legalize psilocybin services (Psychedelic Alpha, 2024). This bill allows for people to legally take regulated psilocybin at licensed facilities, under the guidance of trained facilitators. Following suit, in November 2022, through a ballot initiative, Colorado voted to allow for “natural medicine” use at “healing centers” (Psychedelic Alpha, 2024). The proposition defines the term “natural medicine” to initially include only psilocybin and psilocin, but would be expanded in 2026 to include dimethyltryptamine, ibogaine, and mescaline (excluding peyote). These are the first instances of the United States developing state regulatory models around psychedelic substances, despite their Schedule I status.

These states have set a precedent for the regulated use of psychedelics, offering new models for therapeutic and personal development applications. Such legislative progress reflects a broader societal willingness to reevaluate and reform previous

approaches to psychedelic substances, emphasizing harm reduction, therapeutic potential, and personal freedom.

The Business Boom

Parallel to the cultural, scientific, and regulatory resurgence, the psychedelic sector has experienced a significant business boom. Market researcher Data Bridge recently projects that the global psychedelics sector could bring in \$7.35 billion by 2027 (2024). Fueled by promising research findings and legislative changes, investors have been quick to recognize the therapeutic and financial potential of psychedelics, leading to a proliferation of startups focused on drug development, therapeutic applications, and technological innovations in this space (Lee, 2023). Over the past few years, startups focused on turning psychedelic compounds into approved medicines have raised hundreds of millions of dollars from private investors and dozens of companies have gone public, most of which did not exist a few years ago. For instance, Compass Pathways is a biotechnology company valued at around \$450 million and has filed at least 50 patent claims towards their psilocybin therapy innovations (Jacobs, 2022). While there is excitement about the potential for expanded mental health treatments, particularly for vulnerable populations, concerns exist about the risks that corporatization may bring. Patent wars, treatment monopolies, and inaccessible costs of care, some worry, may be regarded as meritless in the quest to enhance therapeutic value of psychedelic substances (Jacobs, 2022).

This burgeoning market is driven by the anticipation of psychedelics playing a major role in future mental health treatments, attracting billions in investment. While this commercial interest underlines the growing acceptance and potential of psychedelics, it

also presents challenges, including regulatory hurdles and the need for ethical considerations in the commodification of these powerful substances. Nevertheless, it is hard to deny the responsibility of the media in drawing attention to this burgeoning market, outlining a need this study covers for assessing news media's themes and frames of psychedelic portrayals.

News Reporting

Estimating the effect of the news media can be extremely challenging. Scholarship for over 100 years has had to battle severe contention, since media outlets are businesses competing for readers and cater to their interests (King et al., 2017). Thus, there is an ongoing and interconnected national conversation Americans have around major issues of public policy. This conversation is a fundamental characteristic of modern large-scale government, the content of which has important implications for the discernment of officeholders and public policies. Research has shown that among those who participate in social media, the effects of news are approximately the same across citizens of differing political parties, genders, regions, and influence in social media, further supporting the idea that the reach is national (King et al., 2017). Given the tremendous power of media outlets to set the agenda for public discussion, the ideological and policy perspectives of those who own media outlets have considerable importance for the nature of democracy and public policy.

Shifts in recent decades have witnessed considerable variety in the means and methods of obtaining news media. Adults age 18-29 get most of their political news through social media (Pew Research Center, 2020). However, older Americans are much more likely to turn first to print, cable, network television for their news. Historically, in

the U.S., older adults hold more positions of power and possess more influential decision-making ability, meaning that where they source their information from regarding politics is worth an examination. Given that older adults are more likely to consume information through newspapers and news outlets, this study analyzed online newspaper articles and their reports of psychedelics.

Drug Messaging

Research evaluating drug portrayals in the media has largely focused on the ways in which the media educates and influences adolescents' and adults' drug use (ICA, 2018). However, studies have shown that exposure to "alluring, but distorted and potentially unsafe media content" can contribute to negative outcomes for society and individuals (ICA, 2018). To investigate this issue, scholars have conducted a variety of studies addressing the associations between consumption of misleading drug media messages and negative health-related outcomes in a variety of contexts, including substance misuse (Primack et al., 2009; Naimi et al., 2015). While the results of this research do not offer definitive evidence, a large number of empirical studies provide results that are supportive of the negative influence of media exposure on adolescents' decision making and behaviors (Snyder et al., 2006; Brown & Bobkowski, 2011; CDC, 2013). Ultimately, these research findings emphasize the need for interventions that can disrupt the exchange of incorrect and idealized messages about substance use and increase adolescents' ability to detect and use correct, realistic information in their decision making and opinion formations (ICA, 2018). To establish these skills, research suggests moving away from fear-based drug messaging and over to drug messaging that

emphasizes skill and knowledge building, often referred to as “evidence-based” and “fact-based” (Ruiter & Kok, 2012; Griffin & Botvin, 2010).

Thematic Drug Content Analyses

A series of analyses on media coverage of various drugs have been conducted throughout the world. Webster et al. (2020) conducted a critical content analysis of Canadian newsprint media reporting on opioids using a sociological lens. Their analysis showed a slow transition from a conversation primarily about clinical pain care towards a discussion of criminality, especially the increasingly fluidity of boundaries between prescription opioid use and the illegal drug trade. Similarly, a thematic content analysis was employed by Almomani et al. (2023) to analyze the themes that represent newspaper coverage of buying fake prescription medicines on the internet. These themes are the risks of purchasing medicines on the internet; benefits that entice consumers to make the purchase; social influencing factors of the purchase; and facilitators of the purchase.

Numerous studies have investigated the themes of alcohol reporting in print and digital media. Kersbergen et al. (2022) found that news media generally covered U.K. drinking guidelines in a neutral and accurate manner, but in-depth coverage was often negative and aimed to discredit the guidelines using scientific and ethical arguments. A previous analysis of alcohol-related stories in the UK news media conducted by Nicholls (2010) demonstrated that reporting strongly emphasizes negative outcomes, especially violence in men, drunk-driving and long-term health impacts – specifically liver disease. Additionally, a thematic content analysis of online Indian news media pertaining to the country’s sudden alcohol prohibition order revealed four main themes: the beneficial aspects of the policy, the harmful aspects of the policy, non-compliance and attempts to

change and/or subvert the policy, popularity and level of public buy-in of the policy (Ghosh et al., 2020).

Few studies have described the themes emerging from news media pertaining to smoking e-cigarettes and marijuana. A 2021 analysis of Chinese news media coverage of e-cigarettes quantified seven unique themes: health impact, usage, smoking cessation, youth, regulation, industry development, and description of e-cigarettes, with industry development being a unique theme in Chinese newspapers compared with newspapers in other countries (Lyu et al., 2021). An investigation of African news articles and arguments presented e-cigarettes positively, outnumbering those with a negative slant. The health impacts of electronic cigarettes emerged as the most discussed topic, with health authorities frequently cited as news sources (Ngoma & Adebisi, 2023).

On the other hand, thematic analyses of marijuana media have themes and tones of legalization status. A 2020 study reported that U.S. print news articles on cannabis legalization stories were overall reported with a neutral tone. Additionally, arguments about whether cannabis should be legalized are framed using criminological, economic, medical, and political themes (Lynch, 2020). Along the same lines of legalization, a paper outlining the themes in literature on the effects of regulatory change relating to cannabis found five themes: Normalization; Economics; Gatekeeping; Community and Health (Oldfield et al., 2021). As psychedelics are also experiencing regulation shifts, particularly in broadening access to mental health treatments, defining their media themes is a novel and valuable contribution to the literature on drug thematic analyses. This study, through thematic analysis, seeks to define and evaluate the themes and frames of psychedelics in mainstream newspapers.

Psychedelic Media Portrayals and Mental Health Implications

While research investigating drug education, drug use, and attitudes towards drug use has centered primarily around alcohol, tobacco, and opioids, this study argues for the importance of investigating psychedelic drug portrayals and how mainstream media is presenting them. This article posits that since research on psychedelic-assisted therapy is demonstrating great therapeutic efficacy for the treatment of depression, post-traumatic stress disorder, anxiety, substance use disorder, and eating disorders, it is critical to research how psychedelics are portrayed in the media and how this may impact people's willingness to change their mind when presented with new information (Perkins et al., 2021).

We are currently in what some have referred to as a “mental health crisis”, with the rise of social media use and the COVID-19 pandemic (Xiong et al., 2020). Given this crisis and the fact that antidepressants have a 40%-60% success rate, there is growing interest for alternative treatments (InformedHealth, 2020; Schlag et al., 2022). A 2020 Johns Hopkins study found psilocybin (a compound in hallucinogenic mushrooms) to be 4x more effective at treating depression than antidepressants (Davis). This may suggest that psychedelics can be a revolutionary treatment for people where traditional mental health treatment options have not been successful. As such, research on psychedelics' clinical implications have been established, but research evaluating how this science is presented to the public is scarce. This paper argues that psychedelic portrayals should be researched due to the stark difference in the 1960s recreational portrayals to the clinical portrayals of the 2010s-2020s.

Psychedelic News and Stigma

The implications of psychedelics for mental health has been researched since the 1960s, while research evaluating psychedelics in the media primarily began in 2018 and has been limited in scope (Schlag et al., 2022; Aday et al., 2020; Feher, 2018; Belouin & Henningfield, 2018). With regards to accessibility, psychedelic prohibition began in the 1970s with the Controlled Substances Act, but in recent years, numerous opportunities to consume psychedelics all over the world and in the U.S. have occurred, through retreats, workshops, formal therapy, clinical trials, tourism, growing at home, and more (Belouin & Henningfield, 2018). In 2020, Oregon became the first state to legalize psilocybin therapy services and; in 2022, Colorado became the second state to legalize psilocybin therapy services, and opened the door to legalize ibogaine, mescaline, and dimethyltryptamine services in 2026 (Psychedelic Alpha, 2024). Although psychedelic legalization has expanded, media reporting has increased, and psychedelics are more widely available, many people believe psychedelics are addictive, deadly, and provide no therapeutic benefits (Aday et al., 2020; Feher, 2018). Given this stigmatization and dissonance between policy, science, and people's perceptions, this study aims to thematically investigate, through the lenses of Framing Theory and Agenda-Setting Theory, what the different portrayals of psychedelics in the news are and how they have changed in terms of frequency and salience.

Agenda-Setting Theory

Agenda-setting theory, coined by McCombs and Shaw (1972), is the phenomenon of the mass media selecting certain issues and portraying them frequently and prominently, which leads people to perceive those issues as more important than others. For more than thirty years, the main concept in agenda-setting theory has been the

transfer of issue salience, or how media emphasis of certain issues raises their importance for the public (Wu & Coleman, 2009). Original notions from Agenda-Setting Theory assumed that newspapers held a stronger voice in establishing public story and sentiment. But today, agendas are largely driven from political power structures and the media often parrot the ideas that are aligned with their political perspective (Muin, 2011). So while it is unclear what the genesis of the agenda is, it is certain that the media still plays an influential role in the narrative setting process.

Agenda setting occurs in two forms: first-level and second-level. First-level agenda setting focuses on the amount of coverage of an issue, suggesting that the media decide what issues the public will be aware of. Second-level agenda setting examines the properties, qualities, and characteristics that describe objects or people in the news and the tone of those attributes (more on that in the next section).

Coinciding with this theory, there is higher awareness on psychedelics now more than ever. There has been a 1,300% increase in yearly academic publications related to psychedelics in the last 20 years (Lewis et al., 2023). In a recent survey, nearly half of respondents (47%) stated that they heard about psychedelics recently (Pollan et al., 2023). Additionally, about 1 in 4 Americans (27%) say they are “very” or “extremely” familiar with psychedelics (Goldberg & Gustafson, 2023). Similarly, about 82% of U.S. adults have heard of LSD, followed by 70% for psilocybin, 65% for MDMA, and 57% having heard of ketamine (Goldberg & Gustafson, 2023). However, there is limited research evaluating the prevalence of psychedelics as it relates to news media.

The way news stories and topics that impact public opinion are presented is influenced by the media. It is predicated on the idea that most individuals only have

access to one source of information on most issues: the news media. Since the media establishes the agenda, it plays a dominant role in how important issues are seen to be (Brosius & Haas, 2011). When it comes to psychedelic news, greater coverage could indicate to the public that this is an issue that should be on their radar. While many articles state that there is greater coverage of psychedelics in the media, limited studies have tested this theory. In the present study, I will analyze the following based on five of the most circulated American newspapers:

RQ1: What reporting trends can be observed in the volume of psychedelic news articles published from 2017 to 2023?

Framing Theory

Framing theory, put forth by Goffman, suggests that what is being presented (“the theme”) and how it is presented to the audience (“the frame”) influences the choices people make about how to process the information (1974). Themes are a central topic, subject, or message within a narrative, while frames are abstractions that organize and structure message meaning. The most common use of frames is the way in which the news or media conveys information and influences the audience’s perception (Goffman, 1974). In this way, it could be interpreted as a form of agenda-setting—outlets not only tell the audience what to think about, but how to think about it. As framing theory predicts, a frame will exert a stronger influence on preferences when the frame renders a belief available, readily accessible, and/or strongly applicable to the individual’s existing framework of understanding (Goffman, 1974).

Previous analyses have found that 1960s news media glorified psychedelics for mental illness, hyping the drugs and their prevalence in pop culture (Siff, 2015). But over

time, coverage of LSD gave way to a moral panic, transforming the rhetoric of psychedelic users from truth seekers to individuals who are on the fringes of society (Siff, 2015). Now, articles are again citing psychedelics as a “cure” or “miracle drug” (Yaden et al., 2022). Research has demonstrated that positive portrayals of psychedelics, especially those that emphasize the benefit of psychedelics over antidepressants, are not well-supported by empirical evidence (Zhang et al., 2017). However, this overly positive framing is more likely to result in people to seek psychedelic treatments for depression. It’s no surprise that positive framing results in more positive attitudes and a greater frequency of use. But there is a concern that positive framing is not always realistic or accurate (Yaden et al., 2022). Meaning, these overly positive and overly negative frames may neglect to cite scientific evidence and to highlight both the benefits and risks of a substance. Therefore, by utilizing information that is neutral and fact-based, people can come to their own conclusions about psychedelics and not be swayed by sensationalized and biased reports.

An analysis of psychedelics portrayals throughout the most recent decades displays that media has played a large role in constructing and maintaining both extreme positive and negative attitudes about psychedelics, in addition to influencing their accessibility and reputation. This variation in attitudes towards psychedelics, as reflected by their type of media framing, demonstrates the need for ethical reporting. Given this complex reputation, researchers state that formal guidance is required to assist journalists with how to report psychedelics neutrally, without devaluing the evidence supporting conventional antidepressant treatments, the need to report both the benefits and risks, and demonstrate the legitimization of psychedelics in a medical context (Zhang et al., 2017;

Yaden et al., 2022). In the present study, I will investigate not only *what* is being said about psychedelics (the themes), but *how* they are being discussed (the frames). This will be examined through the following research questions:

RQ2: What are the predominant themes and associated subthemes in psychedelic-related news coverage within five of the top American newspapers by circulation?

RQ3: How, if at all, do the frames and themes change in terms of frequency and salience from 2017 to 2023?

RQ4: Do the themes and frames about psychedelics vary across news outlets?

Summary and Aim

In reviewing the literature, I have identified two research gaps that must be addressed. First, no study has explored what the various news portrayal themes and subthemes are for psychedelics. Second, no study has investigated how reporting frequency and salience have changed along with major regulatory, scientific, business, and cultural shifts. This study will utilize a thematic analysis and a content analysis to determine the psychedelic news themes and frames from 2017 through 2023 and their potential changes in prevalence over this period. A broader and future aim of this body of research is to assess how various types of psychedelic news frames impact people's attitudes towards psychedelics, accurate recall of information, and attitude change.

Chapter 3

Methodology

This study aimed to identify and assess the themes and frames in highly circulated, online written news media reporting of psychedelics, how they may differ across outlets, and potentially shift over time. The methodological approach for this study combined thematic analysis and content analysis frameworks, drawing from the research method on e-cigarette news media coverage in China by Lyu et al. (2021). Thematic analysis was chosen to qualitatively determine the themes, subthemes, and frames in widely circulated American newspapers that reported on psychedelics from 2017 through 2023. In the context of this research, a theme is the overarching idea and subject area that captures a salient aspect of the data in a patterned manner (Braun & Clarke, 2006). A frame is the way in which the media organizes and presents the ideas, events, and topics they cover (Goffman, 1974). I have chosen the sampling frame to be 2017 to 2023 to identify any potential differences in themes and frames reported before, during, and after Oregon became the first state to legalize psilocybin services (Psychedelic Alpha, 2024). Additional major shifts in attention towards psychedelics also occurred during this time period, such as the release of the popular 2018 book *How to Change Your Mind* and various psychedelics achieving FDA Breakthrough Therapy Designation. Thematic analysis techniques were also implemented to provide a description of the subthemes and arising within articles. Content analysis quantitatively measured how the reporting varied in frequency, by year of publication, and political leaning of the newspapers.

Newspaper was chosen as the medium to examine because, despite the popularity of social media, previous studies found that newspapers lead the broader media's agenda

in terms of ongoing discussions about an issue (Su & Borah, 2019). Thus, though social media use is increasing, newspapers are still the primary choice for analysis of media coverage on issues, as newspapers often set the agenda for other formats and are easy to access and search (Hughes et al., 2011). We speculate that social media posts regarding psychedelics would respond to coverage similarly to newspaper articles, but may carry more personal opinions in their takes. In this case, newspapers were also preferred because the News section carries a certain level of objectivity and standardization, opposed to editorial and opinion pieces.

The methodological approach for this study was three-fold as presented by Braun and Clarke (2006). This approach was selected prior to data collection and analysis in order to develop a framework for how theory is applied to this research and the ways in which meaning is defined and applied. 1) A deductive, top-down approach was taken for data collection, analysis, and interpretation. A deductive approach involves starting with a theory or research question and then designing a research strategy to test the research question (Braun & Clarke, 2006). In this case, Framing Theory and Agenda-Setting Theory were the basis of the framework, which informed the range of newspapers selected (diversifying by geographical location and political leaning) and how their language, tone, and topics were analyzed as potential means of setting agendas and forming public sentiment. 2) A semantic approach was taken for establishing the depth at which information was examined. A semantic approach primarily focuses on the explicit and surface meanings of the data. It involves analyzing the specific words and phrases used in the text and understanding the direct, obvious messages conveyed (Braun & Clarke, 2006). Since mainstream newspaper articles are often crafted to convey clear,

specific information to a broad audience, a semantic approach was suitable for capturing the explicit ways psychedelics are discussed, as well as categorizing the specific themes in the reporting. 3) The philosophical basis for the study was a constructionist approach, grounded in the belief that knowledge and meaning are constructed through social processes and interactions. It acknowledges that language, including media discourse, plays a critical role in shaping our understanding of the world (Braun & Clarke, 2006). Since news articles on psychedelics are shaped by cultural, social, and historical contexts, a constructionist approach allows for exploration into how these contexts influence the portrayal of psychedelics. Overall, this approach recognizes that the meaning of psychedelics in society is not fixed, but varies across different contexts and times. It enables a deeper analysis of how the discourse around psychedelics is shaped by societal attitudes, legal frameworks, and cultural narratives, and vice versa.

Methods

Sample

Five digital versions of American newspapers were selected to represent written, mainstream media coverage of psychedelics that are both credible and highly circulated. A list of the most circulated American newspapers was viewed from Agility PR Solutions list of Top 10 U.S. Newspapers by Circulation (2022). The five newspapers selected were chosen to represent three key criteria: first, high readership; second, political diversity; and third, geographical variation: The New York Times; New York Post; Chicago Tribune; The Wall Street Journal; and Los Angeles Times. The New York Times, Chicago Tribune, The Wall Street Journal, and Los Angeles Times articles were all extracted from ProQuest and the New York Post articles from NewsBank. In terms of

most readership, they rank 1) The New York Times; 2) The Wall Street Journal; 3) Los Angeles Times; 4) Chicago Tribune; and 5) New York Post. By exploring Ad Fontes Media's Interactive Media Bias Chart, it was determined that largely, The New York Times and Los Angeles Times were politically Moderate to Left (or liberal leaning), Chicago Tribune politically Moderate, The Wall Street Journal politically Moderate to Right (or conservative leaning), and New York Post politically conservative (Ad Fontes Media, 2024). Further, The New York Times is headquartered in New York City, The Wall Street Journal in New York City, Los Angeles Times in El Segundo, California, Chicago Tribune in Chicago, Illinois, and New York Post in New York City.

A systematic search criteria was utilized within each newspaper's database to gather articles for theme and subtheme generation. All chosen articles needed to fit the following criteria: 1. Published in the United States; 2. Published electronically between 2017-2023; 3. Categorized in the Document Type "News"; and 4. Chosen using the search string "Psychedelic* OR Hallucinogen* OR ketamine OR MDMA".

"Psychedelic* OR Hallucinogen*" was originally tested as the search string since they are the most common terms for this drug class, but we found we were leaving out a significant portion of articles that referred to substances by their specific names.

"Psilocybin", "DMT", "LSD", and "Shrooms" were also considered in the search string, but did not yield a great enough sum of articles for necessary inclusion in the sample.

This set of search criteria yielded 1,883 articles broken down by: 823 articles published from The New York Times, 313 from the Chicago Tribune, 299 from The Wall Street Journal, 272 from New York Post, and 176 from Los Angeles Times. In order to narrow down the size of the sample for brevity and sole inclusion of articles where psychedelics

were a salient topic, the article pool was reduced to 56 articles published from The New York Times, 28 from the Chicago Tribune, 43 from The Wall Street Journal, 49 from New York Post, and 36 from the Los Angeles Times. An uneven amount of articles was kept per outlet given that they reported on psychedelics to varying degrees and amounts. Articles that were not included in this sample were articles that used the term “psychedelic” solely as an adjective, such as to describe music or art. Articles that were included were chosen to represent the topic of psychedelics in a wide range of contexts and in a manner where they were a salient piece of the text, even if mentioned minimally. The articles were randomly divided amongst the coders and I coded 121 articles and my undergraduate research assistant coded 91 articles. The total number of articles in the sample for this thematic and content analysis were 212.

Procedures

Based on a preliminary reading of 750 articles haphazardly selected from the pool of 1,883, I generated a list of themes and subthemes dependent on articles where psychedelics were the main topic or an important topic of discussion. For instance, psychedelics could be the primary topic, whereas it is mentioned in the title and throughout the article beginning to end. In other cases, articles were selected where psychedelics were mentioned in a block of text, but not necessarily through the entire article. Cases where someone was under the influence of a psychedelic and the article recounts a corresponding event were also selected. It is important to note that themes were selected based on recurrence, forcefulness, and repetition, such that they needed to occur more than once, over time, and hold significant weight as a topic (Scharp, 2021). As an example, Sacred Usage as a main theme was only cited seven times in this sample,

but it was still included as a theme because of the significance the topic holds in psychedelics' history and introduction into Western society. While reading articles, notes were taken in a document containing every topic that was cited. Topics were condensed, combined, and rephrased in order to encompass overarching themes that were distinct, clear, and notable. Researcher judgment was necessary to determine what ultimately constituted a theme and subtheme. This method was employed for both themes and subthemes. An undergraduate research assistant and I, through two iterative cycles, discussed the themes and subthemes, reread the articles, and combined the 34 subthemes into seven themes. An example of the operationalization of the subthemes is included (see Table I).

Table I. Operationalization of Themes and Subthemes.

Themes and Subthemes	Examples of statements fitting each subtheme
Sacred Usage Psychedelics as religious sacraments in Western entheogenic churches. Increased connection to Spirit/Universe or consciousness expansion. Equity and indigenous reciprocity. Native use, rituals, and ceremonies. Conservation and preservation of naturally-occurring psychedelics.	New churches organize around the use of psilocybin, LSD and other entheogens. Psychedelics can create spiritual insights and mystical states of consciousness. Indigenous groups with sacred knowledge of psychedelics should be supported. Societies used psilocybin mushrooms to achieve altered states in religious rituals. Conserving peyote is important to Native American communities.
Science and Technology Research and clinical trials on psychedelic substances. Medical technology to mimic, enhance, dispense, or monitor psychedelic trips. Pharmaceutical industry development of psychedelics or drugs with no "trip". The medicalization of psychedelics into mainstream healthcare.	Research has shown MDMA is effective at reducing PTSD symptoms. Telehealth ketamine companies are providing virtual therapy and prescriptions. A pharmaceutical company developed Spravato nasal spray to treat depression. Psychedelic therapy is now covered under some insurance plans.
Health and Wellness Psychedelics for mental health treatment and management. Psychedelics for physical health treatment and management. Microdosing psychedelics for improved health and wellness. Psychedelic retreats and centers for improved health and wellness. Testimonials of psychedelic therapy patients or psychedelic users.	Psychedelic-assisted therapy is used to treat an array of mental health conditions. Psychedelics are being used to treat people with chronic pain. Microdosing is used to increase well-being, productivity, and creativity. Retreats offer individual and group psychedelic ceremonies. Psychedelic users often report feelings of introspection, connection, and bliss.
Pop Culture and Recreation Festivals or events that psychedelics are a central part of. Prominent figures who advocate for or speak on their psychedelic experiences. Psychedelics impact on adolescents and youth. Art that details psychedelics. Psychedelics as an idealized cultural phenomenon and/or panacea. History and stigma - The psychedelic 60's and 70's.	Burning Man and Woodstock are festivals with many psychedelic users. Aaron Rodgers recounts how ayahuasca made him a better football player. Psychedelic use among teens and young adults is at an all time high. Pollan's book details a history of psychedelics and his personal experimentation. Increased media coverage and talk of psychedelics has led to mainstream interest. By 1968, the news was full of stories about acid trips that ended badly.
Law Accessibility of treatments and substances. Regulations, rules, and guidelines. Policy change on municipal, state, and federal levels. Criminalization; Arrests; Violence; "Drug busts". Psychedelic markets: Legal; Gray; Illegal/Underground.	Oregon developed regulations and a program to dispense psilocybin to adults. The measure applies to adults 21+ and does not legalize magic mushrooms. The citizens of Washington, D.C., voted to decriminalize psilocybin. He was charged with intent to sell narcotics and operation of a drug factory. Storefronts are selling psilocybin mushrooms despite their illegal status.
Safety and Education Public service announcements. Effects of taking psychedelics. Harm reduction and benefit maximization. Drug abuse; Misuse; "Bad trip"; Death. Information or disinformation about psychedelics.	A National Park requests people don't lick a toad with hallucinogenic properties. Ketamine can produce an out-of-body, sedated feeling, and lessen depression. Drug checking can test for adulterants and reduce overdose deaths. Perry's death may have been from a higher than appropriate dose of ketamine. Ketamine is a drug that has been used since 1962 as a general anesthetic.
Business and Industry Development Development of psychedelic companies, products, and initiatives. Non-profit organizations supporting psychedelic use, science, policy, and more. Conferences where psychedelics are a main topic. Industry trends.	A few psychedelic startups have attracted high-profile investors. Most psychedelic research has been facilitated and funded by nonprofits. Denver hosted a conference put on by a psychedelic advocacy group. Psychedelics for therapeutic purposes have gained momentum in recent years.

To establish coding consensus, my coding assistant and I practiced coding ten articles together and then ten articles on our own. Articles were coded in a Google Sheet and captured Article Title, Article Main Theme, Article Title Frame, Year of Article Publication, Political Outlet Name, Leaning of Outlet, Author(s), Article Word Length, Newspaper Section, Article Main Theme, Article Frame, Message of Article, Article Subtheme 1, Example of statement fitting subtheme, Article Subtheme 2, Example of Statement Fitting Subtheme, Article Subtheme 3, Example of Statement Fitting Subtheme, and Key Words. In order to save time and to focus on the variables most relevant to this study's research questions, the following were omitted from the final data collection process: Author(s), Article Word Length, Newspaper Section, Message of Article, and Key Words. My coder and I then came together to review similarities, differences, and answer any questions before coding our own article set. While we did not agree on the themes designated for all of the practice articles, it was determined that a certain level of subjectivity should be accepted in scenarios where a title or an article contained more than one of the main themes. Overall, incongruent coding was discussed and a solution was agreed upon before moving forward.

To store, review, and analyze the final data set, a Codebook was created in Google Sheets to collect qualitative data. A second Codebook was created in the Statistical Package for the Social Sciences to capture quantitative data. We each recorded our coded data in separate codebooks in order to minimize data crossover and confusion. Under each section, dropdown options were placed to reduce error and the amount of time coders were typing data.

The coding sheet consisted of several sections; the first of which coded for the descriptive characteristics of the article and newspaper: name of paper; year published; news outlet name; and political leaning of the news outlet. The second section coded for the overall tone/frame of psychedelics in the title and the article as a whole. The frame could be coded as positive, negative, mixed, or neutral. Mixed frames were articles or titles that portrayed psychedelics in both positive and negative manners. Frame is defined as the author's perspective of psychedelics. In other words, were the topics highlighted supportive or unsupportive of psychedelic marketing, therapy, sales, research, culture, or use. An example of a positively framed news article title is: "Ketamine Is Promising In Depression Study". An example of a negatively framed news article title is: "MDMA Use Presents a Challenge". An example of a neutrally framed news article title is: "A New Era of Psychedelics in Oregon". An example of a mixed framed news article title is: "Magic Mushroom Therapy Is Met With a Mix of Elation and Trepidation".

The third and final section of the coding sheet consisted of selecting the theme of the title and the main theme and subthemes of the article. For the headline and within the article, only one main theme was selected for sake of concision and showcasing overarching themes in the content. Such that readers often skim titles and articles to glean the main purpose of a text, this method accounted for the fact that readers may walk away from an article solely with one main takeaway. A total of three subthemes could be chosen for each article, but the subtheme needed to fall under the corresponding main theme. Solely including three subthemes was due to sake of brevity, but also ensuring that a diverse range of subthemes could still be recorded. Both positive and negative valence statements were included within each subtheme.

The primary theme of the article title and article was determined by analyzing the main point of the content. For instance, an article titled “Costly Depression Drug Accepted for Veterans, Despite Safety Concern” mentions the theme of “Health and Wellness”, in regards to the depression drug available to veterans struggling with their mental health, and also the theme “Safety and Education” since a safety concern is mentioned. In this instance, the depression drug is being discussed within a safety framework, thus being coded in the “Safety and Education” theme.

Analytical Process

When a primary article theme was identified in the article title, it was given a code between one and seven. Only one primary theme was selected, even if an article contained multiple themes. This decision was made operating under the notion that readers often skim titles and texts to derive a main message, rather than closely reading an article from top to bottom. Both positive and negative valence statements were included within each theme; for example, statements that “clinical trials are showing promise for treating PTSD with psychedelics” and statements that “there is not enough research to determine the efficacy of psychedelic therapy” were both coded and included in the “Science and Technology” theme. When a subtheme was mentioned, it was given a code between one and 34. For articles that contained more than three subthemes, the three main ones were selected. Articles that included only one or two subthemes were recorded as well. To check the intercoder reliability, a random subsample of 22 articles (10%) were double-coded. The level of agreement between coders was found to be high, with Cohen’s Kappa yielding a value of .944 ($p < .001$), indicating almost perfect agreement. After coding, qualitative analysis was conducted through the following procedure: Under

each theme, news articles were organized in chronological order. I first read through the articles to provide a general description of each theme and identified several representative news articles under the theme, and characterized the possible changes over time. Then the articles were reorganized by subthemes (also in chronological order) to enable a close examination of each subtheme. Continual discussion with my second coder was conducted to refine the analysis and to ensure news articles quoted as examples were representative of the themes and subthemes. Following Rooke and Amos's (2014) thematic analysis of newspaper coverage of e-cigarettes in the U.K. and Scotland, quotes with news sources and dates were provided in the section of results to illustrate each theme.

Chapter 4

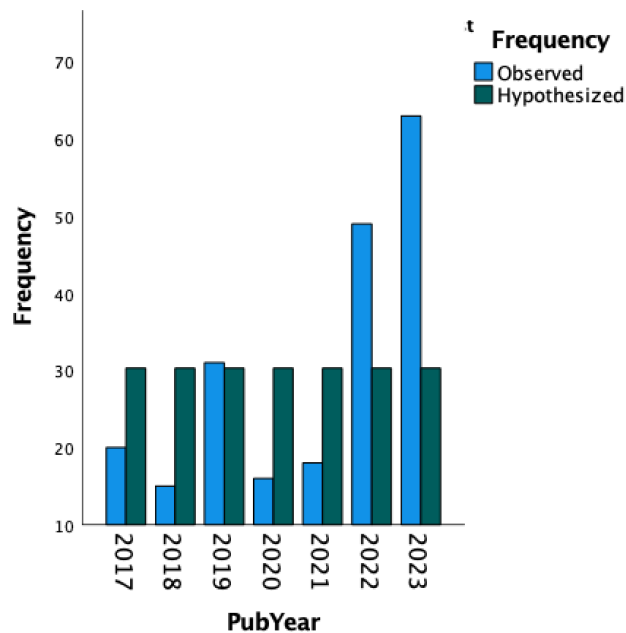
Results

This study consisted of 212 news articles that were selected from five different American newspapers. The five newspapers were The New York Times ($n = 56$), Chicago Tribune ($n = 28$), The Wall Street Journal ($n = 43$), New York Post ($n = 49$), and Los Angeles Times ($n = 36$). From this sample, most articles came from moderate to left news outlets ($n = 92$) and a conservative outlet ($n = 49$), while a smaller sample from a moderate to right outlet ($n = 43$) and a moderate outlet ($n = 28$). The majority of articles were published in 2023 ($n = 63$) and 2022 ($n = 49$), with the remainder published in 2017 ($n = 20$), 2018 ($n = 15$), 2019 ($n = 31$), 2020 ($n = 16$), and 2021 ($n = 18$). Most of the article titles were framed as neutral ($n = 97$), with the remaining article titles framed as positive ($n = 41$), negative ($n = 46$), and mixed ($n = 23$). Most of the articles framed psychedelics positively ($n = 83$), while the others neutrally ($n = 34$), negatively ($n = 42$), and mixed ($n = 53$).

Research Question 1: Trends in the Volume of Psychedelic News Articles

The volume of psychedelic-related articles published by five of the top American newspapers showed a stark increase from 2017 to 2023. A total of 212 articles were analyzed, with 2023 witnessing the highest publication volume at 63 articles, followed by 2022 with 49 published. A bar graph (Figure 1) depicts the yearly distribution of articles.

Figure 1. Frequency of Articles Published, 2017-2023.



The volume of psychedelic-related articles published by five of the top American newspapers showed a range of article frames and themes. A total of 212 articles were analyzed, with the majority of the articles being framed as positive overall, at 83 articles. Out of the seven themes, three occurred most predominantly as the main article theme: Pop Culture and Recreation ($n = 42$), Law ($n = 40$), and Safety and Education ($n = 39$). Bar graphs (Figures 2 and 3) depict the frequency of article frames and themes.

Figure 2. Frequency of Article Frames, 2017-2023.

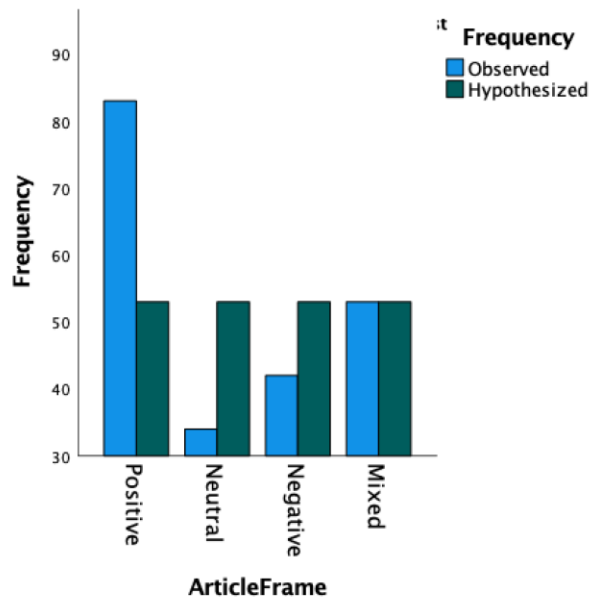
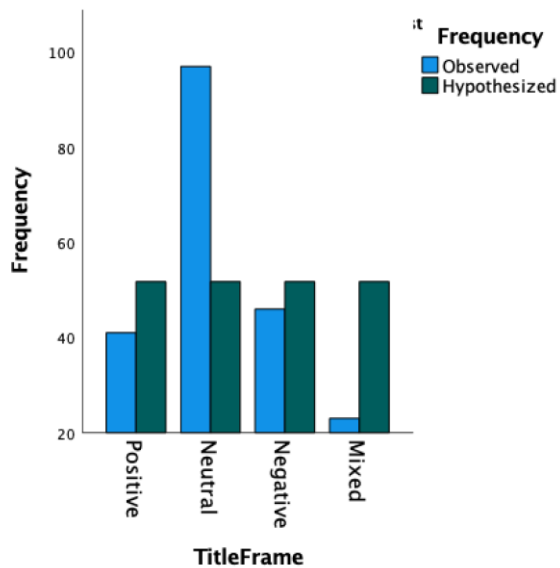


Figure 3. Frequency of Title Frames, 2017-2023.



The volume of psychedelic-related articles published by the top five American newspapers showed a range of article frames and themes. A total of 212 articles were analyzed, with the majority of the article titles being framed neutrally, at 97 articles. Out of the seven themes, three occurred most predominantly as the title theme: Health and

Wellness ($n = 44$), Pop Culture and Recreation ($n = 44$), and Law ($n = 39$). Bar graphs (Figures 4 and 5) depict the frequency of article frames and themes.

Figure 4. Frequency of Article Themes, 2017-2023.

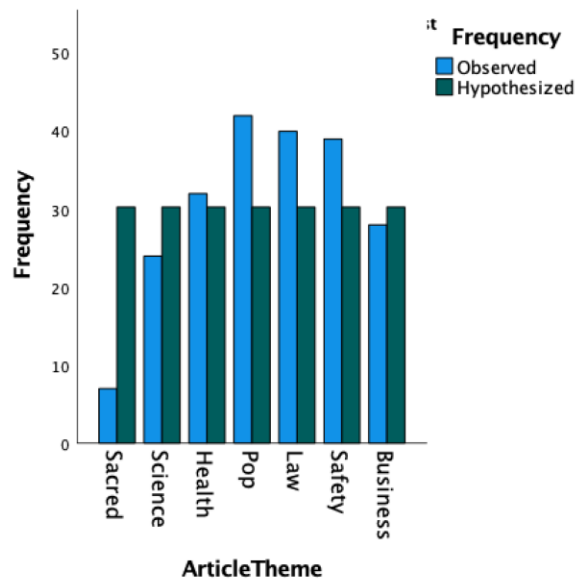
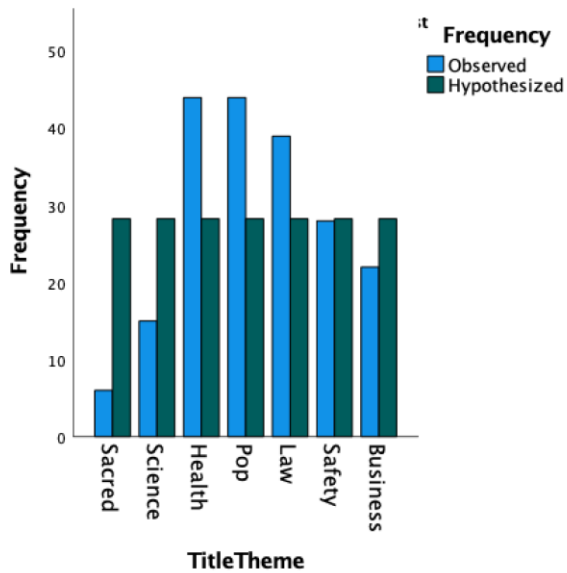


Figure 5. Frequency of Title Themes, 2017-2023.



Research Question 2: Predominant Themes and Subthemes

Analysis of psychedelic-related news coverage from 2017-2023 in five of the top American newspapers by circulation revealed a variety of themes and subthemes. Qualitative thematic analysis identified seven predominant themes: (1) Sacred Usage; (2) Science and Technology; (3) Health and Wellness; (4) Pop Culture and Recreation; (5) Law; (6) Safety and Education; (7) and Business and Industry Development; and one metatheme (1) Western Renaissance (See Table II). Each theme comprised several subthemes. For instance, a few subthemes under Health and Wellness are: Psychedelics for physical health treatment and management; Microdosing psychedelics for improved health and wellness; and Psychedelic retreats and centers for improved health and wellness. Indicating contexts where psychedelics are being used in conjunction with therapy modalities, personal wellness plans, and in group healing sessions. Additionally, a few subthemes under Law are Regulations, rules, and guidelines; Policy change on municipal, state, and federal levels; and Criminality; Arrests; Decriminalization; Violence; "Drug busts". Indicating coverage of psychedelics that falls under the legal connotations of psychedelics, how they are being regulated, and ways they are accessed. The discussion of each theme below will include an overall introductory statement, further explicated by describing thematic properties and example quotes from articles that illustrate each property. Table II presents the identified themes and subthemes, along with their frequency of occurrence within articles.

Table II. Frequency and Percentage of Themes and Subthemes in American Newspaper Articles, 2017-2023.

Themes and subthemes	Frequency	Percentage*
Sacred Usage	7	3.3
Psychedelics as religious sacraments in Westernentheogenic churches.	4	
Increased connection to Spirit/Universe or consciousness expansion.	2	
Equity and indigenous reciprocity.	1	
Native use, rituals, and ceremonies.	6	
Conservation and preservation of naturally-occurring psychedelics.	4	
Science and Technology	24	11.3
Research and clinical trials on psychedelic substances.	20	
Medical technology to mimic, enhance, dispense, or monitor psychedelic experiences.	7	
Pharmaceutical industry development of psychedelics or drugs with no "trip".	11	
The medicalization of psychedelics into mainstream healthcare.	16	
Health and Wellness	32	15.1
Psychedelics for mental health treatment and management.	31	
Psychedelics for physical health treatment and management.	3	
Microdosing psychedelics for improved health and wellness.	5	
Psychedelic retreats and centers for improved health and wellness.	15	
Testimonials of psychedelic therapy patients or psychedelic users.	21	
Pop Culture and Recreation	42	19.8
Festivals or events that psychedelics are a central part of.	9	
Prominent figures who advocate for or speak on their psychedelic experiences.	29	
Psychedelics impact on adolescents and youth.	5	
Art that details psychedelics.	18	
Psychedelics as an idealized cultural phenomenon and/or panacea.	16	
History and stigma - The psychedelic 60's and 70's.	8	
Law	40	18.9
Accessibility of treatments and substances.	12	
Regulations, rules, and guidelines.	12	
Policy change on municipal, state, and federal levels.	22	
Criminality; Arrests; Decriminalization; Violence; "Drug busts".	25	
Psychedelic markets: Legal; Gray; Illegal/Underground.	10	
Safety and Education	39	18.4
Public service announcements.	4	
Effects of taking psychedelics.	30	
Harm reduction and benefit maximization.	11	
Drug abuse; Misuse; "Bad trip"; Death.	24	
Information or disinformation about psychedelics.	23	
Business and Industry Development	28	13.2
Development of psychedelic companies, products, and initiatives.	23	
Non-profit organizations supporting psychedelic use, science, policy, and more.	8	
Conferences where psychedelics are a main topic.	2	
Industry trends.	21	

458 *Note. The percentage = frequency/the total number of articles (i.e., $n = 212$).

Pop Culture and Recreation

Pop Culture and Recreation explores the integration of psychedelics into entertainment, lifestyle, and recreational activities. This theme examines how psychedelics influence music, art, literature, and film, reflecting and shaping societal attitudes towards these substances. Coverage may include festivals, retreats, and the growing trend of psychedelic tourism, highlighting both the celebratory aspects of psychedelic culture and the critiques of its commercialization. Prominent, current pop-culture advocates for the use of psychedelics are Aaron Rodgers, Mike Tyson, Gwyneth Paltrow, Michael Pollan, Shane Mauss, Hunter Biden, Pete Davidson, and Elon Musk. This was the most frequently reported theme, which may be due to the noise that is generated around celebrity use:

“To me, one of the core tenets of your mental health is that self-love,” Rodgers said at the time. “That’s what ayahuasca did for me, was help me see how to unconditionally love myself.” (Glasspiegel, 2023).

“How to Change Your Mind’ In his best-selling 2018 book, Michael Pollan chronicles the storied history of psychedelic drugs, from their turbulent 1960s heyday to their modern therapeutic uses, and tells of his own consciousness-expanding experiments with LSD and psilocybin.” (New York Times, 2023).

“Psilocybin? I’m gonna say slay. I think that psychedelics are going to absolutely be — and currently are — the next, most interesting area in addressing mental health.” - Gwyneth Paltrow (New York Post, 2023).

Law

The Law theme addresses the evolving legal landscape surrounding psychedelics, including decriminalization efforts, policy reforms, and the challenges of integrating psychedelics into society under current legal frameworks. Media coverage in this area often focuses on legislative changes, court cases, and advocacy work aimed at altering the legal status of psychedelics. Articles may discuss the implications of these changes for medical research, personal use, and law enforcement, highlighting the complex interplay between policy, public opinion, and scientific evidence. The most prevalent legislative changes pertaining to psychedelics are Oregon legalizing psilocybin services in 2020 and Colorado legalizing regulated access programs for psychedelics in 2022. Other notable policy shifts during this period are cities and municipalities that decriminalized certain measures around psychedelics, such as Denver, Oakland, Santa Cruz, Washington D.C., Ann Arbor, Detroit, Northampton, Cambridge, and numerous others. Negative reports cite incidents where individuals are under the influence of a psychedelic and they are being violent or “insane”. This was the second most frequently reported theme, likely due to the interest surrounding expanded access and lowering criminal penalties:

“Measure 109, meanwhile, gives the state public health department two years to develop regulations and create a program responsible for manufacturing and dispensing psilocybin to adults aged 21 or older seeking therapy with a trained facilitator for everything from post-traumatic stress disorder to nicotine dependence.” (Morrison, 2020).

“Voters in Denver, a city at the forefront of the widening national debate over legalizing marijuana, have become the first in the nation to effectively

decriminalize another recreational drug: hallucinogenic mushrooms.” (Mazzei, 2019).

“A Connecticut man was found growing \$8.5 million worth of psychedelic mushrooms in his home after a tipster told authorities the suspect was allegedly running a clandestine drug factory.” (Guzman, 2023).

Safety and Education

Safety and Education coverage emphasizes the importance of informed use, harm reduction, and public education surrounding psychedelics. This was the third most frequently cited theme. This theme includes discussions on the potential risks, responsible use guidelines, and educational initiatives aimed at demystifying psychedelics and reducing stigma. Articles may feature expert advice, safety tips for users, and the efforts of organizations to promote a balanced understanding of psychedelics' benefits and dangers. A couple of the most sensationalized reports regarding Safety and Education in this time frame are Matthew Perry's death while under the influence of ketamine and the off-duty pilot who attempted to cut a plane's engines mid-flight, 48 hours after ingesting psilocybin:

“Mr. Emerson appeared to grow agitated, throwing off his headset, the other pilots told the authorities later. “I'm not OK,” he told them.

Mr. Emerson suddenly reached up and yanked the plane's two fire-suppression handles — designed to cut the fuel supply and shut down both engines. The pilots snatched his wrists, wrestling his hands away in a frantic attempt to avert disaster. They radioed that the flight needed to make an emergency diversion to Portland. Mr. Emerson, who has pleaded not guilty, said he had no intention of hurting

anyone that day. Instead, he said, he was desperate to awaken from a hallucinogenic state that had consumed him since taking psychedelic mushrooms two days earlier, during a weekend getaway with friends to commemorate the death of his best friend.” (Baker, 2023).

“But Bottros said that based on the autopsy findings, which indicated ketamine was found in his stomach, Perry may have taken ketamine orally, and the risk is that "there was too much taken at once." The physician cautioned that he did not know what the prescription dose for Perry was, but "the level in his blood is higher than it would be" for what is considered an "appropriate" oral dose. And "the problem here is that he was in a hot tub," Bottros said. In a dissociated state, he said, someone could sink into a tub without realizing it. (Richard & Reyes, 2023).

“A little bit of ketamine has an effect similar to alcohol. It can cause disinhibition, where you do and say things you otherwise would not,” Anand said. “At higher doses, it has another effect, which is dissociation: You feel detached from your body and surroundings.” (Barrabi, 2023).

Health and Wellness

The Health and Wellness theme captures media discussions on the use of psychedelics for personal development, mental health improvement, and physical well-being. Coverage within this theme includes personal anecdotes of healing, microdosing, overviews of therapeutic modalities involving psychedelics, and the increasing acceptance of these substances within holistic health practices and retreats. Articles often emphasize the potential of psychedelics to catalyze profound psychological

transformations, promote wellness, and challenge conventional treatment paradigms. Specifically, substances more commonly used to treat mental health conditions are psilocybin for depression and anxiety, ketamine for depression, and MDMA for PTSD. This was the fourth most frequently reported theme, but perhaps most notably capturing the power and importance of personal testimonials:

"I have personally struggled with depression, anxiety, anger," Baldeschwiler said. This therapy is designed to really dive in and release these negative fears and shadows." (Aleccia, 2020).

"I had been holding on to so many traumas and issues," Beck said. "It was like a massive weight had been released... I wouldn't say it's a 'one and done, I'm completely cured,'" he said. "It takes work." (Baker, 2023).

"My husband started sharing with me for the first time all these thoughts and emotions," Ree said. "It was him without the walls," she added. They also cuddled in bed for hours, skin to skin, describing all the things they loved about one another. (Caron, 2022).

Business and Industry Development

Business and Industry Development covers the burgeoning psychedelic market, including startups, investment trends, and the commercialization of psychedelic therapies and products. This theme, cited the fifth most, explores the economic aspects of the psychedelic renaissance, from the development of new treatments and wellness products to the ethical considerations of monetizing these ancient substances. Articles may discuss the challenges and opportunities facing entrepreneurs, the regulatory hurdles for bringing psychedelic products to market, and the broader implications of the psychedelic

industry's growth for society and healthcare. More highly documented industry trends are organizations and companies seeking FDA approval of certain substances, as well as investors pouring millions into research and drug development:

“A few large, well-known startups based in Europe have attracted high-profile investors. Germany-based ATAI Life Sciences AG is using a big-data approach to psychedelic drug development. U.K.-based Compass Pathways Inc. last year received approval from the U.S. Food and Drug Administration to run clinical trials to test the use of psilocybin on patients with treatment-resistant depression. “ATAI is the largest investor in Compass. Collectively, the two companies have raised about \$122 million from investors including billionaires Peter Thiel and Michael Novogratz.” (Mack, 2019).

“Vine Ventures, an early-stage venture-capital firm, set up Regenerative Financing Vine, a \$70 million special purpose vehicle , with MAPS and its for-profit arm in 2021 to help fund research into using MDMA as a PTSD therapy. The fund's structure lets the nonprofit retain ownership of the for-profit business.” (Taylor, 2023).

Science and Technology

Science and Technology coverage focuses on the cutting-edge research and innovations surrounding psychedelics. This theme encompasses clinical trials, neuroscientific discoveries, and technological advancements that unlock the potential therapeutic benefits of psychedelics for treating mental health disorders such as depression, PTSD, and addiction. Articles may highlight FDA-approved studies, breakthrough therapies, the prescription ketamine nasal spray Spravato, and the role of

digital tools in enhancing psychedelic therapies. Science and technology was the sixth most reported theme.

“Scientists are also starting to test the power of psychedelic drugs to treat a range of mental health problems. In September, Johns Hopkins Medicine announced the opening of the Center for Psychedelic and Consciousness Research to study compounds like psilocybin and LSD. One study at the center has already found that psilocybin can be more effective at helping people quit smoking compared with using a nicotine patch.” (Sheikh, 2019).

“The Food and Drug Administration will be asked to approve MDMA to treat post-traumatic stress disorder by October — opening the door to the use of hallucinogenic drugs to treat mental illness. If approved, the drug will be available in hospitals before the second half of next year, according to new research.” (Steinberg, 2023).

Sacred Usage

The theme of Sacred Usage in media coverage of psychedelics explores the historical and contemporary ceremonial use of these substances in various indigenous and modern spiritual practices. Articles within this theme often delve into the profound spiritual experiences individuals report, highlighting the use of psychedelics in rituals, shamanic traditions, and new religious movements. Coverage may also discuss the resurgence of interest in entheogenic plants for spiritual growth, the legal battles for religious exemptions, and the debates around the commodification of sacred practices. This theme was the least frequently reported on, with only seven out of 212 articles discussing sacred usage as a primary theme. When this theme was prevalent, issues of

peyote decriminalization and conservation were most often addressed. Here we can see how indigenous practices with psychedelic medicines are crossing over into the West:

“There are numerous examples of Indigenous peoples that have successfully incorporated psychedelic compounds into their cultures as a sacrament, medicine or medium of communication... but so much has been taken from Native Americans that they are determined to safeguard their peyote and the rituals that accompany it.” (Pollan, 2021).

More recently, embracing indigenous practices in Western culture and religion has become prevalent:

“He and his wife, Allyson Grey, 71, are the founders and longtime directors of the Chapel of Sacred Mirrors, a nonprofit organization that combines elements of a cultural institution and interfaith church in Wappinger, a town in the Hudson Valley.”

"It's a place where Alex and Allyson are trying to make the case for the religious use of psychedelics," said Rick Doblin, the founder and president of the Multidisciplinary Association for Psychedelic Studies, a nonprofit based in San Jose, Calif., that focuses on medical research and education related to psychedelic and cannabis use. "I think their art can help people bring a process of integration more into their daily life." (Eckstein, 2023).

This theme underscores the deep-rooted connection between psychedelics and the quest for spiritual enlightenment and healing, often supported by communities.

Western Renaissance

The "Western Renaissance" of psychedelics in news coverage encapsulates a profound shift in the Western world's perception and acceptance of psychedelic substances. Following decades of stigma, legal restrictions, and a hiatus in scientific research, the late 2010s marked a pivotal moment when psychedelics re-emerged into the public and scientific spheres. This renaissance is characterized by an explosion of interest from medical researchers, policymakers, and the general public, fueled by groundbreaking studies highlighting the therapeutic potentials of psychedelics for treating mental health disorders such as depression, PTSD, and addiction. News media have played a critical role in this resurgence, not only reporting on the scientific breakthroughs and policy reforms, but also reflecting a broader cultural acceptance and curiosity towards these substances. Coverage has shifted from predominantly cautionary tales to more balanced or even optimistic portrayals of psychedelics as tools for psychological healing, personal growth, and spiritual exploration. This narrative change in the Western media landscape signifies a departure from previous decades' War on Drugs rhetoric, paving the way for a more nuanced understanding and potentially transformative changes in how society approaches mental health, spirituality, and consciousness (Gearin & Devenot, 2021). However, the so-called "Renaissance" is not without its fair share of ethical and cultural appropriation considerations that downplay the reality of commodifying sacred plants, practices, and knowledge within the novel era of psychedelic medicalization.

"The revival of interest began in the early 1990s, when the Food and Drug Administration agreed to approve careful, well-designed, ethically vetted studies of psychedelics for the first time in decades. The Heffter Institute and the

Multidisciplinary Association for Psychedelic Studies, or MAPS, a nonprofit funded by an assortment of wealthy donors, financed projects in the United States and abroad.” (Carey, 2019).

“But for now, the supporters of a revived psychedelic medicine are taking a victory lap. "It's taken half a century since the backlash against the psychedelic '60s, but cultural evolution takes time," said Rick Doblin, executive director of MAPS. "We're seeing a global renaissance in public and scientific interest, regulatory approvals and funding for psychedelic research." (Carey, 2019).

“Stigmatized in law and medicine for the past half-century, psychedelics are in the midst of a sudden revival, with a growing body of research suggesting that the mind-altering compounds could upend psychiatric care.”

“Dr. Charles Nemeroff, the chair of the department of psychiatry and behavioral sciences at the University of Texas at Austin, said he continues to be wary.

Psilocybin is powerful, with immediate effects lasting for hours, and uncertain outcomes for patients, he said, recalling one patient of his who has experienced protracted psychosis, losing partial connection to reality, after taking doses of mushrooms. The treatments ruined her life, said Dr. Nemeroff, who said he worried about the lack of required medical oversight in Oregon's program.”

"I'm really uncomfortable with this," he said, adding that it could erase progress the field has made. "We'll end up back in the Nixonian era in which psychedelics could not even be studied." (Baker, 2023).

“So exactly why are we witnessing what many are calling a "renaissance" in psychedelic drugs now, when they've been around so long? There are many

theories, including that Big Pharma's solutions to mental illness are not satisfactory to everyone; that the internet is helping to spread knowledge about the power and potential of these drugs; that ayahuasca -- the tree-bark tea administered by shamans -- has become so popular in certain enclaves in the United States that it's helping revive interest in other psychedelics; or simply that baby boomers who discovered the wonders of LSD in the '60s are now facing death, and looking, again, for ways to get in touch with their spirituality. Like any movement, this one has its struggles.” (Schwartz, 2017).

“In front of the huge crowd, [a woman] identified herself as "an indigenous person" and began to speak. "My heart is pounding in my chest like a jack rabbit because what I want to say is not necessarily going to make anybody happy," she said. "But what I want to say is that cultural appropriation is a form of retraumatization to indigenous people." (Schwartz, 2017).

Research Question 3: Evolution of Frames and Themes

The analysis from 2017 to 2023 did not indicate significant changes in the frames and themes within psychedelic news coverage. A chi-square was conducted to assess the evolution of these elements. The analysis did not see a change between article themes from 2017 through 2023, $\chi^2(36, n = 212) = 45.02, p = .144$. Additionally, a chi-square did not find a significant change in article frame from 2017 to 2023, $\chi^2(18, n = 212) = 23.86, p = .160$.

In looking at article titles, a chi-square analysis did not reveal a significant difference in title frame from 2017 to 2023, $\chi^2(18, n = 207) = 19.55, p = .359$. Additionally, a chi-square did not find a significant change in title theme from 2017 to

2023, $\chi^2(36, n = 198) = 50.36, p = .057$. Insignificant results may be due to an insufficient sample size. While there were not significant differences in frames and themes across years, there was a general increase in all seven themes that can primarily be seen occurring in 2022 and 2023. Table III illustrates the frequency of the major themes over time.

Table III. Frequency and Percentage of Each Theme, 2017-2023.

Year	Sacred	Science	Health	Pop Culture	Law	Safety	Industry Development	Total each year
2017	1	1	3	6	3	6	0	20 (9.4%)
2018	0	3	3	3	2	3	1	15 (7.1%)
2019	1	5	3	7	6	6	3	31 (14.6%)
2020	1	1	2	2	7	0	3	16 (7.5%)
2021	1	0	1	8	3	1	4	18 (8.5%)
2022	2	6	14	5	8	9	5	49 (23.1%)
2023	1	8	6	11	11	14	12	63 (29.7%)
Total	7	24	32	42	40	39	28	212 (100%)

Note. ($n = 212$). Values in parentheses represent the percentage of articles in that year with the theme.

Research Question 4: Differences in Reporting Among News Outlets

A chi-square test was utilized to compare the frequency of themes across news outlets. The analysis found significant differences in thematic coverage, $\chi^2(24, n = 212) = 62.41, p < .001$, indicating that the portrayal of psychedelics varies by the news outlet. Furthermore, a Bonferroni test was conducted to explore differences in the salience of themes based on outlet, revealing significant differences. The New York Times primarily reported the theme Health and Wellness (21.4%), The Wall Street Journal reported Business and Industry Development (30.2%), New York Post reported Pop Culture and Recreation (20.4%), Los Angeles Times reported evenly Law (33.3%) and Safety and Education (33.3%), and Chicago Tribune reported Health and Wellness (35.7%).

A chi-square test was utilized to compare the frequency of frames across news outlets. The analysis found significant differences in thematic coverage, $\chi^2(12, n = 212) = 34.49, p < .001$, indicating that the framing of psychedelics varies by the news outlet. Furthermore, a Bonferroni test was conducted to explore differences in the salience of frames based on outlets', revealing significant differences. The New York Times primarily portrayed articles positively (55.4%), The Wall Street Journal split positively (32.6%) and mixed (32.6%), New York Post negatively (38.8%), Los Angeles Times nearly split between negative (30.6%), positive (27.85), and mixed (27.8%), and Chicago Tribune positively (50%). Although it is difficult to make generalizations about salience of themes and frames based on political leaning with the number of data in this study, Tables IV and V display a breakdown of frequencies and percentages by political affiliation.

Table IV. Frequency and Percentage of Theme by Political Leaning of Newspaper.

Year	Sacred	Science	Health	Pop Culture	Law	Safety	Industry Development	Total
Left-Moderate	4	12	14	14	17	22	9	92 (43.4%)
Moderate	0	0	10	8	5	4	1	28 (13.2%)
Moderate-Right	3	8	2	4	8	5	13	43 (20.3%)
Conservative	0	4	6	16	10	8	5	49 (23.1%)
Total	7	24	32	42	40	39	28	212 (100%)

Note. ($n = 212$). Values in parentheses represent the percentage of articles in that year with the theme.

Table V. Frequency and Percentage of Frame by Political Leaning of Newspaper.

Year	Positive	Neutral	Negative	Mixed	Total
Left-Moderate	41	10	14	27	92
Moderate	14	5	4	5	28
Moderate-Right	14	10	5	14	43
Conservative	14	9	19	7	49
Total	83 (39.2%)	34 (16%)	42 (19.8%)	53 (25%)	212 (100%)

Note. ($n = 212$). Values in parentheses represent the percentage of articles in that year with the theme.

Chapter 5

Discussion

The goal of this study was to identify, describe, and analyze major themes and frames in highly circulated American newspapers, in order to create a deeper understanding of how this topic is emerging in mainstream media. Previous research has investigated the themes of other drugs in the media, such as marijuana, e-cigarettes, opioids, alcohol, and prescription drugs, and how these portrayals shape perceptions, risk, use, and sales (Lyu et al., 2021; Webster et al., 2020; Lynch, 2020; Kersbergen et al., 2022; Almomani et al., 2023). The media, with its ability to induce topic “normalization”, creates important health policy implications in light of continued debate regarding the worth of decriminalization or legalization, along with the need for public health and harm reduction approaches to psychedelics and other drugs (Haines-Saah et al., 2013). This study sought to explore, in regards to psychedelics, what is being talked about (themes), how they are being talked about (frames), and what reporting trends emerged over the past six years. Psychedelics have been an emerging topic trend in the areas of business, policy, pop culture, health, and more following pivotal shifts in clinical trials, expanded access through decriminalization and state regulated psychedelic facilities, and testimonials from celebrities (Lewis et al., 2023). In the case of this study, the increase in psychedelic reporting overall, coupled with support from both conservative and liberal outlets, indicates potentially increased public awareness that can have implications for not only greater access to psychedelics, but the need for proper public education and reverence for their historical roots. By understanding the ways in which psychedelics are being conveyed to the world and how these changes emerge over time, this study fills a

gap in the literature by discovering RQ1 *reporting trends by volume of articles*; RQ2 *themes and subthemes*; RQ3 *frequency and salience of themes*; and RQ4 *variations in reporting by news outlet*.

The following discussion explores the theoretical implications of the findings of this study as it relates to Agenda-Setting Theory and Framing Theory. As it is important that the findings of this study can be translated into practical use, I will also explore real-world applications of the results. First, I will discuss how changes in psychedelic policy and access may be attributed to media coverage, which in turn, may support policymakers in making more informed decisions that can support public health, scientific inquiry, and individual freedoms. Further, I will provide implications for education and stigma, where an increase in articles and a shift in framing towards more positive or therapeutic perspectives can help reduce stigma, making it crucial to develop peer-led, and evidence-based educational programs. Third, I will tie in the necessity of recognizing, respecting, and supporting indigenous communities, medicines, and sacred practices as individuals and entities aim to commodify and Westernize ancient psychedelics and their practices. Last, I will consider the limitations of the study and directions for future research on the topic.

Theoretical Considerations

This study expanded the body of literature on Agenda-Setting Theory (McCombs & Shaw, 1972) and Framing Theory (Goffman, 1974) pertaining to thematic analyses on drugs in the media (Lyu et al., 2021; Webster et al., 2020; Lynch, 2020; Kersbergen et al., 2022; Almomani et al., 2023). These theories/frameworks were extended by providing a lens through which we may assess the prevalence and patterns of

themes and frames of psychedelics in prominent news outlets and how they may influence awareness and understanding.

Agenda-Setting Theory

Agenda-Setting Theory emphasizes the media's role in shaping the public's priorities by selecting certain issues for coverage, thereby influencing society's perceptions of what is deemed important (McCombs & Shaw, 1972). Reaching consensus among the public is the focal point of agenda-setting theory, a perspective that attributes significant influence to the news media in the process of achieving community agreement about the most important subjects of the day. Through the media's daily selection and publication of the news, editors of newspapers exert powerful influence over public attention to the issues and opportunities that confront each community. Over time, the priorities reflected in the patterns of news coverage, to a considerable degree, become the priorities of the public agenda (McCombs & Bell, 1996; McCombs & Evatt, 1995). Agenda-setting entails the transmission of salience, not the determination of opinions about a particular issue. By setting the public agenda, the news media influences the prominence of a select few issues that come to command public attention (McCombs, 2010). For the most part, news platforms in democratic regions do not consciously and deliberately set the tone and agenda. However, platforms inadvertently set the agenda as a result of the necessity to choose a few topics for attention in each day's news report. In the context of psychedelic coverage, this theory helps us understand how media attention to psychedelics may elevate the topic's significance on the public and political agenda.

Research has assessed that there may be implications for having awareness and proper knowledge around the subject of psychedelics. A survey conducted by University

of California, Berkeley found that about 47% of Americans had heard about psychedelics recently (Pollan et al., 2023). From those same respondents, 52% reported that they or someone close to them had used a psychedelic. Additional research has identified that those with greater knowledge of the risks and benefits of psychedelics (Karthik, 2020; Luoma et al., 2022) and those that had direct or indirect (i.e. through peers) experience with psychedelics, reported more positive attitudes towards them (Luoma et al., 2022). These findings suggest that increased ethical, accurate, and balanced reporting of psychedelics, in turn, may increase both awareness and knowledge, thus shifting attitudes towards these substances.

As media outlets increasingly report on psychedelics, highlighting their potential therapeutic benefits and the movements toward legal reform, they not only increase public awareness, but also potentially influence policymakers' priorities. This theory suggests that the more the media covers psychedelics, the more likely it is that the public and policymakers will consider them a significant issue, warranting further research, discussion, and reconsideration of legal statuses. This expanded coverage can alter the societal narrative, moving psychedelics from the periphery of public consciousness to a more central position. In analyses of news reporting on various public health topics, researchers summarized that while not all reporting results in substantial or long-term changes in behavior or policy implementation, reporting does impact the knowledge of stakeholders (Ishida et al., 2020; Lewis et al., 2015; Myhre & Flora, 2000; Vidanapathirana et al., 2005; Young et al., 2018). Nonetheless, policy reform, particularly progressive drug policy, will require an incremental and long term approach, where shifts begin with the sharing of new knowledge.

In a recent review, Lewis et al. stated that modern psychedelic research may be one of the most interdisciplinary, controversial, and fastest growing areas of interest of the 2020s (2023). In looking at the articles selected for this study, about half of the 212 articles were published either in 2022 or 2023, indicating an expansion in attention on this topic. This shift could catalyze a broader societal dialogue about mental health, drug policy reform, and the role of traditional and non-traditional therapies in addressing psychological well-being. Thus, the agenda-setting function of the media acts as a catalyst for change, not by dictating what people should think about psychedelics, but by influencing what they think about in the first place.

Framing Theory

While agenda-setting theory is concerned with the amount of repeated exposure to a published topic, news framing focuses on the media's influence on its audiences (Aversa et al., 2023). Specifically, news framing investigates how audiences understand or evaluate specific subjects due to how they are presented (Demsar et al., 2022; Gounder & Ameer, 2018; Tuchman, 2002). As a result, the way that individuals frame their understanding, views, and actions on topics is, in part, shaped by the media they consume (Arora et al., 2019; Demsar et al., 2022). The influential work by Goffman (1974) identifies that the value of frames is rooted in their ability to allow individuals to better understand societal complexities (Ardèvol-Abreu, 2015). With a focus on selection and salience, news sources emphasize certain aspects, while actively excluding others (Chyi & McCombs, 2004; De Vreese, 2004; Madden et al., 2021). Since many newsworthy topics have competing frames (e.g., pro-psychedelic legalization vs. anti-psychedelic

legalization), writers are typically mindful of the biases that various news frames can provide readers (Reese, 2017).

Framing literature identifies that newspapers can evoke strong emotional responses from their readers, while reinforcing stigmas and guiding the perceptions and understandings of issues (Islam & Fitzgerald, 2016). Behavioral health researchers deem that headlines and articles about psychedelics have turned from presenting alarmist, extremely negative views of the drugs (1960s to 2000s) to acknowledging their positive and transformative potential (2006 to the present). But researchers assert that journalists must extend caution when reporting within these extreme shifts, as they may create impediments to advancements in research and therapy (Yaden et al., 2022). However, contrary to these findings, this study did not find significant changes in article themes and frames and title themes and frames between the five newspapers analyzed from 2017 to 2023. Rather, analyses showed that all themes and frames (including positive, negative, neutral, and mixed) were more commonly featured, particularly in 2022 and 2023. In general, the articles from this sample displayed that article titles were most often framed as neutral, while the articles themselves most frequently highlighted psychedelics as positive. This finding may partially support the concept of psychedelics existing in a “hype bubble” where their benefits are touted over their risks. It is important to note that this finding may not be generalizable given the limitation in the quantity of newspapers selected.

Framing Theory delves deeper into how media coverage shapes the public's understanding and interpretation of issues, beyond merely making them more salient. It examines the nuances of how issues are presented, which can significantly influence

public perception and discourse (Aversa et al., 2023). In the study of psychedelic coverage, Framing Theory elucidates how the portrayal of psychedelics—whether as dangerous substances, potential medical treatments, or spiritual tools—shapes public and policy discourse surrounding them. The current study reports that within this article sample, the four most commonly reported article themes were Pop Culture and Recreation, Law, Safety and Education, and Health and Wellness, respectively. Sacred Usage, Science and Technology, and Business and Industry Development were the least frequently cited themes, with Sacred Usage showing up significantly less than all the seven themes. Title themes most commonly captured the topics of Health and Wellness, Pop Culture, and Law. Patterns in reporting habitually feature an intersection of themes. For instance, the health and wellness theme is often mentioned alongside other themes and scenarios, such as celebrities detailing their use, laws expanding to allow for therapeutic psychedelic use, new companies emerging that are investing in psychedelic research and therapy, individuals and communities partaking in psychedelics to connect deeper in religion and/or spirituality, and so on. This intersection of rhetorics makes way for the interdisciplinary and ever-evolving psychedelic narrative.

The framing of psychedelics and other drugs in the media can greatly influence societal attitudes towards their use and regulation (Cummings & Proctor, 2014; Lewis et al., 2015). For instance, if the media predominantly frames psychedelics in the context of clinical trials and mental health treatment successes, it could foster a more supportive public attitude towards expanded research and medical use. Conversely, framing that emphasizes risks and abuses could reinforce stigma and opposition to legalization efforts. To the dismay of some, experts attest that the “obstacles” towards shifting psychedelic

access and policy are political, not legal (Milano, 2021). Newspapers themselves, to varying degrees, exhibit levels of their own political media biases, while potentially inadvertently pushing their individual psychedelic narratives (Ad Fontes Media, 2024).

This study sought to determine if individual newspapers, with a range of political leanings, report on psychedelics differently, given their highly politicized nature. Previously, research has shown that variations in media coverage, both geographically and politically, highlight contrasting perspectives on cannabis legalization. Newspapers with more conservative editorial leanings appeared to be more likely to focus public attention on the negative components of recreational cannabis legalization and its expansion across the country (Kim, 2017). In this analysis, we found that The New York Times primarily reported the theme Health and Wellness, The Wall Street Journal reported Business and Industry Development, New York Post reported Pop Culture and Recreation, Los Angeles Times reported evenly Law and Safety and Education, and Chicago Tribune reported Health and Wellness. The two newspapers selected that existed on opposite ends of the political spectrum are The New York Times (liberal) and New York Post (conservative). Overall, The New York Times framed psychedelics positively and New York Post framed psychedelics negatively. Very positive stories about psychedelics often illuminate stories about transformative personal healing, while extremely negative stories highlight instances of abuse and danger. These dissonances reflect gaps in the standards of psychedelic reporting and may mislead readers. While these findings cannot be generalized to reflect that newspapers of varying political leanings consistently frame psychedelics differently, they are congruent with findings

suggesting that those in favor of psychedelics are, on average, politically liberal (Nour et al., 2017; McGlothlin & Arnold, 1971).

By exploring how psychedelics are framed in media coverage, this research illuminates the power of narrative construction in media. It reveals how different frames can either contribute to an informed and nuanced public discourse or perpetuate misconceptions and stigma. Moreover, framing can affect the emotional and cognitive responses of the audience, guiding how they process information about psychedelics. Strategic framing that highlights personal stories of healing and transformation may engender empathy and support for broader access to psychedelic therapies. This aspect of Framing Theory underscores the media's role not just in highlighting issues, but in constructing the lens through which the public interprets and understands these complex topics. Understanding these dynamics is crucial for stakeholders aiming to navigate the public dialogue about psychedelics responsibly and effectively, ensuring that it is rooted in accuracy, empathy, and respect for diverse perspectives.

Implications

It is important to discuss how findings of this research may be applied to real world scenarios and how they can better inform the evolving psychedelic landscape and movement. The findings of this research point to important discussions surrounding the interconnections of policy reform and access, drug education and stigma, and the cultural and historical contexts that psychedelic use originated from. Here we may enact a more nuanced lens of how psychedelics are molding into our modern society and why particular pitfalls exist.

Policy Reform and Access

The study's findings on the frequency and themes of psychedelic portrayals in major newspapers from 2017 to 2023 may have implications for policy reform and access to psychedelics. As media coverage increases and shifts toward more nuanced or positive representations, public perception begins to change, which can, in turn, influence policymakers (King et al., 2017). A recent study demonstrated that the momentum behind psychedelic policy reform is increasing. Since 2019, 25 states have examined 74 bills, with 10 already signed into law (Siegel et al., 2023). The number of bills included has risen steadily from five (2019), to six (2020), to 27 (2021), to 36 (2022). Moreover, bills vary widely in their framework. The majority of introduced bills propose decriminalization and a handful seek to implement medical oversight (Siegel et al., 2023). While the early legislative efforts occurred first in liberal states, various conservative states have now introduced psychedelic bills, indicating that psychedelic drug reform is becoming a bipartisan issue. Although the proposed laws differ considerably, all contradict the regulations enforced by the Controlled Substances Act.

Based on data from cannabis legalization, researchers estimate that most states will have legalized psychedelics by 2033–2037 (Siegel et al., 2023). It is possible that psychedelic reform will occur even quicker than cannabis reform due to a high likelihood of FDA approval, the early movement towards bipartisan support, prompt interest in reform at the federal level, and the precedent that marijuana reform has set for increased access to Schedule I drugs. While expanded access to psychedelics may have significant implications for our country's mental health crisis, concerns remain about proper ways to address issues of psychedelic drug testing, training and licensure, clinical infrastructure,

contraindications, dosing and frequency, and use in vulnerable populations. Thus, adequate and ethical training and clinical oversight are necessary to ensure safety and therapeutic efficacy for this burgeoning class of treatments.

Some experts suggest that responsible psychedelic medicine and access should be five-fold: 1) Appropriately Regulated, Supported Adult Use Model; 2) Reduced Penalties for Psychedelic Possession, Use, Growth, Gifting and Selling; 3) Psychedelic User Licenses; 4) State-supported Tax, Banking & Liability Insurance Policies; 5) Establishment of Responsible Psychedelic Medicine Advisory Board (Lenaburg et al., 2023). Regardless, the jury is still out on what functions as the “ideal” psychedelic policy in modern society and politics.

This evolving landscape may encourage the expansion of research groups and funding towards psychedelic studies, highlighting the therapeutic potential of these substances and the need for reform in drug policy. The data could support arguments for the decriminalization of psychedelics, the creation of legal frameworks for their therapeutic use, and the establishment of user licenses or religious exemptions to allow for controlled, safe access. By providing a comprehensive overview of media portrayal trends, this research equips policymakers with the evidence needed to make informed decisions that balance public health, scientific inquiry, and individual freedoms.

Drug Education and Stigma

This thematic analysis sheds light on the role of drug education and the impact of stigma surrounding psychedelic use. The transformation in our perception of psychedelics from recreational “party drugs” to distinct and potentially transformative compounds, has made this subject particularly salient to publishers (Babaian et al., 2023).

As such, an increase in articles and a shift in framing towards more positive or therapeutic perspectives can help reduce stigma, making it crucial to develop peer-led, and evidence-based educational programs. But a pendulum swing too far in the other direction can dangerously minimize the risks and harms, as psychedelics are not recommended for everyone. With this in mind, programs should aim not only at disseminating accurate information, but also at fostering communal learning experiences that respect the complexities of psychedelic experiences. By promoting a more informed and open discussion about psychedelics, society can move towards destigmatizing these substances, thus enabling individuals to make more informed choices about their use and reducing harm associated with misinformation and fear (Davis et al., 2022).

Though psychedelics may be perceived as dangerous, evidence suggests that they are relatively safe. Those choosing to partake in these substances have done so on individual levels, with romantic partners, or groups in order to foster various levels of healing and understanding (Luoma et al., 2020; Colbert & Hughes, 2022; Ponomarenko et al., 2023). In modern clinical trials with psychedelics, there have been no reports of any serious adverse events including prolonged psychosis, violent behaviors, or continual perceptual changes (dos Santos et al. 2018; Studerus et al. 2011). But there are examples of rare psychiatric harms following controlled administration of psychedelics in the 1950s and 1960s (Larsen, 2016; Ludwig et al. 1969). However, psychedelics and their effects are nuanced, meaning that their educational content and mode of delivering are equally nuanced, variable, and ever-evolving.

In traditional public schools, teachers are not necessarily the most educated on the topic of drugs and may not be the best equipped with resources to deliver this type of

education to their students (Aubrey, 1971). As such, community-based learning, peer education, and evidence-based approaches to drug and psychedelic education should be considered. Further, there is a need to better understand how to effectively link public health, clinical services, and communities in addressing social determinants of health, adverse childhood events, and historical trauma in improving the health of individuals, families, and communities, in addition to new approaches to the treatment of PTSD, Substance Use Disorder, and other mental health conditions (Bhatt et al., 2022). Through this analysis on psychedelic news portrayals, we can identify the need to better educate the public on the relative safety profiles of psychedelics, compared to traditional pharmaceutical agents and other consciousness-altering substances.

Cultural Considerations

Finally, the study highlights the importance of acknowledging and integrating cultural and historical contexts of psychedelic use. As the Western world experiences a "psychedelic renaissance," it is essential to ensure that this revival does not lead to the commodification and appropriation of indigenous practices and knowledge systems. The metatheme identified in this study was that of "Western Renaissance", where hallucinogenic compounds and practices that have been practiced for thousands of years are recently being integrated into science, business, and medicine in the modern, Western world (George et al., 2022). Promisingly, experts attest that a twenty-first century "psychedelic renaissance" anchored in the lessons of history can point healthcare systems—and perhaps even society in general—in a direction that is more humane, attentive to mental health needs, and supportive of human flourishing in a time characterized by remarkable levels of distress and despair (George et al., 2022).

Modes of supporting and revering indigenous medicines and practices can include: Taking indigenous worldviews seriously; Cautioning commercialization of sacred plants; Understanding that the use of psychedelics has a political dimension; Cultivating reciprocal relationships with Indigenous peoples; and Avoiding tokenization and “Indigenous washing” (Assis et al., 2024). By recognizing the vast and unique cultural roots and traditional knowledge associated with psychedelics, the modern movement can foster a more respectful and ethical approach to their use, research, and integration into society.

Overall, in assessing the Western media angle on this subject and the scarceness in which the theme Sacred Usage is reported on, we can see that there is still a long way to go in educating the public and creating cultural understanding and legitimacy regarding these substances. Recent reports demonstrate that many of the major media companies in the U.S. remain mostly white, and that leading news and media outlets are owned by white billionaires (Vinton, 2016). According to a 2022 Pew Research Center survey, 76% of journalists surveyed were white, 8% identified as Hispanic, 6% as Black and only 3% as Asian. The notion that the majority of media companies are white-owned, combined with the fact that most of those journalists are white, indicates that the news we receive is at great risk of being white-centered and limited in scope of opinions and perspectives. Media should assess the ways biases exist in their organizations and aim to create strategies for more diversity, equity, and inclusion in their hiring and story reporting.

Study Limitations and Future Research

There are several limitations to this study that provide the opportunity for further research. As noted by Block (2017), studies that solely focus on newspaper articles do not capture the many forms of other media that provide vehicles to frame and provide coverage of public policy issues. Additional studies may consider analyzing social media posts and online forums to capture a broader sense of dialogues and writer demographics.

This analysis focused on five newspapers, three of them being national and two metropolitan newspapers. Future research has an opportunity to analyze additional newspapers at the national, state, and metropolitan level (i.e., to capture differences in the rollout of psychedelic policy on federal, state, and city levels) and across other American regions (e.g., smaller cities and rural markets). There is also the opportunity to extend this study to other countries/regions at various stages of regulatory reform, such as Australia, Portugal, and The Netherlands. Further, independent newspapers should be investigated, given that they often provide a diversity of opinions, voices, and topics that may capture more depth and breadth than wider newspapers (ShareAmerica, 2023). In addition, this analysis exclusively included articles from the most recent six years. Since the psychedelic sector and culture continue to shift daily, further studies should be conducted evaluating psychedelic reporting over a longer period of time.

Furthermore, this research focuses on the media framing from the news source's perspective rather than the reader's perspective. Therefore, future studies should investigate the effect of how certain narratives and frames of psychedelics may lead to attitude and belief shifts amongst readers. These findings may have implications for safety of usage, regulatory changes, and indigenous reciprocity, such that increased fact-

based knowledge may lead people to use psychedelics more responsibly, lawmakers to regulate psychedelics in ways that protect and support users, and provide context

This research does not provide insights into the impact of the framing and coverage of psychedelic decriminalization and legalization in terms of American public opinion about psychedelics (apart from noting that newspapers increasingly published articles on the subject). There is a need for further research to evaluate the role of newspapers in shaping public opinion about psychedelic markets and related government policies, as they may have substantial implications regarding increasing overall health and wellbeing.

Findings suggest that the psychedelic narrative is a continually evolving web shaped simultaneously by its history in indigenous communities and 20th century U.S., stories created and perpetuated by media, modern day clinical research, financial interests by startups and corporations, and, perhaps most notably, the lived experiences of those that have journeyed and retold their insights. While there is expansion in awareness and access of psychedelics, there is still uncertainty about regulations and policies, potential health effects and appropriate use, and perspectives that include diverse populations. By continuing to study this topic, individuals, communities, decision makers, and stakeholders will be better equipped to make quality and informed decisions regarding their function(s) in modern society.

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of print news media framing of ketamine treatment in the United States and
Canada from 2000 to 2015. *PLOS ONE*, 12(3).
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Curriculum Vitae

Gina Giorgio

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Education

Master's in Communications, August 2022 – May 2024 Winston-Salem, NC
Wake Forest University
Teaching Assistantship: COM-370 Drugs and the Media; COM-220 Empirical Research; COM-110 Public Speaking; COM-113 Relational Communication

Bachelor of Science with Honors in Psychology, August 2016 – May 2019 High Point, NC
High Point University | Organizations and Clubs: Psi Chi; Neuroscience Club, The National Society of Leadership and Success

Experience

Contributing Writer, May 2023 - Present Remote
Psychedelic Spotlight

- Composes informative and thought-provoking articles, with the aim to educate readers, dispel myths, and stimulate discourse on the psychedelic industry.

Policy and Advocacy Intern, April 2022 - Present Remote
NisonCo PR · Part-time

- Manages projects and administrative tasks related to cannabis advocacy, policy, and legislative campaigns through creating information sheets, fact sheets, scheduling meetings, performing membership outreach, and coalition building.
- Compiles news articles and policy changes weekly to craft stories to pitch clients into.
- Assists in creating and running policy councils, educational and drug campaigns, lobbying sessions, and promoting stem cell donation campaigns.
- Manages social media accounts in order to highlight the successes of NisonCo PR and to attract new clients.

Psychedelic Pipeline Career Development Program Director, December 2022 - Present Remote
Psychedelic Pipeline Career Development Program Associate, May 2022 - December 2022
Psychedelic Pipeline Career Development Program Intern, November 2021- May 2022
Students for Sensible Drug Policy · Part-time

- Reviews, updates, and creates the Psychedelic Pipeline resources.
- Plans and implements virtual networking events, training opportunities, and educational programming related to the field of psychedelics for over 30 program members.
- Seeks and reviews feedback from Psychedelic Pipeline participants on ways to enhance and improve the program.
- Raised \$5,000 for Cohort 4 of the Pipeline.
- Promotes the Psychedelic Pipeline and develops partnerships with other organizations and leaders in the psychedelic space.

Social Media and Content Management Intern, Apr 2022 - Aug 2022 Remote
Psychedelic Spotlight · Internship

- Edited, published, and shared engaging content across Psychedelic Spotlight platforms: Instagram, Youtube, LinkedIn, Facebook, and Twitter.
- Planned, created, and coordinated a schedule of activities and posts to expand social media audience base and engage current followers.
- Monitored best practices and trends and experimented with creative ways to present content.

Research Laboratory Technician I, February 2020 – July 2021 Winston-Salem, NC

Wake Forest School of Medicine: Center for Precision Medicine in Dr. Solberg Woods Lab

- Performed weekly experiments on heterogeneous stock rats: EchoMRI, Intraperitoneal Glucose Tolerance Test, Tissue Harvest, Telemeter Implant Surgery, and Forced Swim Test (FST); DNA extractions.
- Oversaw and maintained general functions of the lab (freezer/lab organization, stock of supplies, protocols, and scheduling)
- Trained graduate and undergraduate students on experiments, experimental prep, and lab maintenance.
- Entered and organized data; conducted statistical analyses of data using Excel and presented findings during lab meetings.
- Assisted a higher-level technician and graduate students in genotyping, cell culture, brain microdissections, insulin ELISAs, and breeding colony management.

Clinical Research Data Collector (Temp), August 2019 – January 2020 Winston-Salem, NC

Wake Forest School of Medicine: Department of Emergency Medicine

- Coordinated the collection, organization, and documentation of materials and data used in research reports, publications, and program descriptions.
- Screened and enrolled patients in the Emergency Room and Intensive Care Unit for clinical studies about cardiovascular diseases, stroke, and sepsis.
- Conducted medical record reviews and requests, follow-up phone calls, and participant reimbursements.
- Obtained and processed biospecimen samples and packaged samples for shipment.

Board and Coalition Membership

Psychedelic Communications Hub, December 2023 - Present

Member

- This interdisciplinary group discusses language nuances of psychedelics in the media, shares information resources, and trains media rapid-response spokespeople

Southeast Coalition of Psychedelic Practitioners, November 2023 - Present

Board Member

- SECPP provides a hub of resources to psychedelic-assisted therapy practitioners and their clients.

Veterans Mental Health Leadership Coalition, September 2023 - Present

Member

- VMHLC leads the fight to prevent suicide and deaths of despair – not only for Veterans – but for all Americans – through increased access to safe and affordable psychedelic-assisted therapy.

Awards and Certificates

Nottingham Pro Humanitate Award, May 2023

Wake Forest University Department of Communication

- Awarded to a student(s) who exemplifies the spirit of Pro Humanitate by involvement in community-engaged service beyond Wake Forest.

North Carolina New Leaders Council Fellow, January 2023-Present

- NLC develops, connects, and uplifts inclusive, cross-sector leaders who transform our country through social and political change rooted in equity.

Volunteer Experience

Newsletter Creator, March 2022 - March 2023

Remote

Psychedelic Grad

- Compiled and curated weekly newsletter containing psychedelic events, news, research, and more: <https://www.psychedelicgrad.com/newsletter>

Communications and Media Volunteer, June 2021- January 2022

Remote

Multidisciplinary Association for Psychedelic Studies Public Benefit Corporation (MAPS PBC)

- Researched and wrote information on psychedelic compounds for maps.org/newsroom.
- Created informational “Talking Points” for MAPS’ spokespeople.
- Extracted media quotes and organized information from articles and videos about MAPS’ research.

Syringe Exchange Volunteer, August 2020 – June 2022

Winston-Salem,

NC

Twin City Harm Reduction Collective

- Provided new drug supplies, personal hygiene items, and Narcan to users.
- Trained in overdose prevention and overdose reversals.
- Collected orders from participants, enrolled new participants, and refilled supplies.

Publications and Presentations

Alessandra Von Burg, Gina Giorgio Nate French, Farah Alsakhita (2023, November). Wake Forest University - Envirochic: Sustainability and Care for High School Fashion. Presentation given at Clavier Framing Nature Conference, Milan, Italy.

Betty Aldworth, Gina Giorgio, Ifetayo Harvey, Ami Kachalia (2023, October). Psychedelic decriminalization - Gateway or hurdle to all-drug decriminalization? Panel discussion at Reform Conference, Phoenix, Arizona.

Gina Giorgio. (June, 2023). Psychedelic Storytelling. Presentation given at MAPS Psychedelic Science 2023, Denver, Colorado.

Gina Giorgio, Alyse Harris, Alessandra Von Burg, Nate French, Farah Alsakhita, Una Wilson (2023, March). Wake Forest University - “Handle with Care” High School Envirochic (EnvTQ). Presentation given at The Four Elements of Fashion International Conference, Venice, Italy.

Giorgio, G. (2022, November). Ethically Framing Psychedelics in the Media. Virtual presentation given at: Psychedelics for Researchers, Entrepreneurs, Academics, Advocates and Curious Humans, presented by Stockton University and Future Entheogenic Medicines.

Giorgio, G., & Wear, K. (2020). Openness as a Predictor for Cognitive Functioning. *Wake Forest Journal of Science and Medicine*, 1(5).

Policy Experience

Founder, January 2023- Present

North Carolina Psychedelic Policy Coalition

- Supports HB727 that will put funds towards researching psilocybin and MDMA for the treatment of depression, PTSD, and pain.
- Effectively runs a coalition of over 80 professionals working in psychiatry, research, coaching, politics, and more.
- Organized a successful psychedelics lobby day and press conference at the NC State Legislature where multiple press outlets covered the event and new representatives and senators signed on to support.
- Writes press releases and manages social media accounts.