IMAGE: A MAP OF THE STARS OF THE ORION CONSTELLATION

Print ISSN: 2515-5784 Online ISSN: 2515-5792

JournalPreview

London Journal of Research in Humanities and Social Sciences

Volume 24 | Issue 10 | Compilation 1.0

Great Britain Journals Press

WWW.JOURNALSPRESS.COM

JournalPreview

London Journal of Research in Humanities & Social Science

This document is a pre-published view of London Journal of Research in Humanities & Social Science Volume 24, Issue 10 and Compilation 1.0. For any minor changes and updations kindly follow your paper's live editing URL given in given in sent email or get in touch with our support team at support@journalspress.com or visit our website to use live chat support. This is a beta document thus order, content or existence of papers may alter in the published eJournal. You are requested to kindly acknowledge and approve your research paper in this JounalPreview within three days.

Journal Content

In this Issue

Great Britain Journals Press

Scan to know paper details and author's profile

Influences of Information Sources on Undergraduate Student's Knowledge of Drug Abuse

Mohamad Hashim Bin Othman & Ameer Fuhaili Bin Mohamad Hashim

Universiti Sains Malaysia

ABSTRACT

The influences of various information sources on undergraduate students' knowledge of drug abuse encompass a broad spectrum of factors including familial dynamics, peer interactions, media exposure, education and community programme, and healthcare interventions. Understanding these influences is critical as they collectively shape the perceptions and awareness of drug abuse among students. Despite the diversity of these sources, empirical studies specifically exploring their impacts on undergraduate students' understanding of drug abuse are limited. This study aims to fill this gap by examining how different information sources contribute to undergraduate students' knowledge of drug abuse. Through qualitative methods involving semi-structured interviews with a sample of ten participants, thematic analysis was employed to elucidate the findings. The research reveals a notable preference among students to rely on Internet sources for information on drug abuse due to their accessibility and anonymity. However, the study underscores the importance of integrating diverse information sources comprehensively to provide a more nuanced understanding of drug abuse beyond what internet-based platforms offer. This approach is essential for equipping undergraduate students with the knowledge and insights necessary to make informed decisions and contribute to effective drug abuse prevention strategies.

Keywords: drug abuse; Information, knowledge, sources, undergraduate, students.

Classification: LCC Code: RC564

Language: English

Great Britain Journals Press

LJP Copyright ID: 573311
Print ISSN: 2515-5784
Online ISSN: 2515-5792

London Journal of Research in Humanities & Social Science

Volume 24 | Issue 10 | Compilation 1.0

Influences of Information Sources on Undergraduate Student's Knowledge of Drug Abuse

Mohamad Hashim Bin Othman[α] & Ameer Fuhaili Bin Mohamad Hashim[σ]

ABSTRACT

The influences of various information sources on undergraduate students' knowledge of drug abuse encompass a broad spectrum of factors including familial dynamics, peer interactions, media exposure, education and community programme, and healthcare interventions. Understanding these influences is critical as they collectively shape the perceptions and awareness of drug abuse among students. Despite the diversity of these sources, empirical studies specifically exploring their impacts on undergraduate students' understanding of drug abuse are limited. This study aims to fill this gap by examining how different information sources contribute to undergraduate students' knowledge of drug abuse. Through qualitative methods involving semi-structured interviews with a sample of ten participants, thematic analysis was employed to elucidate the findings. The research reveals a notable preference among students to rely on Internet sources for information on drug abuse due to their accessibility and anonymity. However, the study underscores the importance of integrating diverse information sources comprehensively to provide a more nuanced understanding of drug abuse beyond what internet-based platforms offer. This approach is essential for equipping undergraduate students with the knowledge and insights necessary to make informed decisions and contribute to effective drug abuse prevention strategies.

Keywords: drug abuse; Information, knowledge, sources, undergraduate, students.

Author α: School of Education Studies, 11800 Universiti Sains Malaysia, Penang.
σ: Faculty of Business and Communication, Universiti Malaysia Perlis, 01000 Kangar, Perlis.

I. INTRODUCTION

Drug abuse represents a pervasive challenge in contemporary society, affecting diverse demographics across all geographical and socioeconomic divides. It transcends boundaries, manifesting in both rural and urban areas, impacting individuals irrespective of economic status. Men and women of all ages are susceptible, but its prevalence is particularly pronounced among young boys and girls, notably in primary, secondary education, and higher learning institutions (Kamaruddin, et al., 2010; 2014). Being an undergraduate student is a transformative time filled with opportunities for academic and personal growth. It involves balancing coursework, extracurricular activities, and personal life through effective time management while actively participating in classes and utilizing campus resources like libraries and tutoring centres. However, the transition to college life often brings increased stress from demanding coursework and the pressure to succeed, which can lead some students to turn to substances as a way to cope (Mayer et al., 2016; Mofatteh, 2020). Additionally, mental health struggles, including anxiety and depression, can make students more vulnerable to self-medicating with drugs (Klein et al., 2022; Panchal, 2024). Socially, the desire to fit in and peer pressure can drive students to experiment with drugs, especially in environments where substance use is normalized, such as parties or social gatherings (Andrews & Hops, 2010; Hostetler et al., 2012; Pandina et al., 2010; Strickland & Smith, 2014). Moreover, limited awareness and education about the risks of drug abuse, coupled with the relative ease of access to substances both on and off campus, further exacerbate these challenges. These issues

London Journal of Research in Humanities & Social Science

underscore the critical need for comprehensive support systems and effective education programme to equip students with the knowledge and resources to make informed decisions and seek help when necessary.

II. DRUG EDUCATION KNOWLEDGE

Drug education knowledge involves understanding the types, effects, risks, and prevention of drug use, as well as treatment and harm reduction strategies, and relevant laws. It aims to help individuals make informed decisions, prevent drug abuse, and seek help when needed, promoting overall public health and safety. Drug education knowledge is crucial for undergraduate students as it empowers them with the necessary information to make informed decisions about substance use. By understanding the physiological, psychological, and social impacts of drugs, students can recognize the risks associated with substance abuse and addiction (Clemente-Suárez, et al., 2022; Nawi, et al., 2021). Comprehensive drug education covers topics such as the effects of different substances on the body and mind, risk factors for addiction, strategies for prevention and harm reduction, and avenues for seeking help. This knowledge not only enhances students' ability to protect their health but also equips them to support peers and contribute positively to their campus community. Drug education not only imparts knowledge about the types, effects, risks, and prevention of drug use but also fosters critical thinking skills. This enables students to critically evaluate media messages and societal norms surrounding substance use. By understanding how drugs are portrayed in the media and recognizing societal pressures, students can make more informed decisions. They learn to question and analyse the often-glamorized depiction of drug use, distinguish between fact and misinformation, and understand the real-life consequences. This critical evaluation helps them resist peer pressure and make healthier choices, contributing to their overall well-being and resilience against drug abuse.

The studies by Kamaruddin et al. (2010; 2014) and Khalith et al. (2017) underscore significant knowledge gaps among undergraduate students concerning substance abuse. Kamaruddin et al. highlight that many undergraduates lack sufficient understanding of drug abuse, attributing this to inadequate secondary school education on the risks and consequences of drug use. They also note students' limited awareness of reliable drug information sources, compounded by social influences like peer pressure and normalized drug use in social settings. Khalith et al.'s study reinforces these findings, revealing that a majority of college students possess inadequate knowledge about substance abuse, contrasting sharply with a minority who demonstrate adequate awareness. Meanwhile, Nneka et al. (2022) and Yin et al. (2022) provide critical insights into college students' knowledge, perceptions, and behaviours regarding drug abuse and rational drug use. Nneka et al. indicate that while students generally possess a moderate level of knowledge about drug abuse, there remains a significant disconnect in understanding its severity and societal implications, potentially hindering effective prevention efforts. Yin et al., on the other hand, underscore substantial deficiencies in understanding and practices related to drug use among college students, emphasizing the necessity for improved education and awareness initiatives tailored to enhance both knowledge and behaviour. Om Hashem Mohammed et al. (2021) further highlight significant disparities in knowledge and attitudes toward drug abuse between secondary and technical school students. Their findings suggest ongoing challenges as students transition to university, influencing their behaviours and decision-making regarding drug use. Implementing early targeted education interventions could be pivotal in preparing students for university life and encouraging healthier choices. These insights underscore the urgent need for targeted education initiatives at higher learning institutions, bolstered by accessible, credible information sources, to enhance students' awareness of drug abuse risks and promote effective prevention strategies.

Undergraduate students seeking information on drug abuse can access a variety of credible sources to enhance their knowledge and understanding (Larimer, Cronce, 2002). University health services and counselling centres often provide education materials, workshops, and seminars on substance abuse prevention and treatment. Academic libraries offer access to research articles, books, and databases that cover the latest studies and findings on drug abuse. Online resources from reputable organizations, such as the National Anti-Drugs Agency (NADA), the National Poison Centre Malaysia, the Ministry of Health, Malaysia, the National Institute on Drug Abuse (NIDA), and the Substance Abuse and Mental Health Services Administration (SAMHSA), provide comprehensive information, statistics, and guidance on drug-related issues. Additionally, students can consult peer-reviewed journals, attend guest lectures by experts in the field, and participate in campus awareness programmes and support groups. These diverse sources equip students with the necessary knowledge to understand the complexities of drug abuse and its impact on individuals and communities. Furthermore, drug education fosters a supportive campus environment by encouraging students to look out for one another and seek help if needed. It also equips students with the ability to critically evaluate and resist misinformation about drugs, enabling them to contribute positively to broader public health efforts.

Understanding the influences of information sources on undergraduate knowledge of drug abuse is crucial because it allows for targeted interventions and education strategies that can effectively shape attitudes and behaviours early on (Das, et al., 2016). Undergraduate students are particularly vulnerable to misinformation and peer pressure regarding drug use (Loke & Mak, 2013). Therefore, it is essential to identify which sources, such as family discussions (Daley, 2013), peer interactions (Keyzers et al., 2020), media (Romer & Moreno, 2017), education programmes (Bonyani et al., 2018), community programme (Malick, 2018), and healthcare providers (Mauro et al., 2020), have the most significant impact on their understanding of this issue. Additionally, research on "Information Sources on Knowledge of Drug Abuse" may be disregarded due to perceptions that its findings are predictable or trivial. This perception has led to a scarcity of empirical literature reviews that could offer substantial insights and evidence in this field. Consequently, there remains a limited scholarly exploration and documentation regarding how different sources of information shape individuals' understanding of drug abuse. Bridging this gap is critical for developing evidence-based interventions and policies aimed at effectively combating drug abuse. This research aims to explore how undergraduate students acquire knowledge about drug abuse by examining influential sources such as family discussions, peer interactions, media, education programmes, community initiatives, and healthcare providers. Each of these sources significantly influences adolescents' perceptions and attitudes towards substance use. Family discussions foster foundational understanding in a trusted environment, while peer interactions introduce social norms and potential pressures. Media shapes perceptions through various portrayals and messages, which can either glamorize or caution against drug use. Education programme offer structured information and prevention strategies, and community initiatives along with healthcare providers provide broader support networks and interventions. Understanding the impact of these diverse sources is crucial for developing targeted and effective education initiatives and interventions aimed at reducing the risks associated with adolescent drug abuse, thereby promoting informed decision-making and healthier outcomes.

III. METHODOLOGY

This study uses a qualitative approach to examine the influences of information sources on knowledge of drug abuse, collecting data through in-depth interviews (Dworkin, 2012) with 10 undergraduate students selected using purposive sampling (Palinkas, et al., 2015; Vasileiou, et al., 2018). Purposive sampling is chosen for studies like this one to ensure that the selected participants possess characteristics or experiences that are relevant to the research objectives. In-depth interviews were conducted to gather comprehensive qualitative data for the study. These interviews employed structured guides to ensure consistency while allowing flexibility to explore participants' perspectives on drug use and information sources. This method facilitated a deep understanding of participants' attitudes, knowledge, and behaviours related to drug use, providing rich qualitative insights for analysis and interpretation in the research. Selecting undergraduate students for a study on knowledge of drug abuse is justified due to their critical developmental stage, vulnerability, high prevalence of substance use, significant peer influence, and the potential for substantial education and long-term impacts (Kamaruddin et al., 2010; 2014). The study focused on six domains which are family discussions, peer interactions, media, education programme, community programme, and healthcare providers to explore how undergraduate students perceive and understand drug use. Each of these sources potentially influences undergraduate students' awareness and attitudes toward drug abuse, contributing to their overall understanding of the issue. The study aimed to explore how undergraduate students acquire information about drug use from various sources such as family discussions, peer interactions, media, education programmes, community initiatives, and healthcare providers. This exploration is crucial for developing effective strategies and interventions aimed at promoting accurate knowledge, awareness, and healthy behaviours among undergraduate students about drug use. The data will be analysed thematically (Braun, & Clarke, 2006) to identify common patterns, themes, and unique insights, contributing to a deeper understanding of the factors that influence adolescents' knowledge about drug abuse and informing the development of more effective education and preventive strategies (Fusch, & Ness, 2015).

IV. RESULT

4.1 Informant Demographic

Ten students were chosen as participants for this study, as outlined in Table 1. The selection criteria for informants included demographic factors such as age, gender, and education background, as well as descriptive information pertinent to their roles in the research. This detailed profile of each informant is crucial for ensuring a comprehensive understanding of their perspectives and experiences related to the study's focus on drug abuse.

Table 1: Informant Demographic

	Informant									
	A	B	C	D	E	F	G	H	I	J
Age	23	22	22	21	23	21	22	22	21	22
Gender	M	M	M	M	M	F	F	F	F	F
Race	MY	MY	SE	C	In	MY	MY	SE	C	In
Semester	2	2	2	2	2	2	2	2	2	2
SES	B40	B40	B40	B40	B40	B40	B40	B40	B40	B40
Religion	Ms	Ms	C	B	H	Ms	Ms	C	B	H

Remark: M = Male; F = Female; MY = Malay; SE = Sabah ethnic; C = Chinese; In = Indian; Ms = Muslim; C = Christian; B = Buddhists; H = Hindus; B40 = monthly income below RM 4,850

The demographic characteristics of the informants in this study could potentially influence its outcomes and findings significantly. Factors such as age, gender, and education background among the informants may shape their perspectives, attitudes, and experiences regarding drug use and the sources they rely on for information. The study focuses on a cohort of university students with an average age of 21.9 years. The group is evenly divided between genders, comprising 5 males and 5 females, all currently in their second semester of study. Identified as part of Malaysia's B40 income group, their households earn below RM 4,850 monthly, placing them within the lower 40% of the income distribution. The cohort demonstrates religious diversity, including 4 Muslims, 2 Christians, 2 Buddhists, and 2 Hindus, which reflects Malaysia's multicultural fabric and underscores the country's diverse cultural landscape. This diversity enhances the study's breadth by encompassing varied perspectives and experiences related to drug use among Malaysian undergraduates, thereby enriching the insights gained from the research.

4.2 Interview Analysis

The interview analysis focused on five critical domains: family discussion, peer interaction, media, education programme, community programme, and healthcare providers. It highlighted challenges within families regarding drug-related communication and support, with peer groups exerting significant influence, either positively or negatively, on substance use behaviours. Additionally, the media played a crucial role in shaping perceptions of drug use, and community programme varied in accessibility and effectiveness as resources for drug education and support. Despite healthcare providers being recognized as essential, they were underutilized in addressing adolescent substance abuse. Overall, the analysis underscored the diverse influences across these domains on adolescent attitudes and behaviours toward drug use, as illustrated below.

4.3 Families Discussion

The influence of families in shaping HLS attitudes towards drug abuse is profound, providing foundational values and support systems that can either encourage open discussions about substance use or impart values that discourage experimentation. Family dynamics, including parental involvement and communication styles, play a crucial role in shaping informants' perceptions and behaviours related to drug abuse. However, findings from this study highlight significant barriers that prevent informants from obtaining drug-related information from their families as shown in Figure 1.

Parents' Reluctance	Lack of Understanding	Fear of Judgment or Criticism	Communication Barriers	Cultural or Religious Beliefs
noted parents' reluctance to discuss drugs openly.	a perceived lack of understanding from parents about contemporary drug issues.	mentioned fear of judgment or criticism from parents.	experienced ineffective communication styles or strained relationships within the family	noted that cultural or religious beliefs may stigmatize drug use or discourage discussions.
Informants A, C, E, F, and G	Informants D, E, F, I, and J	Informants C, D, I, and J	Informants C, D, E, and H	Informants B, D, G, H, and I

Figure 1: Seeking Information Knowledge on Drug Abusefrom Families Discussion

Parents' reluctance to discuss drugs openly was noted by informants A, C, E, F, and G. Additionally, informants expressed a perceived lack of understanding from their parents regarding contemporary drug issues (Informants D, E, F, I, J), which hindered meaningful discussions. Fear of judgment or criticism from parents was another barrier reported by Informants C, D, I, and J, contributing to their reluctance to initiate conversations about drugs. Communication barriers within the family, such as ineffective communication styles or strained relationships, were also cited (Informants C, D, E, H), making it difficult for informants to discuss sensitive topics like drug abuse openly. Furthermore, cultural or religious beliefs within families (Informants B, D, G, H, I) may stigmatize drug use or discourage discussions about these issues, further limiting the effectiveness of familial support in addressing drug abuse prevention among students. These insights underscore the multifaceted challenges within family dynamics that impact students' access to accurate information and support related to drug abuse, highlighting the need for improved communication and supportive environments within families to address this critical issue effectively.

4.4 Peer Interaction

Peer interaction plays a significant role in educating each other about drug abuse through various channels and interactions. Within peer groups, there exists a unique dynamic where adolescents share experiences, knowledge, and warnings about drug use. This exchange occurs in informal settings, such as conversations among friends, where individuals feel more comfortable discussing sensitive topics openly. Peers can provide firsthand accounts of the consequences of drug abuse, which can resonate more deeply than information from other sources. Additionally, peer education on drug abuse fosters a supportive environment where adolescents can learn from each other's mistakes and successes as shown in Figure 2.

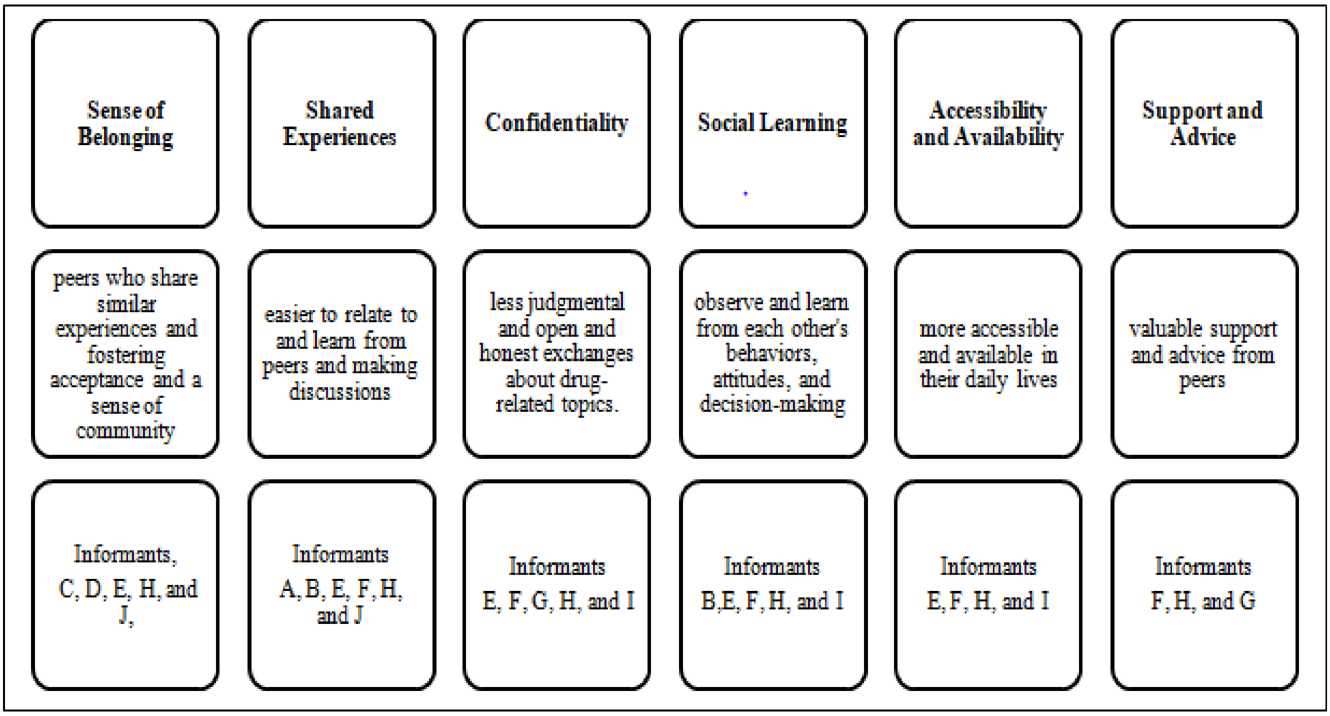


Figure 2: Seeking Information Knowledge on Drug Abusefrom Peer

The analysis emphasizes that informants prefer seeking information from peers due to several compelling reasons. Firstly, there exists a strong sense of belonging among informants (C, D, E, H, J), as adolescents seek connections with peers who share similar experiences and viewpoints on drug-related issues, fostering acceptance and community within their social circles. Shared experiences also play a crucial role (A, B, E, F, H, J), enabling adolescents to relate to and learn from peers with firsthand knowledge or experiences with drugs, thereby making discussions more pertinent and informative. Additionally, confidentiality (E, F, G, H, I) is paramount, as informants perceive peer interactions as private and less judgmental compared to conversations with adults, thereby encouraging open and honest exchanges about drug-related concerns. Social learning dynamics (B, E, F, H, I) are prevalent among peers, where adolescents observe and adopt behaviours, attitudes, and decision-making processes related to drug use from their peers. Peers are also highly accessible and available (E, F, H, I) in adolescents' daily lives, facilitating continuous discussions and information exchange in relaxed, informal settings. Lastly, peers provide valuable support and advice (F, H, G) regarding drug use and its consequences, offering practical guidance and emotional reassurance based on personal experiences, which significantly influences adolescent decision-making and behaviours concerning drugs. These factors collectively underscore the pivotal role of peer interactions in shaping adolescent attitudes, behaviours, and knowledge regarding drug-related issues, particularly in environments where communication with parents may be limited or challenging.

4.5 Media

The media, encompassing internet platforms, social media, television, books, newspapers, and radio, serves as a critical tool for educating informants about drug abuse. It disseminates information through various formats, from visual documentaries on television to interactive discussions on social media. Books provide detailed insights, newspapers deliver current news, and radio offers timely updates. Overall, the media plays a pivotal role in raising awareness, shaping perceptions, and influencing behaviours regarding drug-related issues. The analysis of this study reveals that informants lean towards obtaining information from various media sources as shown in Figure 3.

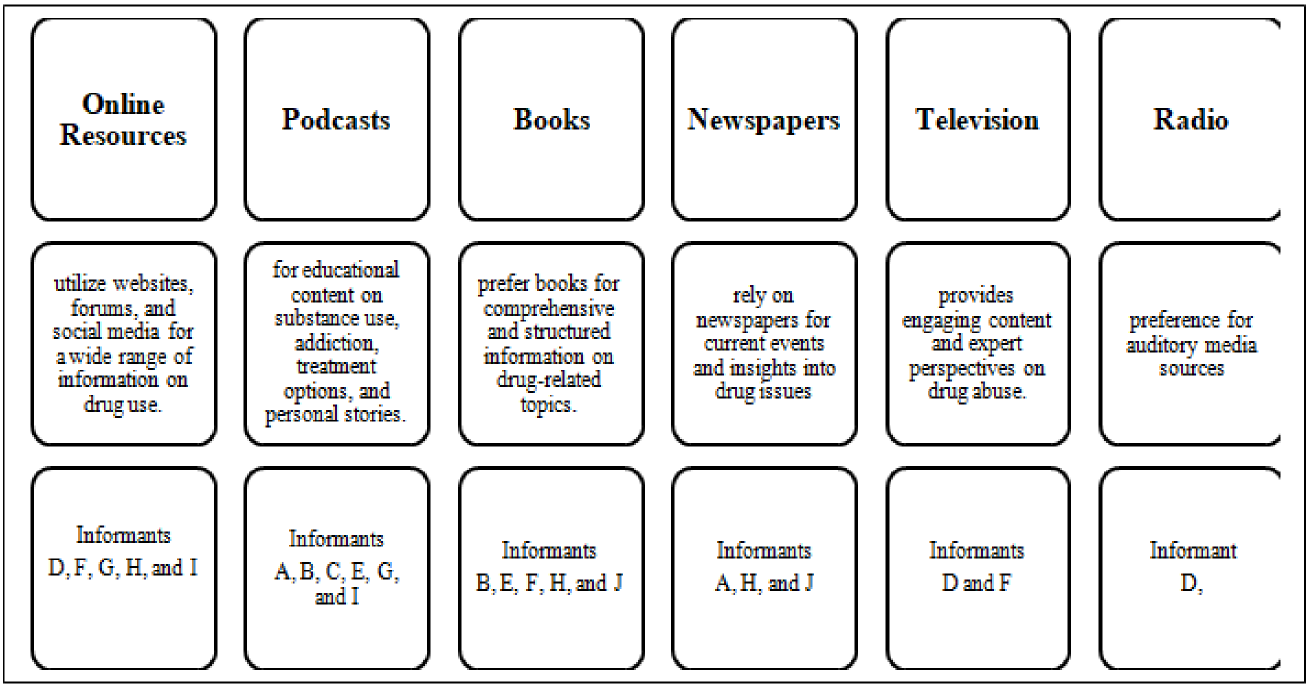


Figure 3: Seeking Information Knowledge on Drug Abusefrom Media

According to the analysis, informants predominantly favour internet platforms as their primary source of information on drug-related topics. Online resources such as websites, forums, and social media (Informants D, F, G, H, I) provide a comprehensive range of information, covering aspects from the effects of drug use to prevention strategies. These platforms facilitate active engagement through discussions, articles, videos, podcasts, and mobile apps dedicated to health education, including sections on drug abuse prevention, symptoms, treatments, and support resources (Informants A, B, D, G, H, I). Podcasts focusing on drug abuse (Informants A, B, C, E, G, I) are particularly valued for their education content, offering insights into substance use, addiction, treatment options, and personal narratives from experts and individuals with lived experiences. In contrast, there exists a diversity of media preferences among individuals seeking information about drug abuse. Some informants (B, E, F, H, J) prefer books for their comprehensive and structured insights, while others (A, H, J) rely on newspapers for detailed reporting and credibility regarding current drug-related events. Visual media such as television influences certain informants (D, F) by providing engaging content and expert perspectives on drug abuse, whereas radio remains pertinent for Informant D, offering timely updates and discussions that contribute to their understanding of drug-related issues. These findings underscore the significance of media diversity in catering to varied preferences and informational needs among individuals seeking to enhance awareness and knowledge concerning drug abuse within academic contexts.

4.6 Education Programme

Education programmes focused on drug abuse serve a critical role in equipping adolescents and individuals with the essential knowledge and skills necessary to make informed decisions and prevent substance misuse. These initiatives are designed to raise awareness about the risks associated with drug use, educate on addiction and its consequences, promote healthy behaviours, and empower participants to resist peer pressure. Effective drug abuse education integrates evidence-based content tailored to diverse age groups and cultural contexts, utilizing interactive teaching methods such as discussions, role-playing, and multimedia presentations to enhance engagement and learning outcomes. By fostering open dialogue and creating supportive environments, these programmes encourage participants to seek help when needed and contribute to community-wide efforts in prevention and intervention.

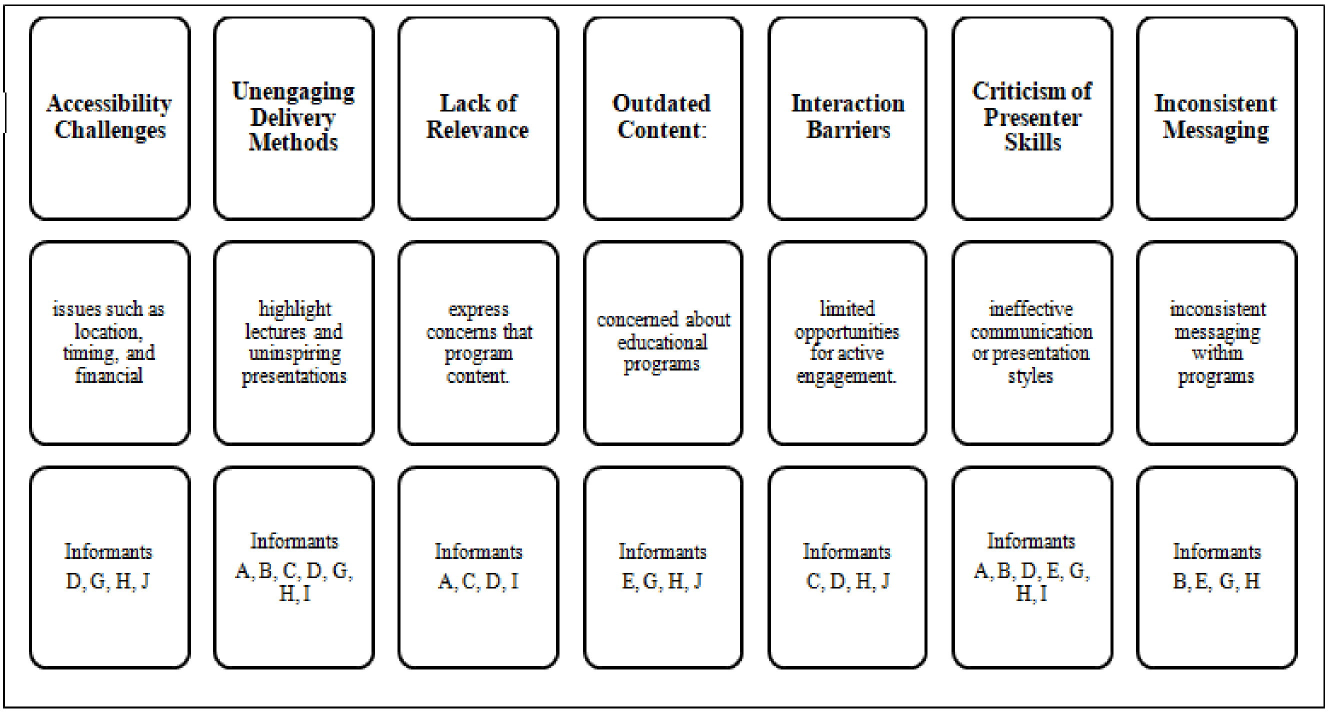


Figure 4: Seeking Information Knowledge on Drug Abusefrom Educational Programs

Despite the acknowledged importance of such a programme, findings from the analysis reveal significant barriers hindering informants' engagement. Accessibility challenges, noted by Informants (D, G, H, J), such as issues related to location, timing, and financial constraints, impede their participation. Furthermore, Informants (A, B, C, D, G, H, I) express dissatisfaction with unengaging delivery methods, such as lectures or uninspiring presentations, which fail to effectively capture their interest. Informants (A, C, D, I) also highlight the lack of relevance in program content, suggesting that it often does not address their specific concerns or current issues in drug abuse. Concerns about outdated content not keeping pace with new trends or developments in drug use are voiced by Informants (E, G, H, J). Interaction barriers, identified by Informants (C, D, H, J), underscore limited opportunities for active engagement or sharing experiences during sessions. Criticisms of presenter skills, raised by Informants (A, B, D, E, G, H, I), contribute to disengagement, citing ineffective communication or presentation styles. Lastly, Informants (B, E, G, H) mention inconsistent messaging within the programme, leading to confusion or mixed signals regarding drug abuse prevention and awareness. Addressing these challenges is imperative to enhance the efficacy of education programmes on drug abuse. Ensuring programmes are accessible, engaging, culturally relevant, and delivered with effective communication strategies is crucial to meeting participants' informational and motivational needs. By overcoming these barriers, education initiatives can effectively empower individuals to make informed choices and contribute to comprehensive community efforts aimed at combating drug misuse.

4.7 Community Programme

Community programmes focused on drug abuse knowledge play a pivotal role in raising awareness, preventing substance misuse, and supporting individuals affected by addiction within local neighbourhoods. Community programme aim to educate the community about the risks associated with drug use, provide resources for prevention and treatment, promote healthy lifestyles, and foster supportive environments. They often include workshops, support groups, outreach campaigns, and education seminars tailored to different age groups and cultural backgrounds. By engaging community members actively, these programmes empower individuals to make informed decisions, seek help when needed, and contribute to reducing drug abuse within their communities. This analysis highlights that not all informants were able to participate in community programme focused on drug abuse as shown in Figure 5.

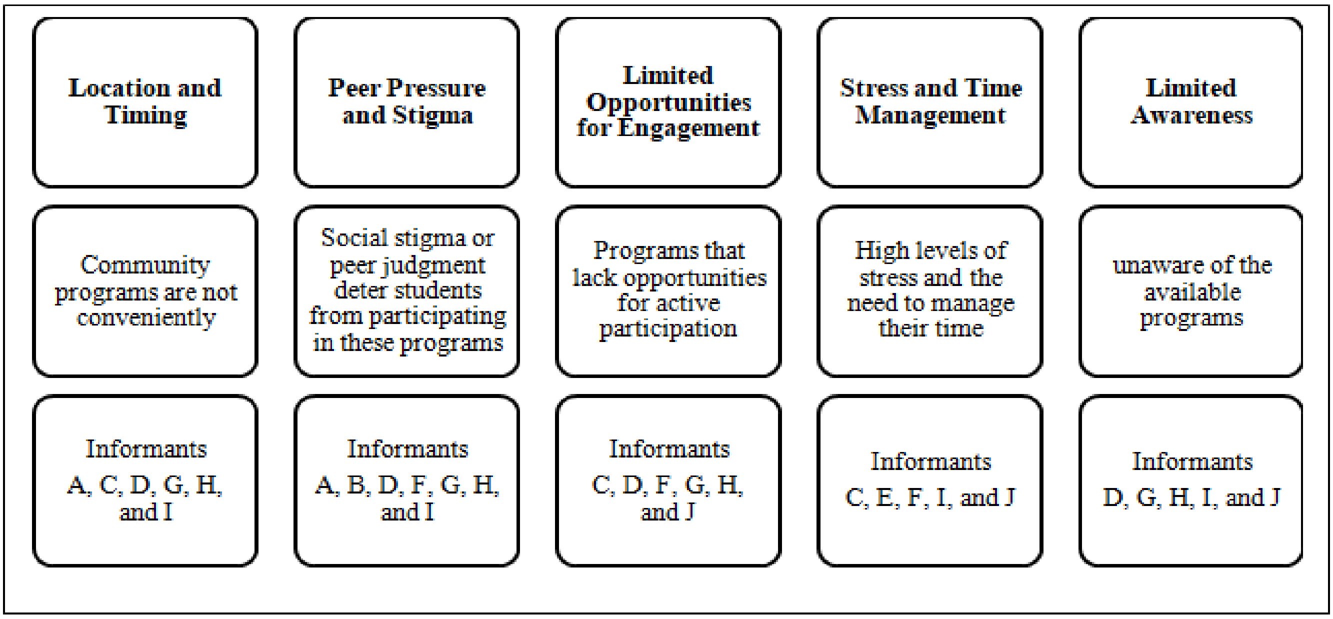


Figure 5: Seeking Information Knowledge on Drug Abusefrom Community Programs

Informants often find it challenging to participate in drug abuse education programmes for several reasons. Firstly, location and timing: Many communities programme are not conveniently located or scheduled at times that fit the busy schedules of undergraduate students, who are often occupied with classes, part-time jobs, and extracurricular activities, leaving little free time (Informants A, C, D, G, H, and I). Secondly, peer pressure and stigma: Concerns about social stigma or peer judgment deter informants from participating in these programmes. The fear of being perceived as having a problem with drugs or being overly concerned about the issue may discourage attendance (Informants A, B, D, F, G, H, and I). Thirdly, limited opportunities for engagement: A programme lacking opportunities for active participation, such as discussions or interactive activities, may fail to engage informants who thrive on interactive and engaging formats (Informants C, D, F, G, H, and J). Fourthly, stress and time management: High levels of stress and the need to manage their time effectively can lead students to avoid additional activities that are not perceived as essential (Informants C, E, F, I, and J). Lastly, limited awareness: Many informants are unaware of the available programme due to inadequate promotion or communication within the university community (Informants D, G, H, I, and J). These insights underscore the multifaceted challenges that need to be addressed to enhance the accessibility, relevance, and effectiveness of community-based drug abuse prevention efforts.

4.8 Healthcare Providers

Healthcare providers, encompassing doctors, counsellors, nurses, and social workers, are essential in addressing drug abuse. Doctors manage medical aspects, while counsellors offer psychological support. Nurses and social workers coordinate care and connect patients with resources, providing comprehensive support for prevention, treatment, and recovery. They play a crucial role in early detection through screenings and interventions, offering personalized advice on safe medication practices, and facilitating access to support services for individuals affected by substance misuse. This collaborative approach ensures holistic care and effective management of drug abuse issues. The analysis reveals several reasons why informants may not receive adequate information from healthcare providers regarding drug abuse as shown in Figure 6.

Self-Reliance	**Concerns about Stigma and Privacy**	**Perceived Stigma**	**Lack of Trust**	**Fear of Legal Consequences**	**Negative Past Experiences**
gather information independently from online	fear judgment or breaches of confidentiality	perception among students that healthcare providers may stigmatize,	students lack trust in healthcare	Concerns about potential legal implications	Previous negative interactions with healthcare providers
Informants B, D, E, F, H, I, J	Informants A, D, E, F, G, H	Informants C, D, E, F, G, H, J	Informants A, D, F, G, H, I	Informants A, D, H, J, I	Informants A, C, G

Figure 6: Seeking Information Knowledge on Drug Abusefrom Healthcare Provider

Some informants prefer to gather information independently from online resources or other sources, feeling self-reliant in their search (informants B, D, E, F, H, I, J). Concerns about stigma and privacy also play a significant role, as students fear judgment or breaches of confidentiality if they discuss drug-related issues (informants A, D, E, F, G, H). Informants may perceive stigma from healthcare providers if they disclose drug use, impacting their willingness to seek information (informants C, D, E, F, G, H, J). Additionally, a lack of trust in healthcare providers or the healthcare system prompts some students to look elsewhere for information (informants A, D, F, G, H, I). Fear of legal consequences related to drug use is another deterrent for students seeking guidance from healthcare providers (informants A, D, H, J, I). Negative past experiences, such as feeling dismissed or unheard by healthcare providers, also contribute to students' reluctance to seek information about drug abuse from them (informants A, C, G). These findings underscore the multifaceted reasons behind students' preferences for seeking information from sources other than healthcare providers.

V. DISCUSSION

The reluctance of parents to engage in open discussions about drug abuse is influenced by several significant factors with profound implications. Drug use is frequently stigmatized across various cultures, which instills fear in parents of potential judgment or harm to their family's reputation, thereby discouraging open dialogue about the risks and consequences associated with substance use (Low et al., 1996). Furthermore, parents may feel ill-prepared or uncomfortable addressing such sensitive topics due to a perceived lack of knowledge, further hindering constructive conversations. Concerns also exist regarding the inadvertent normalization of drug use among adolescents through discussions, compounding parental apprehensions (Chie et al., 2015). Moreover, apprehensions surrounding children's safety and well-being, coupled with cultural and generational disparities in experiences with drugs, contribute to this reluctance. In cultures such as Malaysia, norms promoting family harmony may discourage open discussions about drugs, while adolescents, adhering to societal privacy norms and respecting authority figures, may avoid initiating such conversations. Addressing these multifaceted challenges is essential for fostering open dialogue and enhancing parental involvement in preventing substance abuse among adolescents, with an emphasis on cultivating trust, empathy, and openness in parent-child relationships.

Informants frequently turn to their peers for information about drug abuse, often due to limited communication with their families. This preference arises from a desire for firsthand experiences and practical insights perceived as relatable and less stigmatized compared to information from formal sources or authority figures (Albert et al., 2013; de Water et al., 2016; Gardner & Steinberg, 2005). Peers are regarded as credible sources due to their direct involvement or proximity to drug-related issues, providing insights into the real-life implications and consequences of substance use (Maxwell, 2002). Seeking information from peers also fosters solidarity and understanding within peer groups, facilitating open and candid discussions about drug abuse. While this approach allows informants to gather insights grounded in personal experiences, an exclusive reliance on peer information may lead to misinformation or biased perspectives, potentially normalizing risky behaviours and increasing peer pressure. Moreover, limited communication with family members about drug abuse can weaken familial support networks, thereby impacting informants' access to holistic care and guidance.

In addition to peer interaction, influence informants seeking information on drug abuse frequently underutilize traditional media such as books, newspapers, television, and radio. These sources, despite their potential to provide valuable information, are often overlooked for several reasons (Jamri, et al., 2022). Books and newspapers, as traditional sources, may not consistently offer the most current or detailed updates on drug abuse trends and initiatives. Printed publications typically adhere to editorial schedules involving substantial lead times from writing to publication, which can result in outdated information by the time it reaches readers. Furthermore, the depth and breadth of coverage on drug abuse topics in these media can vary significantly. While some books and newspapers may provide comprehensive insights, others may focus on broader societal issues or lack the specificity required to address evolving trends in substance use and treatment. Meanwhile, television and radio, relying on scheduled programming, often struggle to accommodate the flexible schedules and immediate access preferences of informants interested in drug abuse information. Unlike digital platforms offering on-demand content, traditional broadcast media follow fixed schedules that may not align with their audience's availability or preferences, posing challenges to timely access to relevant information. Additionally, the inability to access information instantly contrasts sharply with the convenience and accessibility offered by digital media. Therefore, while television and radio remain influential mediums, their adherence to scheduled broadcasts may limit their effectiveness in meeting the dynamic information needs of informants interested in drug abuse issues.

The coverage of drug abuse topics in traditional media often falls short of meeting the specific interests and needs of informants, prompting them to favour alternative sources or platforms. Media such as newspapers, television, and radio typically offer generalized or sporadic coverage of drug abuse, lacking the in-depth exploration of emerging trends, local initiatives, or comprehensive analysis sought by informants. These mediums prioritize broader audience appeal over detailed discussions on substance abuse, resulting in limited depth of information. Consequently, informants seeking nuanced insights or specific information may turn to alternative sources like specialized publications, online forums, or peer discussions that provide more targeted perspectives on drug abuse topics. This preference for alternative sources underscores informants' quest for comprehensive and relevant information beyond what traditional media typically provides on drug abuse issues

Education and community programmes aimed at addressing drug abuse are designed to enhance awareness of its risks, impart skills to resist peer pressure, and foster supportive community environments (Chie et al., 2015). Despite these objectives, these initiatives often encounter challenges in effectively engaging participants. Informants face considerable time constraints due to rigorous academic commitments, part-time employment, and active social lives, which can deter their involvement in such programmes. Furthermore, when the content of these programmes does not closely align with participants' immediate interests or fails to address their specific needs, they may perceive the information as irrelevant or lacking in practical application. Ineffective promotion and outdated delivery methods further contribute to low participation rates. Additionally, there exists a stigma associated with attending a drug education programme, as participants may fear social judgment or be labelled by their peers. These barriers collectively underscore the need for programmes that are not only accessible and well-advertised but also highly relevant to the target audience to effectively foster engagement and promote proactive approaches to addressing drug abuse issues.

Moreover, informants may be reluctant to seek information on drug abuse from healthcare providers such as doctors, counsellors, nurses, and social workers due to various factors (Cernasev, et al., 2022). One primary concern is the stigma attached to discussing substance abuse openly with healthcare professionals, often portraying substance use as a moral failing rather than a medical issue. This societal perception can deter individuals from seeking necessary help or guidance. Confidentiality concerns also loom large, with individuals apprehensive that shared information could be disclosed without consent, potentially leading to breaches of privacy or other unintended consequences like legal ramifications or social stigma. Furthermore, the fear of being stigmatized or labelled as having a substance abuse problem may discourage individuals from seeking early intervention or openly discussing their concerns, perpetuating feelings of isolation and reluctance to engage with healthcare providers who could offer crucial support and assistance. Additionally, individuals may not fully recognize the confidential and non-judgmental support services available from healthcare providers, viewing these professionals primarily through the lens of physical health rather than recognizing their expertise in mental health or substance abuse issues. Consequently, individuals may turn to perceived more specialized sources such as peer groups or online forums for information, seeking immediate access without the perceived formality or potential barriers associated with healthcare settings.

The accessibility and effectiveness of information sources on drug abuse, which include family discussions, peer influence, traditional media (such as books, newspapers, television, and radio), education and community programme, and healthcare providers, often fail to fully meet the needs of informants. Social stigma and concerns about family reputation hinder open discussions within families, prompting informants to turn to peers for information they perceive as more relatable. Traditional media channels typically do not provide comprehensive coverage of local drug abuse trends, while education and community programme may struggle to engage informants due to mismatched content or lack of awareness. Consequently, informants frequently seek out alternative sources like online forums, underscoring the necessity for more relevant and accessible approaches to disseminating information about drug abuse.

The internet serves as a versatile platform enabling individuals to access a diverse array of information swiftly and conveniently, circumventing the social pressures and stigmas frequently linked with discussing sensitive topics face-to-face. Unlike traditional modes of communication, online resources offer anonymity, granting users a sense of freedom to explore drug abuse-related content without fear of personal scrutiny or societal judgment. This anonymity fosters a more open and candid exploration of information, allowing individuals to delve deeper into their queries while shielding them from potential consequences associated with disclosing personal concerns in public forums. Moreover, the internet's accessibility ensures that individuals can seek out resources, insights, and support from various sources globally, empowering them with comprehensive knowledge and enabling informed decision-making regarding drug abuse. Using the internet to acquire knowledge about drug abuse can have significant negative impacts. Firstly, the vast amount of information available online varies widely in accuracy and credibility, leading to potential misinformation and confusion among users seeking reliable guidance. This can perpetuate myths or outdated beliefs about substances and their effects. Moreover, the anonymity of online platforms can facilitate the spread of harmful ideologies or encourage risky behaviours, especially in forums or social media groups where drug use might be normalized or glamorized. Privacy concerns also arise, as individuals may unwittingly disclose personal information that compromises their confidentiality or exposes them to exploitation. Additionally, continuous exposure to drug-related content online can trigger or exacerbate mental health issues, including anxiety or depression, particularly for vulnerable individuals. The internet's accessibility and immediacy can also undermine the importance of seeking professional advice, deterring individuals from consulting healthcare providers who can offer tailored support and evidence-based interventions. Overall, while the internet provides unprecedented access to information, its unregulated nature and potential for misinformation pose substantial risks for those seeking accurate knowledge about drug abuse Despite the myriads of sources available for obtaining information on drug abuse knowledge, the role of families remains paramount. Research indicates that informants often communicate less with their families about this critical issue. Nonetheless, families serve as fundamental units in educating informants about drug abuse knowledge. They provide a foundational environment where attitudes, beliefs, and behaviours towards substance use are shaped and discussed. Effective family communication fosters understanding, trust, and support, creating an atmosphere where informants feel safe to seek guidance and share concerns about drug abuse. By engaging in open discussions, families can impart essential information about the risks, consequences, and prevention of substance abuse, complementing formal education and community interventions. Moreover, familial involvement instills values and norms that influence decision-making processes related to drug use, reinforcing responsible behaviours and reducing the likelihood of substance abuse among informants. In addition to parents providing foundational knowledge about drug abuse, undergraduate students must engage in courses dedicated to drug abuse education. Substance misuse is prevalent among young adults, especially within education settings, making it essential for students to acquire a comprehensive understanding and skills to address this issue effectively. These courses not only equip students with the knowledge to identify signs of drug abuse and understand its societal impacts but also empower them to advocate for and implement preventive measures. By integrating drug abuse education into undergraduate curricula, universities fulfill a critical role in fostering a safe and supportive environment conducive to healthy decision-making and well-being among their student populations.

Summary

The influence of various information sources on adolescent knowledge of drug abuse involves a complex interplay among familial, peer, media, education & community programme, and healthcare factors. Despite potential communication barriers, families are pivotal as primary educators of drug abuse for adolescents. Peer interactions provide relatable insights but may inadvertently normalize risky behaviours. Traditional media sources like books, newspapers, television, and radio often offer generalized or outdated information, failing to meet adolescents' specific and evolving informational needs regarding drug abuse. Education and community programmes aim to raise awareness and impart skills but encounter challenges in engaging adolescents due to perceived relevance and stigma. Healthcare providers offer crucial support but face barriers related to stigma and confidentiality concerns. Overall, while adolescents prefer internet sources for their convenience and anonymity, a comprehensive approach integrating diverse information sources is essential to effectively enhance adolescent knowledge and understanding of drug abuse issues.

REFERENCE

1. Adibe, M. O., Okonta, J. M., & Udeogaranya, P. O. (2010). The effects of television and radio commercials.
2. Adibe, M. O., Okonta, J. M., & Udeogaranya, P. O. (2010). The effects of television and radio commercials.
3. Adibe, M. O., Okonta, J. M., & Udeogaranya, P. O. (2010). The effects of television and radio commercials.
4. Adibe, M. O., Okonta, J. M., & Udeogaranya, P. O. (2010). The effects of television and radio commercials.
5. Adibe, M. O., Okonta, J. M., & Udeogaranya, P. O. (2010). The effects of television and radio commercials.
6. Adibe, M. O., Okonta, J. M., & Udeogaranya, P. O. (2010). The effects of television and radio commercials.
7. Albert, D., Chein, J., & Steinberg, L. (2013). The teenage brain: Peer influences on adolescent decision making. *Current Directions in Psychological Science, 22*(2), 114–120. https://doi.org/10.1177/0963721413481302
8. Andrews, J. A., & Hops, H. (2010). The influence of peers on substance use. In L. M. Scheir (Ed.), *Handbook of drug etiology: Theory, methods and empirical findings* (pp. 403-420). American Psychological Association.
9. Bonyani, A., Safaeian, L., Chehrazi, M., Etedali, A., Zaghian, M., & Mashhadian, F. (2018). A high school-based education concerning drug abuse prevention. *Journal of Education and Health Promotion, 7*, 88. https://doi.org/10.4103/jehp.jehp_122_17.
10. Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77-101. https://doi.org/10.1191/1478088706qp063oa.

11. Cernasev, A., Kline, K. M., Barenie, R. E., Hohmeier, K. C., Stewart, S., & Forrest-Bank, S. S. (2022). Healthcare professional students' perspectives on substance use disorders and stigma: A qualitative study. *International Journal of Environmental Research and Public Health, 19*(5), Article 2776. https://doi.org/10.3390/ijerph19052776.
12. Chie, Q. T., Tam, C. L., Bonn, G., Wong, C. P., Dang, H. M., & Khairuddin, R. (2015). Drug abuse, relapse, and prevention education in Malaysia: Perspective of university students through a mixed methods approach. *Frontiers in Psychiatry, 6*, Article 65. https://doi.org/10.3389/fpsyt.2015.00065.
13. Clemente-Suárez, V. J., Ruisoto, P., Isorna-Folgar, M., Cancelo-Martínez, J., Beltrán-Velasco, A. I., & Tornero-Aguilera, J. F. (2022). Psychophysiological and psychosocial profile of patients attending drug addiction centers. *Applied Psychophysiology and Biofeedback, 47*(2), 77–84. https://doi.org/10.1007/s10484-021-09531-1.
14. Daley, D. C. (2013). Family and social aspects of substance use disorders and treatment. *Journal of Food and Drug Analysis, 21*(4), S73–S76. https://doi.org/10.1016/j.jfda.2013.09.038.
15. Das, J. K., Salam, R. A., Arshad, A., Finkelstein, Y., & Bhutta, Z. A. (2016). Interventions for adolescent substance abuse: An overview of systematic reviews. *The Journal of Adolescent Health, 59*(4S), S61–S75. https://doi.org/10.1016/j.jadohealth.2016.06.021.
16. De Water, E., Burk, W. J., Cillessen, A. H. N., & Scheres, A. (2016). Substance use and decision making in adolescent best friendship dyads: The role of popularity. *Social Development, 26*(4), 860–875. https://doi.org/10.1111/sode.12177.
17. Dworkin, S. L. (2012). Sample size policy for qualitative studies using in-depth interviews. *Archives of Sexual Behavior, 41*, 1319-1320. https://doi.org/10.1007/s10508-012-0016-4.
18. Fusch, P. I., & Ness, L. R. (2015). Are we there yet? Data saturation in qualitative research. *The Qualitative Report, 20*(9), 1408-1416. https://nsuworks.nova.edu/tqr/vol20/iss9/3.
19. Gardner, M., & Steinberg, L. (2005). Peer influence on risk taking, risk preference, and risky decision making in adolescence and adulthood: An experimental study. *Developmental Psychology, 41*(4), 625–635. https://doi.org/10.1037/0012-1649.41.4.625.
20. Hostetler, C. M., Anacker, A. M. J., Loftis, J. M., & Ryabinin, A. E. (2012). Social housing and alcohol drinking in male-female pairs of prairie voles (*Microtus ochrogaster*). *Psychopharmacology, 224*(1), 121–132. https://doi.org/10.1007/s00213-012-2836-4.
21. Jamri, M. H., Ismail, N., & Ahmad, J. (2022, January). A study of the use of electronic media in drug abuse campaign. In *International Conference on Emerging Media & Communication*. https://doi.org/10.15405/epsbs.2022.01.02.38.
22. Kamarudin Hussin, Abdul Majid Mohd Isa, Abdull Halim Abdul, Huzili Hussin, Mohamad Hashim Othman, Norismiza Ismail, Nor Azmah Abd Karim, & Ku Azira Ku Aziz. (2010). Penyalahgunaan dadah; Pelajar institusi pengajian tinggi awam Malaysia (*Drug abuse among students in public higher education institutions in Malaysia*). *Universiti Malaysia Perlis Publication.*
23. Kamarudin Hussin, Abdul Majid Mohd Isa, Mohamad Hashim Othman, Abdull Halim Abdul, Nor Azmah Abd Karim, & Ku Azira Ku Aziz. (2010). Penyalahgunaan dadah; Pelajar institusi pengajian tinggi Malaysia (*Drug abuse among students in Malaysian higher education institutions*). *Universiti Malaysia Perlis Publication.*
24. Keyzers, A., Lee, S. K., & Dworkin, J. (2020). Peer pressure and substance use in emerging adulthood: A latent profile analysis. *Substance Use & Misuse, 55*(10), 1716–1723. https://doi.org/10.1080/10826084.2020.1759642.
25. Khalith, M. A., Priyadharshini, J., Ramya, V., & Rogina, J. S. Savarimuthu. (2017). Knowledge on awareness about substance abuse among college students. *International Journal of Pharmaceutical Sciences and Research, 6*(8), 375-376.
26. Klein, R. J., Gyorda, J. A., & Jacobson, N. C. (2022). Anxiety, depression, and substance experimentation in childhood. *PloS One,*

17(5), Article e0265239. https://doi.org/10.1371/journal.pone.0265239.
27. Larimer, M. E., & Cronce, J. M. (2002). Identification, prevention and treatment: A review of individual-focused strategies to reduce problematic alcohol consumption by college students. *Journal of Studies on Alcohol, Suppl 14*, 148–163.
28. Loke, A. Y., & Mak, Y. W. (2013). Family process and peer influences on substance use by adolescents. *International Journal of Environmental Research and Public Health, 10*(9), 3868–3885. https://doi.org/10.3390/ijerph10093868.
29. Low, W. Y., Zulkifli, S. N., Yusof, K., Batumalail, S., & Aye, K. W. (1996). The drug abuse problem in Peninsular Malaysia: Parent and child differences in knowledge, attitudes and perceptions. *Drug and Alcohol Dependence, 42*(2), 105–115. https://doi.org/10.1016/0376-8716(96)01265-3.
30. Malick, R. (2018). Prevention of substance use disorders in the community and workplace. *Indian Journal of Psychiatry, 60*(Suppl 4), S559–S563. https://doi.org/10.4103/psychiatry.IndianJPsychiatry_24_18.
31. Mauro, P. M., Samples, H., Klein, K. S., & Martins, S. S. (2020). Discussing drug use with health care providers is associated with perceived need and receipt of drug treatment among adults in the United States: We need to talk. *Medical Care, 58*(7), 617–624. https://doi.org/10.1097/MLR.0000000000001340.
32. Maxwell, K. A. (2002). Friends: The role of peer influence across adolescent risk behaviors. *Journal of Youth and Adolescence, 31*(4), 267–277.
33. Mayer, F. B., Santos, I. S., Silveira, P. S. P., et al. (2016). Factors associated with depression and anxiety in medical students: A multicenter study. *BMC Medical Education, 16*, Article 282. https://doi.org/10.1186/s12909-016-0793-4.
34. Mofatteh, M. (2020). Risk factors associated with stress, anxiety, and depression among university undergraduate students. *AIMS Public Health, 8*(1), 36–65. https://doi.org/10.3934/publichealth.2021004.
35. Nawi, A. M., Ismail, R., Ibrahim, F., et al. (2021). Risk and protective factors of drug abuse among adolescents: A systematic review. *BMC Public Health, 21*, Article 2088. https://doi.org/10.1186/s12889-021-11906-2
36. Nneka, R. A., Nnenna, A., Obinna, O. K., Nneoma, N. O., & Anthony, I. O. (2022). Knowledge and perception of university students on drug abuse in Delta state, South-South, Nigeria. *Open Journal of Clinical Medicine Images, 2*(1), 1049.
37. Om Hashem Mohammed, Yossria E. Hossein, & Amal H. Mohamed. (2021). Assessment of knowledge and attitudes of secondary school students regarding drug abuse at Minia City. *Minia Scientific Nursing Journal, 9*(1). https://doi.org/10.21608/MSNJ.2021.188058
38. Palinkas, L. A., Horwitz, S. M., Green, C. A., Wisdom, J. P., Duan, N., & Hoagwood, K. (2015). Purposeful sampling for qualitative data collection and analysis in mixed method implementation research. *Administration and Policy in Mental Health, 42*(5), 533–544. https://doi.org/10.1007/s10488-013-0528-y.
39. Panchal, N. (2024, February 6). Recent trends in mental health and substance use concerns among adolescents. *Kaiser Family Foundation*. Retrieved from https://www.kff.org/mental-health/issue-brief/recent-trends-in-mental-health-and-substance-use-concerns-among-adolescents/.
40. Pandina, R. J., Johnson, V. L., & White, H. R. (2010). Peer influences on substance use during adolescence and emerging adulthood. In L. M. Scheir (Ed.), *Handbook of Drug Etiology: Theory, Methods and Empirical Findings* (pp. 383-401). American Psychological Association.
41. Romer, D., & Moreno, M. (2017). Digital media and risks for adolescent substance abuse and problematic gambling. *Pediatrics, 140*(Suppl 2), S102–S106. https://doi.org/10.1542/peds.2016-1758L.
42. Strickland, J. C., & Smith, M. A. (2014). The effects of social contact on drug use: Behavioral mechanisms controlling drug intake. *Experimental and Clinical Psychopharmacology, 22*(1), 23–34. https://doi.org/10.1037/a0034669.

43. Vasileiou, K., Barnett, J., Thorpe, S., et al. (2018). Characterising and justifying sample size sufficiency in interview-based studies: Systematic analysis of qualitative health research over a 15-year period. *BMC Medical Research Methodology, 18*, Article 148. https://doi.org/10.1186/s12874-018-0594-7.
44. Yin, C., He, X., Shen, K., Mu, X., & Tang, F. (2022). Knowledge and behavior in rational drug use among college students in Zunyi City. *Risk Management and Healthcare Policy, 15*, 121–131. https://doi.org/10.2147/RMHP.S347822.

This page is intentionally left blank

Scan to know paper details and author's profile

Challenges Facing Indian Democracy in the Digital Age: Cyber Security and Election Integrity

Saurav Suman

Patna University

ABSTRACT

In the digital age, Indian democracy faces significant challenges that threaten the integrity of its electoral processes and the security of its cyberspace. This paper explores two critical issues: cybersecurity vulnerabilities and threats to election integrity within the context of India's evolving digital landscape. It examines the multifaceted nature of cyber threats, ranging from data breaches and misinformation to targeted cyber-attacks on electoral infrastructure, which collectively pose a substantial risk to the sanctity of democratic processes. Additionally, the paper delves into the complexities introduced by digital voting systems, social media influence, and the role of artificial intelligence in shaping political narratives. By analyzing recent incidents and existing governmental frameworks, the study highlights the urgent need for robust, adaptive strategies to safeguard democracy against these digital age challenges. The objective is to provide a comprehensive overview of the current threats and propose strategic measures to enhance resilience in India's digital and democratic spheres. Through this exploration, the paper aims to contribute to the ongoing discourse on maintaining and strengthening democratic practices in the face of growing digital challenges.

Keywords: technologies, cybersecurity, electronic, communication.

Classification: LCC Code: JQ281

Language: English

Great Britain Journals Press

LJP Copyright ID: 573312
Print ISSN: 2515-5784
Online ISSN: 2515-5792

London Journal of Research in Humanities & Social Science

Volume 24 | Issue 10 | Compilation 1.0

London Journal of Research in Humanities & Social Science

Challenges Facing Indian Democracy in the Digital Age: Cyber Security and Election Integrity

Saurav Suman

ABSTRACT

In the digital age, Indian democracy faces significant challenges that threaten the integrity of its electoral processes and the security of its cyberspace. This paper explores two critical issues: cybersecurity vulnerabilities and threats to election integrity within the context of India's evolving digital landscape. It examines the multifaceted nature of cyber threats, ranging from data breaches and misinformation to targeted cyber-attacks on electoral infrastructure, which collectively pose a substantial risk to the sanctity of democratic processes. Additionally, the paper delves into the complexities introduced by digital voting systems, social media influence, and the role of artificial intelligence in shaping political narratives. By analyzing recent incidents and existing governmental frameworks, the study highlights the urgent need for robust, adaptive strategies to safeguard democracy against these digital age challenges. The objective is to provide a comprehensive overview of the current threats and propose strategic measures to enhance resilience in India's digital and democratic spheres. Through this exploration, the paper aims to contribute to the ongoing discourse on maintaining and strengthening democratic practices in the face of growing digital challenges.

Keywords: technologies, cybersecurity, electronic, communication.

Author: Research Scholar, Department of Political Science Patna University, Patna.

I. INTRODUCTION

In the digital age, democracies worldwide are grappling with new challenges that could potentially destabilize their foundational structures. India, with its vast and diverse population, is not immune to these challenges. As the world's largest democracy, India has increasingly integrated digital technologies into its electoral and governance processes. This integration, while enhancing accessibility and efficiency, has concurrently exposed the democratic processes to various cybersecurity threats and concerns related to election integrity. This paper aims to dissect these dual challenges, focusing on the unique context of Indian democracy and its digital engagements.

Cybersecurity threats in India manifest in multiple forms, including, but not limited to, phishing attacks, malware dissemination, and large-scale data breaches. These threats are compounded by the nation's growing digital footprint and the extensive adoption of information and communication technologies in both urban and rural landscapes. The cybersecurity challenge is particularly acute considering the sensitive nature of political and electoral data, which if compromised, can undermine public trust in the electoral process. This risk is heightened during election periods, where targeted attacks can potentially alter outcomes or skew public perception.

Parallel to cybersecurity issues, the integrity of elections in India faces threats from digital misinformation and disinformation campaigns. The proliferation of social media platforms has enabled the rapid spread of false information, which can be particularly influential during election cycles. The strategic dissemination of fake news is employed to sway voter opinions, manipulate public sentiment, and even incite communal unrest. Such practices pose a direct challenge to the principle of fair and free elections, a cornerstone of democratic governance. Moreover, the advent of digital voting technologies presents both opportunities and challenges. While electronic voting machines (EVMs) have been used in India to reduce the incidence of ballot stuffing and electoral fraud, concerns persist about their vulnerability to tampering and hacking. The debate over the use of EVMs underscores the broader anxieties surrounding the security of digital voting systems and the transparency of the electoral process. The Government of India has undertaken several initiatives to bolster cybersecurity and ensure electoral integrity. These include the establishment of the Indian Computer Emergency Response Team (CERT-In) to address cybersecurity threats and the deployment of VVPAT (Voter Verified Paper Audit Trail) systems to augment the transparency of electronic voting. However, these measures alone are insufficient without a comprehensive and continuously evolving strategy that addresses the multifaceted nature of digital threats. In conclusion, this paper explores how India's democracy is navigating the complex terrain of the digital age, marked by significant cybersecurity challenges and threats to election integrity. By investigating recent incidents and evaluating governmental and non-governmental responses, this study aims to outline effective strategies for safeguarding India's electoral processes and ensuring that its digital advancements do not compromise but rather strengthen its democratic fabric. Through this analysis, the paper contributes to the broader discourse on securing democracies in an increasingly digital world.

II. CYBER SECURITY CHALLENGES IN INDIAN ELECTIONS

The cyber security landscape in Indian elections is marked by a constellation of challenges that reflect the broader global struggle to safeguard democratic processes in the digital age. As India advances its digital infrastructure, the electoral system becomes increasingly vulnerable to a variety of cyber threats that can undermine election integrity and public trust in the democratic process.

2.1 The Landscape of Cyber Threats

The landscape of cyber threats in Indian elections is complex and multifaceted, shaped by the rapid growth of digital technology and the strategic importance of political data. As India continues to digitalize its electoral processes, it becomes increasingly susceptible to cyberattacks that can undermine the democratic process. This section delves into the main categories of cyber threats faced by Indian elections, highlighting the specific vulnerabilities and the potential consequences of such attacks.

2.1.1 Phishing and Social Engineering Attacks

Phishing and social engineering attacks are prevalent methods used by cybercriminals to manipulate election outcomes. These attacks typically involve the use of deceptive emails or messages that mimic legitimate sources to steal sensitive information or propagate false information. For election officials, falling victim to these tactics can lead to unauthorized access to electoral rolls and internal communication. For the electorate, these methods often aim to mislead voters about voting procedures or manipulate their political opinions, directly impacting voter behavior and trust in the electoral system.

2.1.2 Malware and Ransomware

Malware and ransomware present significant risks to the integrity of electoral data and the availability of critical systems. Attackers deploy malware to disrupt the functioning of electronic voting machines (EVMs) or to access confidential election data, such as voter identities and party strategies. Ransomware attacks, in which attackers encrypt vital election data and demand ransom for decryption, pose a direct threat to the availability of critical electoral infrastructure, potentially delaying or invalidating election processes.

2.1.3 Data Breaches and Unauthorized Access

Data breaches involving unauthorized access to election databases can have severe consequences for electoral integrity. Such breaches can lead to the exposure of voter identities, voting patterns, and other sensitive information, which can be used to skew electoral processes and outcomes. The risk is exacerbated by inadequate cybersecurity measures and the often outdated digital infrastructure used in managing electoral data.

2.1.4 Denial of Service Attacks

Denial of Service (DoS) and Distributed Denial of Service (DDoS) attacks are used to overwhelm and incapacitate online services related to elections, such as voter registration portals, official election commission websites, and real-time result reporting services. By disrupting these services, attackers can create chaos, undermine public trust in the electoral process, and challenge the legitimacy of the election results.

2.1.5 Manipulation and Misinformation

Beyond direct cyberattacks, the digital landscape in India is rife with the risk of misinformation and manipulation through digital channels, particularly social media. Cyber threat actors often use these platforms to spread false information, deep fakes, and manipulated narratives to influence voter perceptions and stir societal divisions. This form of cyber threat indirectly affects the electoral process by shaping voter intentions and opinions based on falsehoods and propaganda.

In conclusion, the landscape of cyber threats facing Indian elections is diverse and constantly evolving, requiring continuous vigilance and adaptation of cybersecurity strategies. Addressing these threats necessitates a holistic approach that includes technological upgrades, robust legal frameworks, widespread cybersecurity awareness campaigns, and international cooperation. As India moves further into the digital age, ensuring the security of its elections from these cyber threats is paramount for maintaining democratic integrity and public trust.

III. IMPACT OF DIGITAL TECHNOLOGIES ON ELECTION INTEGRITY

The advent of digital technologies has transformed electoral processes globally, offering opportunities for greater efficiency and participation. However, these technologies also introduce vulnerabilities that can be exploited to compromise election integrity. In India, where digital technologies like Electronic Voting Machines (EVMs) and social media play pivotal roles in elections, understanding these vulnerabilities is crucial for safeguarding democracy.

3.1 Electronic Voting Machines (EVMs) and Vulnerabilities

Electronic Voting Machines (EVMs) have been a significant part of India's electoral process since their widespread adoption in the early 2000s. EVMs were introduced to reduce the incidences of ballot box stuffing and vote miscounting, promising a more efficient and transparent voting process. However, the transition from paper ballots to electronic systems has not been without its challenges.

Vulnerabilities in EVMs

- Hardware and Software Security: EVMs are susceptible to tampering at both the hardware and software levels. Although the machines are not connected to the internet, thus mitigating some risk of remote hacking, they can still be compromised through physical tampering or during the transportation and storage phases. The software used can also be a point of attack if not properly secured, potentially allowing unauthorized code to alter vote counts.
- Lack of Transparency: The absence of a physical trail in the older EVM models poses a challenge for verifying vote tallies. This has led to demands for Voter Verified Paper Audit Trail (VVPAT) systems, which provide a paper backup by printing a slip for each vote cast. However, even with VVPAT, concerns remain about the verifiability and the practicality of auditing these trails effectively.

- Public Trust Issues: Despite assurances from the Election Commission of India, skepticism persists among certain segments of the populace and political entities regarding the infallibility of EVMs. Allegations of machine tampering have surfaced in various elections, highlighting the need for enhanced security measures and more transparent handling procedures.

3.2 The Role of Social Media in Electoral Manipulation

Social media's influence on elections has grown exponentially, paralleling its rise as a fundamental tool for communication and information dissemination. In India, where millions of new internet users are added each year, social media platforms wield significant power in shaping political narratives and influencing voter behavior.

Social Media and Electoral Manipulation

- Spread of Misinformation and Disinformation: Social media platforms are fertile ground for the spread of false information. This includes deliberate disinformation campaigns orchestrated by internal or external actors aimed at influencing election outcomes or sowing discord among the electorate.
- Targeted Political Advertising and Data Privacy Concerns: The use of targeted political advertisements based on user data raises ethical and privacy concerns. The Cambridge Analytica scandal is a prime example, where data from millions of Facebook users was used without consent to target political ads, affecting voter perceptions and behavior.
- Polarization and Echo Chambers: Social media tends to exacerbate political polarization by creating echo chambers where users are exposed primarily to viewpoints that align with their own. This can intensify divisions and reduce the effectiveness of democratic discourse.

To mitigate these threats and enhance election integrity in the digital age, India must implement comprehensive cybersecurity measures, enforce stringent data protection laws, and ensure greater transparency and accountability in the use of digital technologies in electoral processes. This includes continual updates to EVM security protocols, rigorous monitoring of social media platforms, and public education campaigns to foster critical engagement with digital content. Addressing these challenges is imperative not only for maintaining the robustness of Indian democracy but also for setting a global standard in managing the complex interplay between technology and electoral integrity.

IV. MEASURES TO ENHANCE CYBER SECURITY AND ELECTION INTEGRITY

As digital technologies continue to evolve, so too must the strategies to protect and enhance the integrity of electoral processes. In India, addressing the dual challenges of cyber security and election integrity requires a multidimensional approach that includes updating legislative frameworks, adopting advanced technological solutions, and adhering to best practices in digital security. This section outlines key measures that can help fortify India's defenses against cyber threats and ensure the robustness of its electoral system.

4.1 Legislative and Regulatory Frameworks Developing Comprehensive Legislation

- *Data Protection Laws:* Enacting robust data protection laws that define and regulate the collection, storage, and use of personal data is crucial. This would help safeguard voter information and deter unauthorized access and manipulation. India's Personal Data Protection Bill, which is modeled after the GDPR, is a step in the right direction.
- *Cybersecurity Regulations:* Strengthening cybersecurity regulations that specifically address the needs of the electoral process is essential. This includes laws that govern the security standards for electronic voting machines, voter databases, and the digital infrastructure of political parties.
- *Transparency and Accountability Measures:* Legislation should also include provisions for greater transparency and accountability in electoral processes. This could involve

mandatory audits, public disclosure of cybersecurity practices by the Election Commission, and protocols for responding to cyber incidents.

Enhancing Enforcement

- *Establishing Dedicated Units:* Creating specialized units within law enforcement agencies to handle cybercrimes related to elections can enhance the effectiveness of response mechanisms. These units could work in close coordination with national cybersecurity organizations like CERT-In.
- *International Cooperation:* Cyber threats often transcend national boundaries, making international cooperation essential. India could benefit from treaties and collaborative agreements focused on combating cybercrime, sharing intelligence, and developing best practices in electoral security.

4.2 Technological Solutions and Best Practices

Upgrading Technology

- *Securing Electronic Voting Machines:* Implementing advanced cryptographic techniques to secure EVMs can help prevent tampering. This includes using hardware-based security modules (HSMs) and regularly updating firmware to patch vulnerabilities.
- *Voter Verified Paper Audit Trails (VVPATs):* Ensuring all EVMs are equipped with VVPAT systems allows for physical verification of votes, enhancing voter confidence and enabling effective audits.

Implementing Best Practices

- *Regular Security Audits and Penetration Testing:* Conducting regular audits of the electoral digital infrastructure and penetration testing by independent experts can identify vulnerabilities before they can be exploited.
- *Enhanced Training and Awareness Programs:* Training election officials and the general public on cybersecurity awareness and digital literacy can significantly reduce the risk of phishing attacks and misinformation.
- *Use of Secure Communication Channels:* Encouraging political parties and election bodies to use encrypted communication channels for transmitting sensitive information can prevent unauthorized access and data leaks.

Leveraging Technology for Transparency

- *Blockchain Technology:* Exploring the use of blockchain for storing voter rolls and results could provide a tamper-proof system due to its decentralized and immutable characteristics. Pilot projects in smaller elections could help assess its feasibility and effectiveness.
- *Open Source Software:* Using open-source software for election-related technology could enhance transparency, allowing independent verification of the software's security and integrity.

By adopting these legislative measures and technological solutions, India can enhance the security and integrity of its elections, ensuring they remain free from manipulation and interference. This comprehensive approach not only protects the electoral process but also reinforces the democratic values that are essential for the nation's progress.

V. DISCUSSION

In the intricate web of challenges and solutions surrounding the integrity of elections in the digital age, India stands at a critical juncture. As this paper has explored, the widespread adoption of digital technologies has introduced new vulnerabilities into India's electoral processes, ranging from the risks associated with Electronic Voting Machines (EVMs) to the profound impact of social media on public opinion and political discourse. The dual-edged sword of technological advancement offers remarkable opportunities for enhancing democratic engagement but also poses significant threats that can undermine the very foundation of electoral integrity. The adoption of legislative and regulatory frameworks that protect data and ensure transparency, coupled with the implementation of cutting-edge technological solutions and best practices, are pivotal in navigating this complex landscape. However, these measures alone are insufficient if not supported by a broad cultural shift towards greater cybersecurity awareness and civic responsibility among stakeholders at all levels—from government bodies and political entities to individual voters. It is essential to foster an environment where technology serves as a tool for empowerment rather than a means of manipulation. This requires a concerted effort to educate, innovate, and regulate concurrently, ensuring that advancements in digital technology fortify rather than fracture the democratic process. The ongoing discussion about digital democracy in India is not merely about securing data or streamlining processes but involves a deeper examination of how technology shapes political power dynamics and the very notion of participatory democracy. As India continues to digitize its electoral processes, the need for an adaptive and proactive approach to election management becomes increasingly apparent, highlighting the need for continuous evaluation and refinement of strategies to safeguard against evolving cyber threats. This dynamic landscape calls for a robust discourse that integrates technological, legal, ethical, and social perspectives, aiming not only to react to emerging challenges but also to anticipate and shape future developments in election technology and cybersecurity.

VI. CONCLUSION

As this analysis of the challenges facing Indian democracy in the digital age concludes, it becomes evident that the intersection of cybersecurity and election integrity is fraught with complexities that demand a proactive and multifaceted response. The vulnerabilities exposed by the integration of digital technologies into the electoral process—ranging from the risks inherent in Electronic Voting Machines (EVMs) to the pervasive influence of social media—pose significant threats to the sanctity of the electoral process. However, these challenges also present opportunities for strengthening democratic engagement through improved security measures and increased public awareness.

The implementation of comprehensive legislative and regulatory frameworks is crucial. These frameworks must not only address current vulnerabilities but also be adaptable enough to anticipate future threats. Robust data protection laws, stringent cybersecurity regulations, and enhanced transparency measures can provide a solid foundation for protecting electoral integrity. However, legislation alone is insufficient without effective enforcement and a commitment to continuous improvement.

Technological solutions such as advanced encryption for EVMs, the wider adoption of Voter Verified Paper Audit Trails (VVPATs), and the utilization of blockchain technology offer promising avenues for enhancing the security and transparency of elections. Yet, the adoption of these technologies must be accompanied by rigorous testing and public trust-building initiatives to ensure their effectiveness and reliability.

Moreover, the role of education and awareness cannot be overstated. Training programs for election officials, public awareness campaigns on cyber hygiene, and educational initiatives about misinformation are essential for cultivating a more informed electorate capable of critically engaging with digital content. These efforts are crucial in mitigating the impact of misinformation and in enhancing the resilience of the electoral process against manipulation.

In conclusion, securing Indian democracy against the threats posed by digital technologies requires a holistic approach that combines legislative action, technological innovation, and public engagement. By embracing these strategies, India can not only protect its electoral processes but also set a global benchmark for democratic resilience in the digital age. This comprehensive approach will ensure that digital advancements enhance rather than undermine the democratic process, promoting a healthier, more informed, and more secure democratic society. The ongoing evolution of digital threats necessitates an equally dynamic and forward-looking response, emphasizing the need for vigilance, adaptability, and collaboration in safeguarding the cornerstone of democratic governance: the integrity of elections.

BIBLIOGRAPHY

1. Agarwal, N. (2022). *Cybersecurity in Indian Elections: Issues and Challenges*. Oxford University Press.
2. Bajpai, K., & Chakravarti, S. (2021). *Digital Democracy in India: The Impact of Social Media on Elections*. Routledge.
3. CERT-In. (2020). *Annual Report*. Ministry of Electronics and Information Technology, Government of India.
4. Election Commission of India. (2019). *EVM and VVPAT Awareness*. ECI Publications.
5. Ghosh, D. (2023). *Manipulating Votes: The Vulnerabilities of Electronic Voting Machines in India*. Journal of Democracy and Technology, 5(1), 44-58.
6. Gupta, A., & Kumar, P. (2022). *Cyber Security Strategies in Indian Elections: A Policy Review*. Journal of Political Studies, 34(2), 209-227.
7. Kaur, R. (2021). *The Rise of Cyber Attacks in Indian Elections*. Cybersecurity Review, 12(3), 30-42.
8. Kumar, V. (2022). *Blockchain Technology for Election Integrity: A Feasibility Study in India*. International Journal of Digital Governance, 3(4), 195-210.
9. Misra, A. (2020). *Social Media and Electoral Manipulation in India*. Social Science Research Network.
10. NASSCOM. (2021). *Cyber Security in India's Digital Economy*. NASSCOM Report.
11. Patel, S. (2022). *Legal Frameworks and Cyber Security in Indian Elections*. Legal Affairs Review, 18(1), 77-89.
12. Raj, C., & Singh, A. (2019). *Data Protection and Privacy in India's Electoral Process*. Asian Journal of Law and Society, 6(2), 233-250.
13. Ramasubramanian, R. (2023). *Tackling Misinformation in Indian Elections: Challenges and Solutions*. Journal of Information Policy, 13, 142-167.
14. Singh, M., & Das, S. K. (2021). *Enhancing Electoral Security in India: Role of Technology and Regulation*. Technology and Democracy, 4(2), 158-174.
15. Tripathi, S. (2020). *Cyber Threats and Electoral Integrity in India*. International Review of Political Sciences, 7(3), 334-349.
16. Singh, A. (2020). Cybersecurity in Indian Elections: Challenges and Solutions. Journal of Cyber Policy.
17. Kumar, V., & Shah, N. (2021). Electronic Voting Machines in India: Assessing Technological and Security Perspectives. Technology and Democracy.
18. Election Commission of India (2019). Guidelines for use of Social Media in Elections. New Delhi: ECI Publications.Sharma, D. (2018).
19. Blockchain in Voting: An Emerging Frontier in Election Integrity. Indian Journal of Computer Science.

This page is intentionally left blank

Guadalupe Aqueduct in Mexico City. Legal Protection of a Historic Monument

Martha Julieta García García

ABSTRACT

The author focuses her analysis on the issue of the preservation of immovable historical monuments, the constructions built during the 16th to 19th centuries in Mexico. Legal instruments exist to this end, but other factors converge to facilitate, hinder or even prevent the legal and technical protection of the properties in question. As well as to sensitise the communities that inhabit or safeguard historic monuments towards the mutual benefit of both the property and the society that owns it.

The reading emphasises the importance of consulting the documentation in the Jorge Enciso Historical Archive and Plan Library, which contains information on the different interventions and changes in the use of historic buildings.

Keywords: declaratory, historic building, valorization, legal protection, archives.

Classification: LCC Code: K2100

Language: English

Great Britain Journals Press

LJP Copyright ID: 573313
Print ISSN: 2515-5784
Online ISSN: 2515-5792

London Journal of Research in Humanities & Social Science

Volume 24 | Issue 10 | Compilation 1.0

Guadalupe Aqueduct in Mexico City. Legal Protection of a Historic Monument

Acueducto de Guadalupe en Ciudad de México. Protección legal de un Monumento Histórico

Martha Julieta García García

ABSTRACT

The author focuses her analysis on the issue of the preservation of immovable historical monuments, the constructions built during the 16th to 19th centuries in Mexico. Legal instruments exist to this end, but other factors converge to facilitate, hinder or even prevent the legal and technical protection of the properties in question. As well as to sensitise the communities that inhabit or safeguard historic monuments towards the mutual benefit of both the property and the society that owns it.

The reading emphasises the importance of consulting the documentation in the Jorge Enciso Historical Archive and Plan Library, which contains information on the different interventions and changes in the use of historic buildings.

Keywords: declaratory, historic building, valorization, legal protection, archives.

ABSTRACT

La autora enfoca el análisis en el tema de la preservación de los monumentos históricos inmuebles, es decir, las construcciones realizadas durante los siglos XVI al XIX en México. Existen instrumentos legales para llevar a cabo este fin, no obstante, otros factores confluyen para facilitar, obstaculizar e incluso impedir la protección legal y técnica de los inmuebles referidos. Así como sensibilizar a las comunidades que habitan o resguardan monumentos históricos hacia la puesta en valor en mutuo beneficio, tanto del inmueble como de la sociedad que lo posee.

Enfatiza la lectura en la importancia de consultar la documentación integrada en el Archivo Histórico y Planoteca Jorge Enciso, que resguarda información sobre las diferentes intervenciones y los cambios de uso de inmuebles históricos.

Palabras Clave: declaratoria, inmueble histórico, puesta en valor, protección legal, archivos.

I. INTRODUCCIÓN

En el Centro de Documentación de la Coordinación Nacional de Monumentos Históricos (CNMH) se integraron los archivos; documental y de planos con el nombre de Jorge Enciso, el fotográfico denominado Fototeca Constantino Reyes-Valerio y la biblioteca bajo el nombre Jorge Gurría Lacroix.[1]

El Archivo Histórico y Planoteca Jorge Enciso, resguarda expedientes y planos de cada inmueble monumento histórico de México. Este acervo está organizado a partir de un cuadro de clasificación dividido en secciones y series básicamente por un orden geográfico, es decir, la localización de cada inmueble en entidades de la república, municipios, localidades, colonias y calles.

Los expedientes que conforman el archivo tienen documentos mayoritariamente elaborados durante las distintas administraciones

[1] La Coordinación Nacional de Monumentos Históricos es la instancia dentro del Instituto Nacional de Antropología e Historia de México que tiene entre sus atribuciones, la de normar y supervisar la preservación de las construcciones que se hicieron entre los siglos XVI al XIX. El Centro de Documentación empezó a formarse a mediados del siglo XX con los acervos que se conservaron de la antigua Inspección de Monumentos, y la nueva documentación que se generó desde la creación del INAH.

gubernamentales dedicadas al estudio y conservación de los edificios y construcciones históricas. Además, fotografías tomadas en las supervisiones de obra, croquis, planos, recortes de periódicos y anexos como larguillos fotográficos, investigaciones y proyectos de intervención de inmueble.

Una de las labores en el ámbito de competencia del Instituto Nacional de Antropología e Historia (INAH), respecto de la protección de los monumentos históricos inmuebles, es el estudio de las construcciones que se realizaron entre los siglos XVI y XIX en México. La investigación con fines de la preservación del patrimonio cultural, inicia en el acopio de información en los documentos que este Archivo Histórico y Planoteca resguarda.

El texto *Acueducto de Guadalupe en Ciudad de México. Protección legal de un monumento histórico* pretende dar cuenta de la complejidad que implica la salvaguardia de los inmuebles debido a diversos factores, como son, el desconocimiento por parte de la sociedad y de las autoridades de su carácter legal identificado como monumento; la falta de leyes o de la aplicación de estas, ante agravios que se infringen en los inmuebles. Un aspecto también muy importante es la ubicación de las construcciones en un territorio específico, que en su origen determinó su uso, como el caso del acueducto que servía para el traslado y abasto de agua a la zona norte de la ciudad virreinal de México y que lo siguió haciendo hasta las primeras décadas del siglo XX. Esa localización, con el avance de los siglos, sumada al crecimiento urbano en la zona, hizo que el antiguo uso dejara de funcionar para darle nuevos usos. Y, vinculado con lo que se mencionó antes, sobre la falta de conocimiento de la historia del inmueble, impide a las nuevas generaciones poner en valor el monumento para darle nuevo uso y protección.

Los instrumentos legales creados para la preservación de monumentos históricos no pueden por sí mismos, son insuficientes si las comunidades en el entorno cercano, institucional y desde la perspectiva estética, no reconocen al inmueble como un elemento funcional, necesario y valioso.

II. INSTRUMENTOS LEGALES DE PROTECCIÓN

La identificación de valores en los legados que resguardan las sociedades actuales, recibidos de generaciones anteriores, conlleva su protección. Esta se hace directamente sobre el bien patrimonial, de manera física y a través de instrumentos legales.

De muy diversas formas en México se ha tratado de proteger a los inmuebles históricos; a finales de la centuria de 1900 destacó la elaboración de catálogos que permitieron a las instituciones identificar, clasificar y sobre todo localizar geográficamente, aquellas construcciones que por sus características arquitectónicas pudieron agruparse dentro de alguna tipología regional, incluso ser la representación de unicidad por la aplicación de criterios y materiales constructivos.

La catalogación se desarrolló en el siglo XX y actualmente es una de las principales formas de protección, el estudio del bien edificado implica la integración sistematizada de información en bases de datos automatizadas que conforme se continúan los estudios y análisis se incrementa el conocimiento sobre el inmueble y se impide su destrucción.

Las leyes también son valiosos instrumentos para la protección de los inmuebles como la *Ley Federal sobre Monumentos y Zonas Arqueológicos, Artísticos e Históricos*[2]. Si bien ha sido reformada en años recientes en algunos de sus artículos, por ejemplo, la inclusión del concepto de vestigios con interés paleontológico,[3] queda pendiente la protección de las nuevas categorías patrimoniales que se han estudiado en los siglos XX y XXI, porque su consideración

[2] Es la Ley vigente en México que se promulgó en 1972 con la finalidad de proteger a los bienes clasificados por su temporalidad en arqueológicos, históricos y artísticos.

[3] *Ley Federal sobre Monumentos y Zonas Arqueológicos, Artísticos e Históricos*, Capítulo III. De los monumentos arqueológicos, artísticos e históricos, Artículo 28 Bis adicionado en el Diario Oficial de la Federación el 13 de enero de 1986.

únicamente se centra en aspectos estéticos. De esta forma, lo arqueológico se refiere a restos culturales de civilizaciones previos a la llegada de los europeos a América; lo histórico se centra en los productos culturales resultado desde el establecimiento de la cultura hispánica en México hasta el año 1900 y lo artístico es todos los bienes posteriores a ese año y llega hasta la época actual. Hacen falta nuevas discusiones académicas que puedan presentar a nivel legislativo los argumentos de clasificaciones distintas, para procurar su protección.

En la Ley de 1972 se prevé que el "Presidente de la República, o en su caso el Secretario de Cultura," tienen la facultad, una vez que se hayan realizado los procedimientos también previstos en ella, de emitir o revocar la declaratoria correspondiente a cada monumento.[4]

Se publicaron otros documentos de carácter legal que tienen importancia en este texto como antecedentes para la integración de los estudios necesarios previos a una declaratoria, por lo que únicamente las mencionaré. Ley sobre Conservación de Monumentos Históricos y Artísticos y Bellezas Naturales (1914), Ley sobre Protección y Conservación de Monumentos y Bellezas Naturales (1930), Ley sobre Protección y Conservación de Monumentos Arqueológicos e Históricos, Poblaciones Típicas y Lugares de Belleza Natural (1934), Ley Federal del Patrimonio Cultural de la Nación (1970) y la previamente mencionada, Ley Federal sobre Monumentos y Zonas Arqueológicos, Artísticos e Históricos (1972).

A la par de los decretos de declaratoria como monumento histórico o arqueológico o artístico, debería realizarse su inscripción en el Sistema Único de Registro Público de Monumentos y Zonas Arqueológicos e Históricos, a cargo del Instituto Nacional de Antropología e Historia.

El documento que resulta de esta inscripción es la emisión de un folio real –único-, cuya información equivale al documento registral humano, acta de nacimiento en el caso de México.

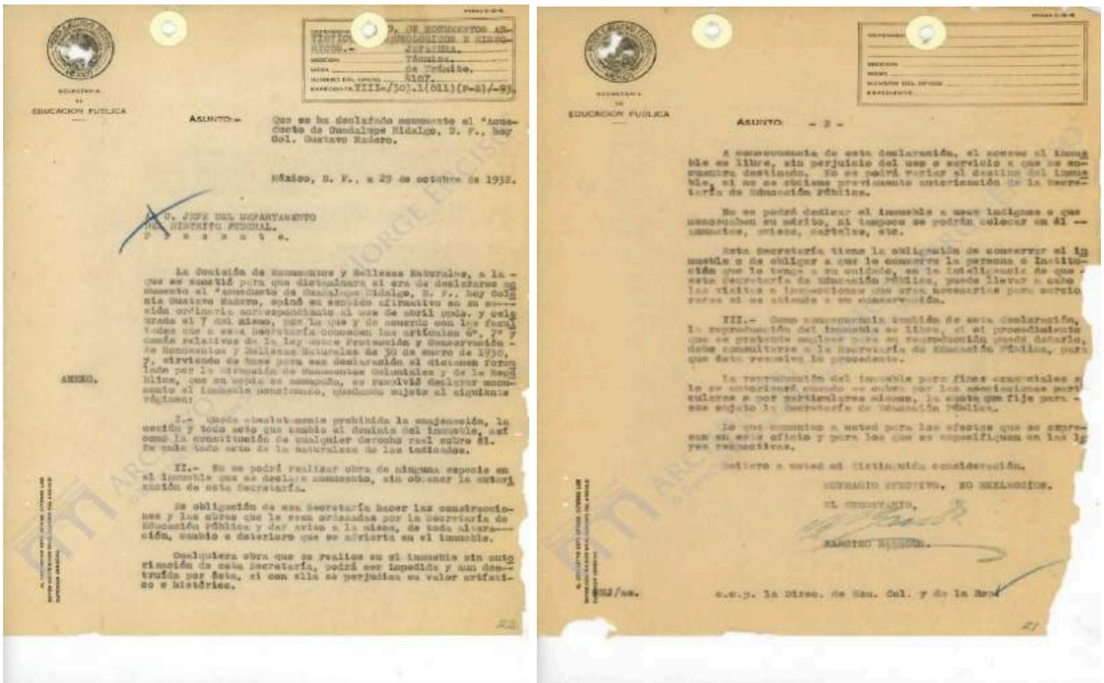
III. DECLARATORIA COMO MONUMENTO HISTÓRICO DE UN ACUEDUCTO. ¿PROCESO SUFICIENTE PARA SU PROTECCIÓN?

Una instancia de protección creada para la aplicación de las decisiones en materia de conservación del patrimonio mueble, inmueble y de las bellezas naturales fue la Comisión de Monumentos y Bellezas Naturales que se expidió como parte de la ley de Portes Gil en 1930.

En el gobierno del presidente Pascual Ortiz Rubio, Narciso Bassols otrora secretario de Educación Pública firmó la Declaratoria como monumento del inmueble denominado Acueducto de Guadalupe Hidalgo con fecha 29 de octubre de 1932.[5]

[4] Los artículos 5°, 5° Bis y 5° Ter de la *Ley Federal sobre Monumentos y Zonas Arqueológicos, Artísticos e Históricos*, especifican los procedimientos y requisitos que se deben cumplir para determinar un bien patrimonial como monumento, de carácter arqueológico, artístico o histórico.

[5] Archivo Histórico y Planoteca Jorge Enciso (en adelante AHPJE), *Acueducto de Guadalupe, Delegación Gustavo A. Madero D. F.*, Leg. I, años 1932-1978, Declaratoria, 29 de octubre de 1932, p. 20-22.


SECRETARÍA DE EDUCACIÓN PÚBLICA

D. DE MONUMENTOS ARTÍSTICOS, ARQUEOLÓGICOS E HISTÓRICOS.- Jefatura. Técnica. de Trámite. 4107. XIII-/30[illegible].1(011)(P-2)/-93.

ASUNTO:- Que se ha declarado monumento el "Acueducto de Guadalupe Hidalgo, D. F., hoy Col. Gustavo Madero.

México, D. F., a 29 de octubre de 1932.

C. JEFE DEL DEPARTAMENTO DEL DISTRITO FEDERAL.
P r e s e n t e.

La Comisión de Monumentos y Bellezas Naturales, a la que se sometió para que dictaminara si era de declararse monumento el "Acueducto de Guadalupe Hidalgo, D. F., hoy Colonia Gustavo Madero, opinó en sentido afirmativo en su sesión ordinaria correspondiente al mes de abril ppdo. y celebrada el 7 del mismo, por lo que y de acuerdo con las facultades que a esta Secretaría conceden los artículos 6°, 7° y demás relativos de la Ley sobre Protección y Conservación de Monumentos y Bellezas Naturales de 30 de enero de 1930, y, sirviendo de base para esa declaración el dictamen formulado por la Dirección de Monumentos Coloniales y de la República, que en copia se acompaña, se resolvió declarar monumento el inmueble mencionado, quedando sujeto al siguiente régimen:

ANEXO.

I.- Queda absolutamente prohibida la enajenación, la cesión y todo acto que cambie el dominio del inmueble, así como la constitución de cualquier derecho real sobre él. [illegible] todo acto de la naturaleza de los indicados.

II.- No se podrá realizar obra de ninguna especie en el inmueble que se declara monumento, sin obtener la autorización de esta Secretaría.

Es obligación de esa Secretaría hacer las construcciones y las obras que le sean ordenadas por la Secretaría de Educación Pública y dar aviso a la misma, de toda alteración, cambio o deterioro que se advierta en el inmueble.

Cualquiera obra que se realice en el inmueble sin autorización de esta Secretaría, podrá ser impedida y aun destruída por ésta, si con ella se perjudica su valor artístico o histórico.

22

SECRETARÍA DE EDUCACIÓN PÚBLICA

ASUNTO: - 2 -

A consecuencia de esta declaración, el acceso al inmueble es libre, sin perjuicio del uso o servicio a que se encuentra destinado. No se podrá variar el destino del inmueble, si no se obtiene previamente autorización de la Secretaría de Educación Pública.

No se podrá dedicar el inmueble a usos indignos o que menoscaben su mérito, ni tampoco se podrán colocar en él anuncios, avisos, carteles, etc.

Esta Secretaría tiene la obligación de conservar el inmueble o de obligar a que lo conserve la persona o Institución que lo tenga a su cuidado, en la inteligencia de que esta Secretaría de Educación Pública, puede llevar a cabo las visitas e inspecciones que crea necesarias para cerciorarse si se atiende a su conservación.

III.- Como consecuencia también de esta declaración, la reproducción del inmueble es libre, si el procedimiento que se pretende emplear para su reproducción puede dañarlo, debe consultarse a la Secretaría de Educación Pública, para que ésta resuelva lo procedente.

La reproducción del inmueble para fines comerciales sólo se autorizará cuando se cubra por las asociaciones particulares o por particulares mismos, la cuota que fije para ese objeto la Secretaría de Educación Pública.

Lo que comunico a usted para los efectos que se expresan en este oficio y para los que se especifiquen en las leyes respectivas.

Reitero a usted mi distinguida consideración.

SUFRAGIO EFECTIVO. NO REELECCIÓN.

EL SECRETARIO,

NARCISO BASSOLS.

[illegible]/aa. c.c.p. la Direc. de Mon. Col. y de la Rep.

21

Fuente: Cortesía de Instituto Nacional de Antropología e Historia, Ciudad de México, Archivo Histórico y Planoteca Jorge Enciso, consultado el 17 de mayo de 2024.

Figura 1: Declaratoria, documento, 29 de octubre de 1932, en Acueducto Guadalupe, delegación Gustavo A. Madero de la Ciudad de México, México.

No obstante, otro documento da cuenta de una inconsistencia en la fecha, el arqueólogo José Reygadas Vertiz solicitó al director del departamento de Monumentos Coloniales y de la República le confirmara si una fuente en la Plaza Juárez, colonia Gustavo Madero, el acueducto de Guadalupe Hidalgo, la iglesia de Santa Fe y el colegio y hospital de Santa Fe y la casa de Don Vasco, eran "inmuebles declarados monumentos por la Comisión de Monumentos y Bellezas Naturales en su sesión ordinaria correspondiente al 3 de marzo de 1932.[6] Es probable que en el Acta número 18 correspondiente a la sesión de la Comisión se hubiera determinado la procedencia de emitir esa Declaratoria, la resolución final que firmó el titular de la Secretaría de Educación pasó por un largo proceso de gestión administrativa para firmar el documento oficial.[7]

Es indispensable señalar que la sección documental Actas de la Comisión de Monumentos y Bellezas Naturales se encuentra en proceso de catalogación y digitalización para su consulta pública en un repositorio digital. La vinculación que se puede hacer a partir del cruce de información entre secciones y documentos del mismo archivo es una fuente importante para el estudio de los procesos de gestión e intervención que han tenido los inmuebles históricos en México.

El proceso que culminó con el documento de Declaratoria, seis meses antes hizo confluir los estudios y señalamientos de Jorge Enciso, quien fuera pintor formado en la antigua Academia de San Carlos de México, quien también formó parte de un reconocido grupo de personas que trabajaron en la Inspección General de Monumentos, dedicados a la catalogación de edificios con carácter histórico.[8]

[6] *Ivi*, p. 5.

[7] Griselda Ríos Revilla, *Catálogo de la Sección B "Actas de la Comisión de Monumentos" del fondo documental de la Coordinación Nacional de Monumentos Históricos del Instituto Nacional de Antropología e Historia, Archivo Histórico, Jorge Enciso" (1914-1968), Tesis* para optar por el título de Licenciada en Etnohistoria, ENAH, México 2021, Serie B.2, Expediente 21, Acta 18, Ficha catalográfica 48, 7 de abril de 1932.

[8] Jorge Enciso fue Inspector General de Monumentos de 1916 a 1920, contribuyó a la fundación del Instituto Nacional de Antropología e Historia (1939) y años después fue su Director.

Enciso escribió en un documento a propósito de las razones para valorar el Acueducto que, "la declaratoria debe referirse a la arquería, a la caja de agua, a las "tomas" y a la fuente de san Francisco", el inmueble consta de 2310 arcos desde la toma que tuvo comienzo en su construcción el 22 de junio de 1743 y se finalizó la obra el 30 de marzo de 1751.[9] En documento de 2 de agosto de 1932 Jorge Enciso informó al Jefe del Departamento de Monumentos Artísticos, Arqueológicos e Históricos que "tanto el acueducto como la fuente [de Guadalupe Hidalgo] los tiene bajo su cuidado la Dirección General de Servicios Urbanos y Obras Públicas del Departamento del DF".[10]

Es indiscutible que por el periodo en el que fue construido el acueducto, siglo XVIII, se trata de un monumento por determinación de ley.[11] No obstante desde estos tempranos momentos se vislumbra un tema que es afín a una gran cantidad de inmuebles, su régimen de propiedad.

En esa tercera década del siglo XX Enciso inició la pesquisa para determinar de quién era el acueducto. La Secretaría de Educación Pública le contesta que ignora si es propiedad de la nación o del municipio; el delegado de la oficina del Departamento del Distrito Federal tampoco tuvo una respuesta clara y contundente sobre la propiedad.

Continuando con el tema de la protección, una vez declarado el inmueble como monumento histórico todas las intervenciones que pretendan realizarse deberían ser gestionadas en Monumentos Coloniales y de la República.

En febrero de 1933, Felipe J. Sánchez solicitó autorización para reparar fugas en el acueducto. La documentación del expediente muestra que se trataba de un caso cotidiano, muy probablemente sencillo, por lo que Enciso le respondió que podía hacer las reparaciones.

En otro caso, donde ya se identifica la expansión urbana por el aumento poblacional en un territorio, y personas que demandan ampliación de los servicios, Cosme Hinojosa, jefe de la oficina de Pavimentos de la Dirección de Obras Públicas del Departamento del Distrito Federal acude al Secretario de Educación Pública para explicar y solicitar que se construya un camino que comunique a Villa Gustavo A. Madero con los pueblos de Ticoman y Cuautepec, solo que para lograr esta labor se requería cortar tres arcos del acueducto en Ticoman y Tlalnepantla, específicamente para permitir el paso de autobuses de pasajeros y vehículos de carga. Enciso escribe en un memorándum con firma autógrafa fechado el 27 de agosto de 1936, "La demolición propuesta, al restarle unidad, ocasionará un considerable demérito al acueducto" y sugiere "se modifique el nivel de la carretera haciendo un columpio entre los dos arcos" para que se use en ambos sentidos de la circulación. Privilegiando la integralidad del monumento en su "conservación [...] dará mayor interés a la carretera."[12]

La respuesta final fue en el sentido de afectar un solo arco del lado de Ticoman, en el cruce del acueducto en la colonia Santa Isabel Tola; de esa forma se evitaría la destrucción de los arcos y restar unidad al inmueble. Esta solución actualmente podría haber generado una polémica que no satisficiera los criterios de intervención de los edificios históricos.

Otro tema de delicado tratamiento y resolución es el abastecimiento de agua en la Ciudad de México.

Sin tratar de remontarnos demasiado a los orígenes, se puede afirmar que Tenochtitlan, la ciudad prehispánica, tenía un eficiente sistema de canales, tanto para transportar a las personas, como ductos para obtener agua consumible y

---

[9] AHPJE, *Acueducto de Guadalupe, Delegación Gustavo A. Madero D. F.*, Leg. I, años 1932-1978, Oficio, 6 de abril de 1932, p. 1.

[10] *Ivi*, p. 15.

[11] *Ley Federal sobre Monumentos y Zonas Arqueológicos, Artísticos e Históricos*, Capítulo III. De los Monumentos Arqueológicos, Artísticos e Históricos, Artículo 36, fracción I. Diario Oficial de la Federación, 1972.

[12] AHPJE, *Acueducto de Guadalupe, Delegación Gustavo A. Madero D. F.*, Leg. I, años 1932-1978, Oficio, 9 de julio de 1936, p. 27-28.

diques para separar aguas salitrosas de agua dulce para el consumo humano y otros seres vivos.[13]

El paulatino proyecto de desecamiento de los lagos trajo como una de sus consecuencias, la dirección del agua de zonas alejadas en la cuenca del Valle de México, desde la instauración de la cultura hispánica, durante el siglo XIX y hasta este momento en que se ha vuelto una crisis hídrica.

Regresando al tema del acueducto que nos ocupa, a finales de la década de los 30s, no solo se agudizó la falta de regularidad con la que se transportaba el agua en este sistema hidráulico, sino que su estructura arquitectónica denotaba una falta de mantenimiento y necesidad de intervención para su conservación.

El director del Servicio de Aguas y Saneamiento del Departamento del Distrito Federal, ingeniero Eduardo Molina, nombró al ingeniero Ignacio Hierro, de esa misma dependencia, para realizar las gestiones y entrevistas necesarias con el arquitecto jefe de la oficina de Monumentos Coloniales y de la República para atender los problemas de abastecimiento de agua en el monumento, derivado de este transporte, las obras de intervención en el acueducto de Tlalnepantla. Empezaba a ser un asunto de importancia en los dos ámbitos de gobierno, el local y el federal, cuya coordinación en la aplicación de soluciones se volvió indispensable.[14]

Aunque la respuesta de la Secretaría de Educación Pública a través de Monumentos Coloniales incluyó la buena voluntad para solucionar el asunto, la suma de asuntos por resolver se volvió también abundante. Se reitera que el acueducto presenta en esa época arcos cegados por lo que se pide a Servicios Urbanos y Vía Pública de la Ciudad que demuela esos agregados para que se recupere el aspecto del acueducto. Es pertinente llamar la atención en esta correspondencia institucional, porque si bien, los titulares o responsables del buen estado de los monumentos se dispusieron, al menos por escrito, a recuperar los valores originales del inmueble, el paso del tiempo fue inevitable.

Continúa el epistolario institucional, del que deseo llamar la atención en un escrito de Cecilio Aliaga solicitando una comprobación de los terrenos expropiados en los límites del acueducto, ubicados en el pueblo de Santa Isabel Tola.

Manuel Toussaint quien emite la respuesta era el director de Monumentos Coloniales, que en esa época situaba sus oficinas en la calle de Zacatecas número 218, colonia Roma. La contestación no debió satisfacer al solicitante porque por primera vez se fija una postura separando las competencias de cada institución y muy claramente, la distribución y el abasto hídrico no era de incumbencia de dependencia encabezada por el historiador.

Sin embargo, Toussaint encargó una supervisión, de la cual deriva la petición al presidente municipal de Tlalnepantla para que retire una barraca, en San Bartolo Tenayuca, que tapaba la placa conmemorativa y alusiva del siglo XVIII que hace alusión a la construcción del acueducto.[15]

IV. ¿QUÉ PROTEGE LA ZONA DE MONUMENTOS HISTÓRICOS?

Hemos referido la protección que se tiene prevista para los monumentos históricos en lo individual; por determinación de Ley, es decir, que su construcción realizada en los siglos XVI al XIX los hace susceptibles de esa salvaguardia. Ex profeso que se solicite emitir el documento de declaratoria y su expedición de folio real al realizar su registro único como monumento histórico inmueble.

[13] Existe una amplia cantidad de referencias para el tema de abastecimiento y arquitectura en y para la Ciudad de México, dos que puede explicar lo que aquí se está analizando: Alain Musset, *El agua en el valle de México, siglos XVI-XVIII*, México, Pórtico de la Ciudad de México, 1992, 245 p. Teresa Rojas Rabiela, *La cosecha del agua en la Cuenca de México*, México, Centro de Investigaciones y Estudios Superiores en Antropología Social, CIESAS, 1998, 142 p. Otros trabajos a partir de labores arqueológicas como el de María de Lourdes López Camacho, coord., *Desenterrando fragmentos de historia: siglos XVI al XIX*, México: Secretaría de Cultura, Instituto Nacional de Antropología e Historia, 2018, 270 p.

[14] AHPJE, *Acueducto de Guadalupe, Delegación Gustavo A. Madero D. F.*, Leg. I, años 1932-1978, Oficio, 25 de julio de 1938, p. 37.

[15] *Ivi*, p. 38-43.

Otro instrumento legal de protección que se creó para los monumentos en su conjunto, es la emisión de un decreto como Zona de Monumentos Históricos. Esta figura de protección legal se refiere a un territorio que incluye monumentos históricos que se distingan por alguna o todas de las características siguientes: que estén relacionados con algún acontecimiento de carácter nacional, que su vinculación a esa área territorial sea por hechos históricos sucedidos en ese sitio cuya importancia sea relevante para la historia del país.

El proceso metodológico para conformar una Zona de Monumentos Históricos ha sido diseñado por los arquitectos especialistas que laboran en la integración y estudio de estas. Y consiste en determinar si el monumento es una estructura arquitectónica completa, si se trata de una estructura arquitectónica modificada o si se trata de una estructura arquitectónica transformada.[16]

Al referirnos a una estructura arquitectónica completa o una modificada se deben considerar los siguientes aspectos: a) Forma y proporción del terreno, b) Forma y proporción de la construcción, c) Construcción nuclearizada, d) Disposición de los núcleos, e) Composición en las fachadas, f) Espacios funcionales, g) Materiales y procesos de construcción h) Elementos formales y ornamentales. Del análisis se derivarán los prototipos de las distintas morfologías arquitectónicas que se tienen en un espacio determinado para asignarles tipologías generales, esto dará paso a la normatividad aplicable en la Zonas de Monumentos.[17]

Cuando se refiere a una estructura arquitectónica transformada las consideraciones se determinarán por el reglamento de imagen urbana que aplique en el sitio que se quiera determinar como Zona de Monumentos.[18]

Las ciudades históricas, también denominados centros históricos en México, constituyen un continuo constructivo que dependerá de su paso por episodios y hechos en la historia. La dinámica constructiva de las ciudades sobre todo en el siglo XX, dio como resultado en los inmuebles con valores testimoniales de la historia del lugar, aislados y fuera de las zonas protegidas, además, el proceso constructivo de nuevos inmuebles generaría por lo menos dos vertientes contrarias entre sí: integración de esas nuevas edificaciones al aspecto antiguo o el choque de la modernidad.

Los especialistas consideraron el diseño e inclusión de una zona de amortiguamiento que también ofreciera protección a los inmuebles en estos últimos supuestos. Se les empezó a denominar como Perímetro A de protección y en algunos casos se tienen Zonas de Monumentos con Perímetros B y hasta C.

Las revisiones y modificaciones a la Ley de 1972 ya no incluyen estos perímetros, y en la práctica cotidiana se prevé aludir a un aspecto que, si se considera legalmente, la denominada colindancia con un monumento histórico.[19]

El expediente archivístico del acueducto da cuenta de varias peticiones de los diferentes propietarios que para la primera mitad del siglo XX ya lucían como vecinos adosados al inmueble monumento. Un ejemplo es el documento firmado por Consuelo Lara de Villa quien interpela al jefe del Departamento de Monumentos Coloniales para que se le permita cercar y hacer una granja en la franja límite de protección del inmueble.

A esta petición, Manuel Toussaint le contestó que no era posible, debido a que debía existir una franja de por lo menos 14.70 m entre el acueducto y las nuevas construcciones.[20] Estas son precisamente las zonas de amortiguamiento que se requieren para no dañar al monumento, no obstante, la Ley no es explícita en el tema de la visual, que también se ve afectada por las transformaciones urbanas, al construir edificios

[16] AHPJE, *Zona de Monumentos Históricos de la Ciudad de México*, Proceso Metodológico elaborado por el arquitecto Miguel A. Gálvez González, México 1986, p. 15-16.
[17] *Idem.*
[18] *Idem.*

[19] AHPJE, *Zona de Monumentos Históricos de la Ciudad de México*, Lineamientos Generales para el Reglamento de la Zona de Monumentos de la Ciudad de México elaborado por el arquitecto Miguel A. Gálvez González, México 1986, p. 10-12.
[20] AHPJE, *Acueducto de Guadalupe, Delegación Gustavo A. Madero D. F.*, Leg. I, años 1932-1978, Oficio, 25 de julio de 1938, p. 44-46.

con altura mayor a la del inmueble protegido, y fuera de esas zonas de amortiguamiento.

La arquitecta Sonia Lombardo fue la autora de una argumentación que se dio a la Procuraduría General de la República en el sentido de la consulta que esa dependencia hiciera a Monumentos Coloniales sobre la existencia legal de una zona de protección. Se reitera en documento firmado por el arquitecto Luis Ortiz Macedo, a Beatriz Solís Contla, agente del Ministerio Público de la PGR que la zona de amortiguamiento es de 14.70 m mínimo, a cada lado del acueducto.[21]

Las gestiones continuaron hasta que la Secretaría del Patrimonio Nacional, a través de su titular Guillermo Lerdo de Tejada, emitió un documento el 10 de abril de 1965, en el que *Se concede autorización para el arreglo del camino localizado a los lados del Monumentos Colonial denominado Acueducto de Guadalupe en su tramo Tlalnepantla-Tenayuca-La Villa.*[22]

Casi por concluir la sexta década del siglo XX, la Comisión de Reforestación de la Asociación Nacional de Actores (ANDA) se interesó en llevar a cabo la restauración del acueducto de Ticomán. El director de Monumentos Coloniales era el arquitecto José Gorbea y el jefe de Departamento de esa dependencia era el arquitecto Carlos Flores Marini,[23] quien, por su amplia experiencia en acciones de intervención y defensa de la calidad monumental en diversas ciudades, sobre todo de Latinoamérica, partía de lo que él denominó principios rectores, estos son: *Conocimiento del problema, sensibilización de las clases dirigentes, integración de la comunidad, enfoques sociopolíticos y activación monumental.*[24] En 1964 Marini había participado en la elaboración del documento llamado Carta de Venecia, destacando una aportación y enfoque distintos a la publicación de documentos similares, se refería a la "puesta en valor" de los monumentos.[25] Con su experiencia y acompañamiento, se continuaron revisando solicitudes de particulares e instituciones con la finalidad de construir a escasos metros del acueducto o para crear nuevas rutas vehiculares, como accesos a las urbanizaciones que recientemente se estaban formando.

Alberto Le Duc, director general de la Secretaría del Patrimonio Cultural en 1969, reiteró la necesidad de determinar de manera legal y por escrito la zona de protección del antiguo Acueducto de "Guadalupe Hidalgo",[26] debido a que había una probable invasión por el cruzamiento del acueducto con el cauce del río de Tlanepantla, esos terrenos tenían un propietario de nombre Bernardo Grunstein Quintanilla, a quien se le otorgó el permiso de sembrar alfalfa en su Rancho Temoluco. El asunto repercutió en la protección del acueducto y en que actualmente se encuentre invadido porque las acciones fueron lo contrario a lo que los documentos internacionales y la legislación nacional indicaron.

El caso Grunstein, con propiedad privada en territorio que ocupa el acueducto, es un ejemplo del problema constante al que se enfrenta el intento de establecer la delimitación para la protección de los inmuebles monumentos históricos.

Bernardo Grunstein deseaba construir un conjunto de casas en terrenos de su propiedad en los que se encontraba el acueducto. El arquitecto Carlos Chanfón Olmos, jefe del Departamento de

[21] AHPJE, *Acueducto de Guadalupe, Delegación Gustavo A. Madero D. F.*, Leg. I, años 1932-1978, Oficio, 29 de febrero de 1968, p. 65-67 y 71.
[22] AHPJE, *Acueducto de Guadalupe, Delegación Gustavo A. Madero D. F.*, Leg. I, años 1932-1978, Oficio, 10 de abril de 1965, p. 64.
[23] *Ivi*, p. 53.
[24] Carlos, Flores Marini, «Algunos conceptos sobre la problemática de la restauración monumental en América Latina», publicación original en *Boletín del Centro de Investigaciones Históricas y Estéticas*, Facultad de Arquitectura y Urbanismo de la Universidad Central de Venezuela, 1973, número 16, p. 66-71, y en *Conversaciones con.*, Año 2023, número 11, febrero, p.79-84. Recuperado: https://revistas.inah.gob.mx/index.php/conversaciones/article/view/19041.
[25] María Eugenia, Rivera Pérez, «Desde Italia para el mundo: La Carta de Venecia. Entrevista a Carlos Flores Marini», *CR. Conservación y Restauración*, México, Año 2018, número 4, mayo, p. 58-61. Recuperado: https://revistas.inah.gob.mx/index.php/cr/article/view/12068.
[26] AHPJE, *Acueducto de Guadalupe, Delegación Gustavo A. Madero D. F.*, Leg. I, años 1932-1978, Oficio, 29 de abril de 1969, p. 73-74.

Monumentos Coloniales, convocó a la Comisión de Monumentos para reconsiderar la negativa que se le había dado al inversor inmobiliario. Para la nueva revisión y reconsideración, fue necesario solicitar a Grunstein, planos de conjunto y de detalle hechos por un profesionista para ver la "relación entre el acueducto de Guadalupe y la serie de casas proyectadas".[27]

Otro factor puso en juego la respuesta y es que la empresa Petróleos Mexicanos (PEMEX) había construido unos ductos de conducción de producto en un tramo entre San Juan Ixhuatepec, localidad que se ubica en el Estado de México, y Tula en el de Hidalgo, pasando por terrenos propiedad de los esposos Bernardo y Ofelia López Grunstein Quintanilla, e inutilizados por la empresa, cuando estos reclamaron su propiedad.[28]

En septiembre de 1972, posterior a la emisión de la Ley Federal sobre Monumentos y Zonas Arqueológicos, Artísticos e Históricos, continuaron las solicitudes de algunas personas para solicitar la demolición de arcos en el acueducto. Destaco aquí que el efecto de la Ley aún no era identificado como obligatoriedad en su cumplimiento, faltaban años de difusión y, sobre todo, para que la población no especialista comprendiera los criterios de intervención sin afectar a los monumentos.

Continúo, a partir de la revisión de los legajos en el expediente sobre el acueducto, con las referencias de algunos casos que años después de la Ley lograron o no ver realizadas sus peticiones de intervención en el inmueble.

Un tema recurrente en esas solicitudes fue saber cuánto debe medir la zona de protección. Es notorio que el impacto de expansión urbana, sin una política pública clara, no facilita la comprensión de los habitantes en cuanto a la protección y las razones por las cuales no se debe demoler o construir adosando los nuevos elementos a un inmueble histórico.

En este sentido, al arquitecto Ignacio Angulo le correspondió emitir un documento fijando en 15 m libres del paramento, la zona de protección de un monumento histórico inmueble, y 9 m de altura total para no sobrepasar la del monumento; llama la atención que se haya basado en el artículo 36 (LMZAAH 6 de mayo de 1972) y su Reglamento (8 diciembre 1975), porque en ninguno de los dos documentos legales se menciona la precisión en metros.[29]

En octubre de 1973 se aprobó una intervención al acueducto por parte de la entonces delegación Gustavo A. Madero, a través del contratista arquitecto Carlos Mendoza Fleury, con la supervisión y acuerdo del Instituto Nacional de Antropología e Historia, por lo que el profesor José Luis Lorenzo, director del Centro Nacional de Conservación de Obras Históricas se responsabilizó de esa obra.

En el documento emitido para señalar los procedimientos técnicos que debían seguirse, se encuentra la descripción del estado general del acueducto, este era bueno, no obstante, por acumulación de tierra, el nivel original del piso ya se había perdido, teniendo como consecuencia que la altura de los arcos fuera variable; además se había alterado la pendiente y el hundimiento de algunos arcos era evidente a través de agrietamientos y fracturas, existiendo agua estancada en algunos lugares. En distintas zonas se podían observar dos capas de aplanado y en otras más, era evidente la falta de ellas. Era notoria la existencia de árboles alrededor y sobre la construcción, causando deterioros por el crecimiento de las raíces en los cimientos y muros. Existía riesgo en la estabilidad del monumento por diversos desprendimientos de material de construcción por las abrasiones y pérdida. Sobre el canal la tierra se había acumulado, además de basura y piedras, también ahí presentaba encharcamiento y filtración de agua hacia los materiales de construcción. La escultura de un santo había sido desplazada por los vecinos del lugar hacia un altar construido con ladrillo en un claro de los arcos cercanos porque

[27] *Ivi*, p. 85.
[28] *Ivi*, p. 111 y sgs.

[29] AHPJE, *Acueducto de Guadalupe, Delegación Gustavo A. Madero D. F.*, Leg. I, años 1932-1978, Oficio, 16 de abril de 1975, p. 109.

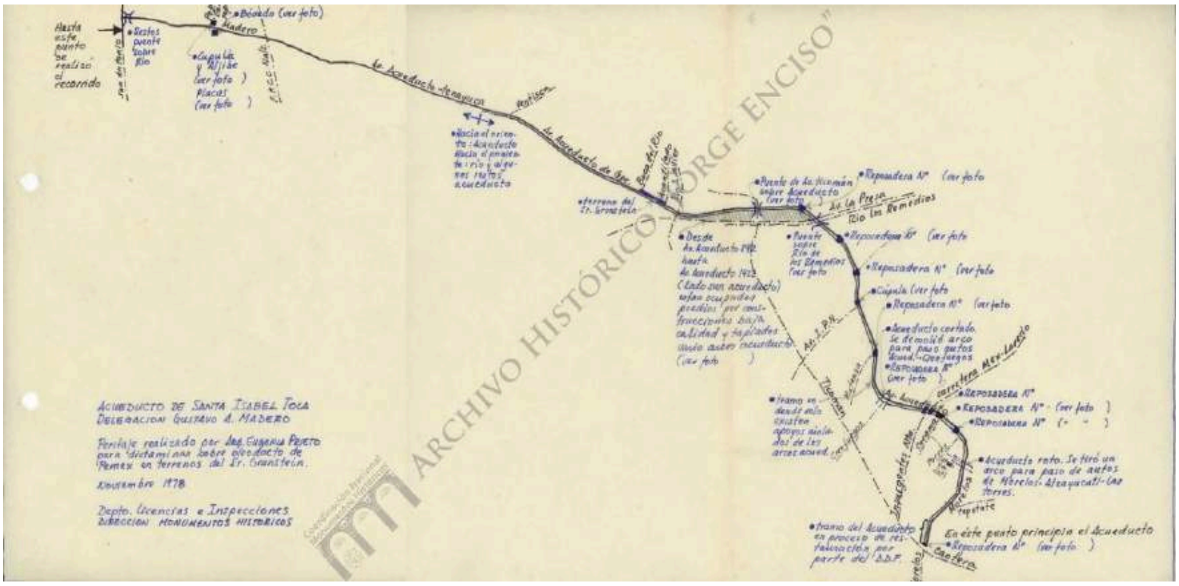
en su estructura original un árbol la había cubierto en su totalidad.[30]

Se solicitó a la Sección de Fotogrametría y al Laboratorio de Química de la Universidad Nacional Autónoma de México emitieran recomendaciones para solucionar los problemas encontrados en el acueducto y determinar lo que procediera en la intervención.

Esta sería la primera intervención en por los menos un par de siglos que se le haría al acueducto, por esta razón me parece importante señalar que el documento que lo expresa es consultable de manera física y al no contar el Archivo Histórico y Planoteca Jorge Enciso con la digitalización resumo las soluciones expresadas en diez puntos:[31]

- Encontrar el nivel original del acueducto mediante calas espaciadas y remover el material que se ha acumulado.
- Eliminar el material de relleno donde el monumento se encuentre cubierto.
- Consolidación del aplanado original con argamasa moderna.
- Desazolve del canal y construcción de drenes para evitar encharcamientos y resanar grietas y fisuras para evitar filtraciones de agua.
- Inyectar concreto con expansores en las grietas y fracturas de la estructura. Utilizar este material era una práctica común en esos años, con el tiempo, los arquitectos conservadores en la actualidad analizan primero la maleabilidad de los materiales y su comportamiento al utilizarse con materiales de otras épocas.
- Resane de pérdidas de material, grietas, fisuras, para recuperar el volumen dejando un ligero desnivel que evidencie las áreas de intervención modernas.
- Eliminación de árboles que puedan crecer en áreas cercanas afectando el monumento.
- Dejar al santo en el nicho donde lo trasladaron los vecinos y cuando se tuviera el nivel original del piso considerar la posibilidad de reintegrarse en su sitio original y eliminar la construcción del altar moderno.
- Consolidar los asientos erosionados de los arcos y restituir el volumen con material moderno -no se especificó en este caso cuál sería ese material-, dejando un ligero desnivel para evidenciar la intervención.
- Solicitar al Departamento de Restauración del Patrimonio Cultural -actual Coordinación Nacional de Conservación del Patrimonio Cultural del INAH-, el tratamiento preliminar de la escultura de piedra para dictaminar si es necesaria su restauración eliminando la pintura en aceite y tratando los posibles problemas que esta hubiera ocasionado.

[30] AHPJE, *Acueducto de Guadalupe, Delegación Gustavo A. Madero D. F.*, Leg. I, años 1932-1978, Oficio, 23 de octubre de 1973, p. 103-104.
[31] *Ivi*, 104.



Fuente: Cortesía de Instituto Nacional de Antropología e Historia, Ciudad de México, Archivo Histórico y Planoteca Jorge Enciso, consultado el 17 de mayo de 2024.

Figura 2: Peritaje realizado por la arquitecta Eugenia Prieto para dictaminar un oleoducto de Pemex en terrenos del Bernardo Grunstein, croquis, noviembre de 1978, en Acueducto de Santa Isabel Tola, delegación Gustavo A. Madero de la Ciudad de México, México.

La realización de la obra de intervención no cuenta con más referencia en el expediente, no obstante, un antiguo asunto pondría en evidencia que esa obra o no se realizó, o no fue afortunada en su conclusión. La arquitecta Eugenia Prieto Inzunza en recorrido de peritaje en 1978 elaboró un croquis que acompañó la emisión de su dictamen además de imágenes fotográficas en las que se puede ver el estado que guardaba en ese momento el acueducto.

PEMEX, hizo una consulta sobre las restricciones de construcción en la franja de protección de 14.70 m a ambos lados del Acueducto y si era posible llevar a cabo construcciones superficiales en la mencionada franja.

El dictamen de la arquitecta Prieto fue una respuesta a esa consulta y en él se determinó que no podía realizar ningún tipo de obra que perjudicara estructural o visualmente al monumento. Se descartó toda posibilidad de construcción de inmuebles, aunque fueran separadas del acueducto, porque tapaban la vista del mismo desde la Avenida Acueducto de Guadalupe. Solo podrían realizarse obras de jardinería separadas del acueducto, protegiendo al mismo con una banqueta o drenando el terreno donde se ubicaran.[32]

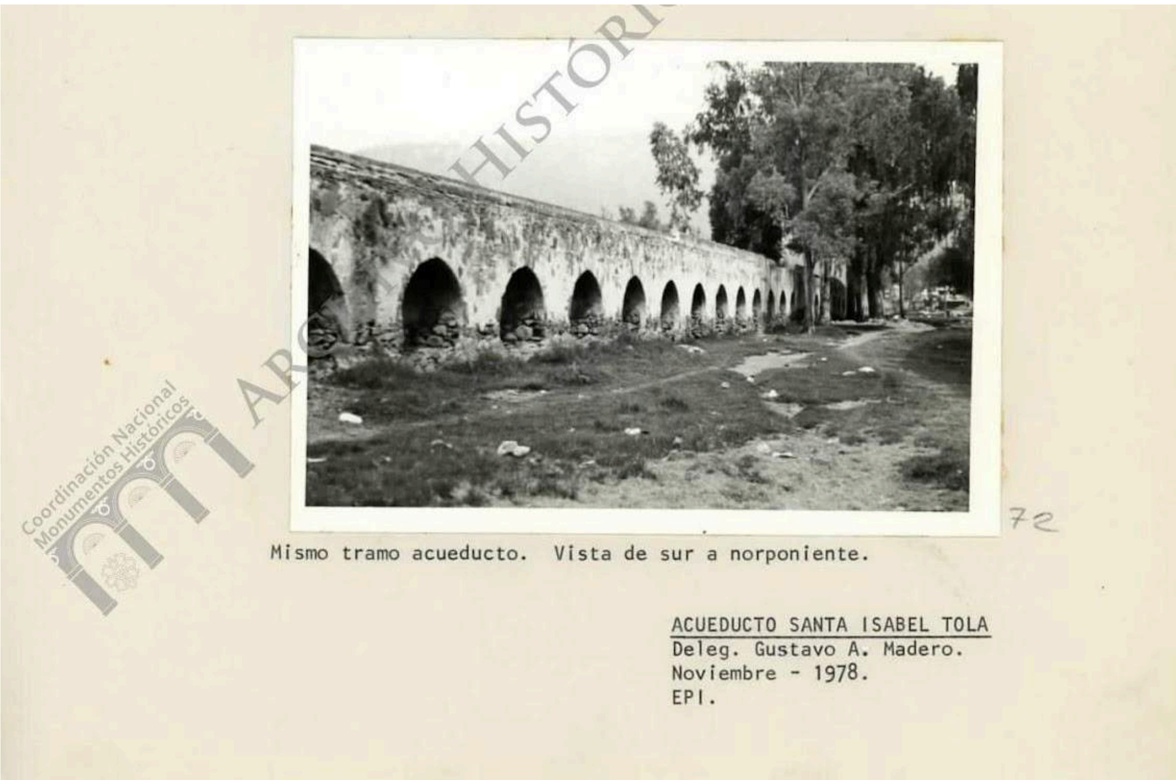
El asunto de la indemnización que PEMEX debería pagar a los Grustein por la ocupación de sus terrenos con la colocación de un oleoducto sin material, lo retomó en 1985 Elva Grunstein López, hija del matrimonio que para esa fecha había fallecido. La señora Elva Grunstein acudió al INAH para solicitar la aclaración sobre el tipo de uso de suelo que los terrenos tienen al estar en colindancia con un monumento histórico. No se tiene en el expediente la respuesta emitida por la institución, lo que se sabe es que la competencia para determinar el uso de suelo le corresponde al gobierno local, es decir, en este caso a la delegación Gustavo A. Madero o en su defecto, al gobierno de la Ciudad de México, más no al INAH.

Durante los años 80 del siglo XX, otra amenaza cierne sobre el monumento[33] del acueducto[34]. Nuevamente está relacionada con la dotación de

[32] AHPJE, *Acueducto de Guadalupe, Delegación Gustavo A. Madero D. F.*, Leg. I, años 1932-1978, Dictamen, p. 148-160.
[33] AHPJE, *Acueducto de Guadalupe, Delegación Gustavo A. Madero D. F.*, Leg. II, años 1979-1993, p. 39.
[34] *Ivi*, p. 40 y 48-50.

servicios a la población, en específico de transporte, por la construcción de la línea 3 norte del Sistema de Transporte Colectivo Metro. La demarcación donde se ubica el acueducto en esa época se denominaba delegación Gustavo A. Madero y fue la instancia que hizo la solicitud para restaurar el monumento.

Correspondería al arquitecto Guillermo Fuentes hacer la inspección del estado de conservación del monumento. En su reporte señaló que el acueducto estaba en estado deplorable y fue designado por Monumentos Coloniales para brindar la asesoría necesaria en los trabajos que se requerirían en la restauración.



Fuente: Cortesía de Instituto Nacional de Antropología e Historia, Ciudad de México, Archivo Histórico y Planoteca Jorge Enciso, consultado el 17 de mayo de 2024.

Figura 3: Arquería del acueducto en el tramo de Av. Acueducto entre Av. Morelos y Atzayacat, vista sur a norponiente, fotografía núm. 72, noviembre de 1978, en Acueducto de Guadalupe, delegación Gustavo A. Madero de la Ciudad de México, México.

En 1991 el subdelegado de Zona de Desarrollo Urbano y Obras de la delegación Gustavo A. Madero presentó a la arquitecta Lorena Ramos Molina, titular de la subdirección de Licencias, Inspecciones y Registros de Monumentos Históricos del INAH, el proyecto denominado Rescate y dignificación del Acueducto de Guadalupe, segunda etapa. En él se incluía la intervención del monumento desde Calzada Ticomán hasta Río de los Remedios. Un año después, se iniciaron los trabajos de construcción de una vía mayor, Anillo Periférico Arco Norte, el cual implicó mucha labor de los arquitectos peritos del INAH y su interrelación con las autoridades locales delegacionales, por más de tres décadas, para procurar la preservación del monumento y la realización de la nueva obra constructiva[35].

El desarrollo urbano con la dotación de servicios no solo depende de la buena voluntad, de políticas gubernamentales y presupuesto suficiente; además debe considerarse e integrarse en los

[35] AHPJE, *Acueducto de Guadalupe, Delegación Gustavo A. Madero D. F.*, Leg. III, años 1994-2005, p. 57-59.

proyectos a las comunidades que viven, transitan o visitan un monumento histórico.

El recorrido y la estación de ascenso y descenso de los autobuses proyectada en los arcos del lado norte del paradero, fue motivo para que los vecinos se organizaran en la Asociación de residentes "Santa Isabel Tola" y pidieran el apoyo tanto del INAH, como de su autoridad local, para participar en la planeación de la vía pública y la construcción del paradero de la estación metro Indios Verdes. Sin embargo, un vecino a nombre de todos los residentes hizo un acuerdo con la empresa Transportes Ecatepec que derivó en el deterioro del acueducto.

Fuente: Cortesía de Instituto Nacional de Antropología e Historia, Ciudad de México, Archivo Histórico y Planoteca Jorge Enciso, consultado el 10 de junio de 2024.

Figura 4: Obras públicas, fotografía núm. 52, 1997, delegación Gustavo A. Madero de la Ciudad de México, México

El deterioro de un inmueble se refleja a través de la poca valoración que los habitantes de la comunidad en el entorno le otorguen, lo que en una obra con uso constante se reflejó en gran esplendor y respeto, la falta de identificación de valores derivó en el caso del acueducto de Guadalupe que se llenara de basura y *graffitis*. Así, en 1999 el gobierno de la delegación Gustavo A. Madero solicitó al INAH la autorización para realizar la limpieza del monumento con la participación del Colegio Nacional de Educación Profesional Técnica, CONALEP, para hacer los trabajos de limpieza y restauración. Fue así que un grupo de alumnos encabezados y capacitados por los arqueólogos Julio Celis, Socorro Espino, José Martín González e Ismael Arturo Montero, hicieron la limpieza del monumento "a base de jabón neutro, agua, *shishi* y cepillo de raíz".[36]

[36] *Ivi*, p. 101. Con la licencia número 138 99 fechada el 19 de abril de 1991 se autorizó al ingeniero Ricardo Delgado Villarreal. *Shishi* es una palabra de origen náhuatl y se refiere a la penca y la raíz trituradas de una especie de agave, que sirve como jabón. Consulta hecha en Guido Gómez de Silva, *Diccionario breve de* mexicanismos, Academia Mexicana de la Lengua, 11 de junio de 2024. Recuperado: https://www.

Aplicada en toda la "longitud del acueducto 1797 m, 415 arcos que van de la Caja de agua de Ticomán a la Avenida Insurgentes Norte." También "Se autoriza la aplicación del producto "Graffiti Remover" para el retiro de las pinturas sobrepuestas (*graffitis*), en el Acueducto de Guadalupe del tramo que comprende entre Ticomen [sic] Ticoman e Insurgentes."[37]

Cuando se hacían las labores de limpieza, se percataron de dos tramos rotos, uno de 10.70 m y otro de 10.30 m porque se utilizaron como pasos vehiculares. Se solicitó y autorizó la intervención para restaurar los arcos.[38]

Después de hacer el recuento de los daños y vicisitudes que el acueducto, monumento histórico declarado y por determinación de Ley, presentó a lo largo de varias décadas de existencia de la institución proveedora de la protección al patrimonio cultural, en el año 2000 el área de Catálogo y Zonas de la Coordinación Nacional de Monumentos Históricos, encomendó a las arquitectas Sara Mildred Vázquez Morales, Nadia Teresa Jaramillo Orellana, Jessica Patricia Barrera Barrera y al arquitecto Luis Erik Nájera Ángeles, realizar recorridos para elaborar el diagnóstico prospectivo con la finalidad de evaluar la pertinencia del proyecto de delimitación como Zona de Monumentos Históricos, el área del acueducto, con el fin de actualizar su catalogación y proponer su decreto de declaratoria con esta nueva figura de protección legal. Proyecto que después de veinticuatro años no ha sido aprobado.

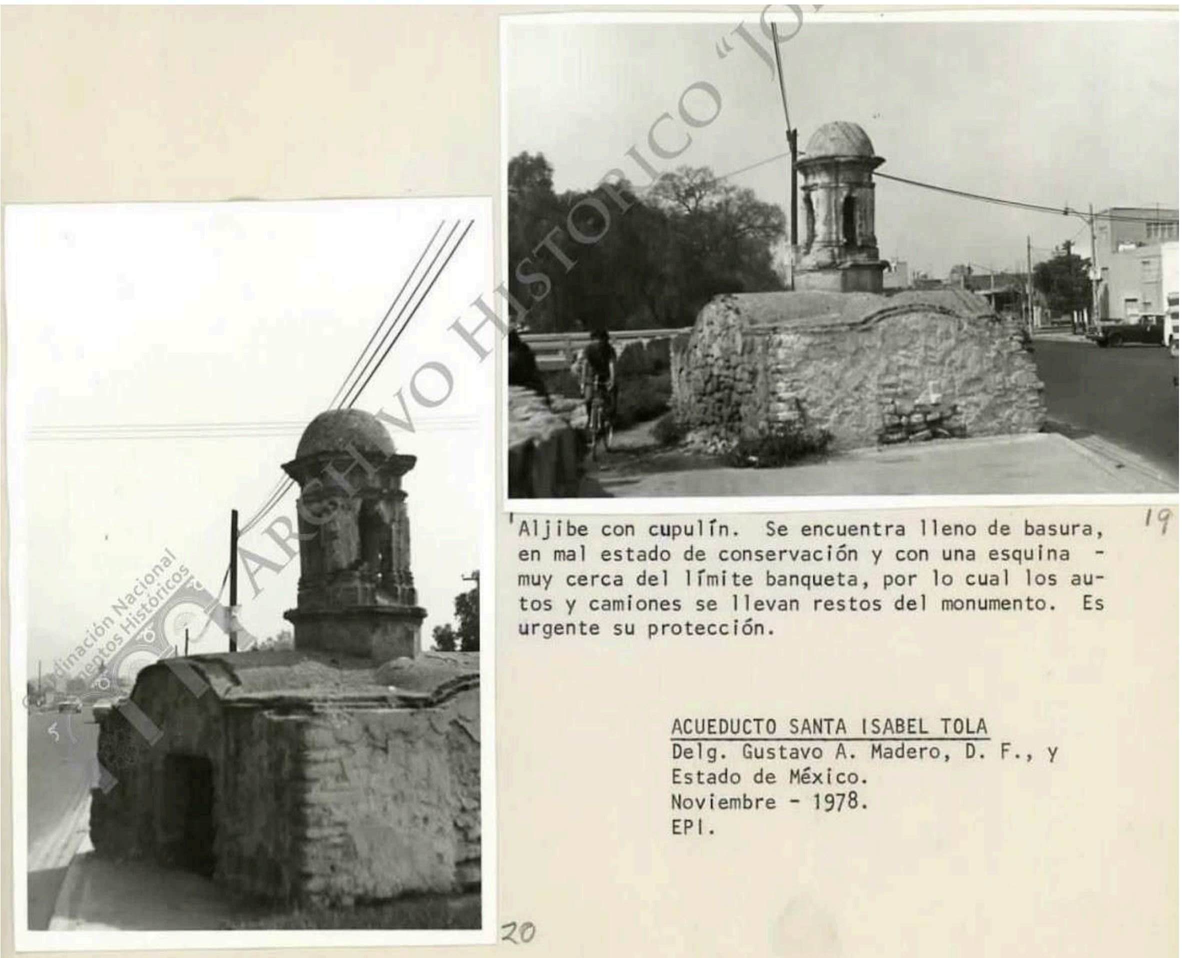
Seis años más tarde, con la licencia 134 06 con fecha 28 de marzo de 2006 se autorizó el "proyecto de obra para la restauración, exclusivamente del Acueducto de Guadalupe, en el tramo comprendido entre las avenidas Ticomán e Insurgentes Norte, Col. Santa Isabel Tola, de acuerdo a los planos presentados".[39]

academia.org.mx/consultas/obras-de-consulta-en-linea/diccionario-breve-de-mexicanismos-de-guido-gomez-de-silva/item/shishi#:~:text=Cierto%20agave%20cuya%20penca%20y,machacada%20para%20servir%20como%20jab%C3%B3n.

[37] *Ivi*, p. 103.

[38] Ivi, p. 108. Se emitió otra licencia con el número 333 99, de fecha 23 de julio de 1999, para obras de restauración del acueducto.

[39] AHPJE, *Acueducto de Guadalupe, Delegación Gustavo A. Madero D. F.*, Leg. IV, año 2006, p. 101.



Fuente: Cortesía de Instituto Nacional de Antropología e Historia, Ciudad de México, Archivo Histórico y Planoteca Jorge Enciso, consultado el 17 de mayo de 2024.

Figura 5: Aljibe con cupulín, fotografías núms. 19 y 20, noviembre de 1978, en Acueducto de Guadalupe, delegación Gustavo A. Madero de la Ciudad de México, México.

Las obras se referían a la "sustitución de la corona del acueducto en un tramo corto que llega a la caja de agua terminal, limpieza con aspersor a presión de agua, cambio de algunas piezas de cantera con un ligero martelinado [acabado de apariencia rústica] en su superficie, aplanados en algunas superficies y cumbrera de cañón corrido de mampostería en los tramos según proyecto." La supervisión de este nuevo trabajo de intervención en el monumento durante todo el tiempo de su proceso estuvo a cargo de los arquitectos Jorge Rojas Ramírez y Jorge Zavala Carrillo, como parte de la Subdirección de Supervisión de Proyectos y Asesoría en Obras Externas de la CNMH.[40] Cabe señalar que solicitaron un dictamen al ingeniero Luis Torres Montes, del Laboratorio de Química Arqueológica y Conservación de la UNAM; sobre el empleo de los silanos y siloxanos (material de restauración empleado) para el tratamiento de la piedra utilizada en monumentos históricos.[41]

En este mismo sentido y como parte de los trabajos de restauración, también se hizo recimentación de la reposadera número 4 -a las cajas de agua también se las identifica como reposaderas e incluso como posas-, porque presentaba fracturas en su cara noreste y suroeste, debido al proceso de hundimiento del terreno que denota diferentes tipos de terreno a lo largo del recorrido del acueducto. Además de la "falta de un proceso constructivo acorde a cada tipo de

[40] AHPJE, *Acueducto de Guadalupe, Delegación Gustavo A. Madero D. F.*, Leg. IV, año 2006, Informe dirigido al arquitecto Alfonso Hueytletl Torres, 2 de mayo de 2006, p. 103-105.

[41] *Ivi*, p. 106-109.

terreno". Para su restauración se propuso ampliar el área de carga de la cimentación construyendo una zapata de concreto armado debajo de la cimentación de piedra y la construcción de un cimiento de mampostería ligado a la cimentación existente.[42]

El 29 diciembre de 2006 se dio el visto bueno de terminación de la obra por parte del director de Licencias, Inspecciones y Registros de la CNMH. Dándose por concluida esta intervención.

En 2009 un documento hace alusión a la posible construcción de un muro milán como solución y prevención a consecuencia de las inundaciones severas que se habían tenido en el entorno de la zona del acueducto. Sin embargo, personal de la demarcación Gustavo A. Madero negó tener información al respecto, y nuevamente bajo el argumento de frenar los efectos adversos del clima se estaba construyendo obra vial, sin tomar en cuenta las características del monumento.[43]

V. CONSIDERACIONES FINALES

La herencia cultural en monumentos históricos inmuebles en México es vasta y muy diversa. Las políticas implementadas por diferentes gobiernos y autoridades de educación y cultura durante los siglos XX y lo que va del XXI, en cuanto a la protección de las construcciones hechas en los siglos XVI al XIX, se enfocaron en preservar la integridad en cuanto a materialidad. En este ámbito, se deberán proponer estrategias que además de esos factores, propongan la puesta en valor de los inmuebles para recuperar usos antiguos o se les asignen nuevos usos.

La Ley Federal sobre Monumentos y Zonas Arqueológicos, Artísticos e Históricos y su Reglamento junto con otros instrumentos jurídicos, son aplicables para la protección de inmuebles monumentos históricos en México. Sin embargo, se enfrentan a la figura legal de la propiedad de cada inmueble; porque puede ser estatal, municipal y privada. Los dueños particulares de inmuebles históricos tienen responsabilidad de mantenimiento y conservación de sus propiedades y requieren de la asesoría de los especialistas para llevar a cabo cualquier acción sin poner en riesgo o demeritar al edificio.

El Instituto Nacional de Antropología e Historia tiene la responsabilidad de promover la sensibilización y propiciar una conciencia en torno a reconocer los valores históricos, estéticos y de uso, de los monumentos históricos inmuebles entre las personas. Las comunidades que habitan, los circundan y disfrutan los monumentos son potenciales conservadores de ellos.

Las instituciones no pueden, ni deberían, realizar acciones de preservación sin practicar la transdisciplina; las perspectivas de antropólogos, sociólogos, historiadores junto con arquitectos, arqueólogos, abogados, urbanistas y restauradores-conservadores, entre otros, aportarán estrategias y programas integrales de intervención.

Asimismo, el trabajo interinstitucional aportará las mejores propuestas y estrategias para atender las necesidades de servicios de la población sin afectar a los inmuebles.

Una adecuada planeación implica siempre la investigación en documentos que se resguardan en los archivos, tanto institucionales, como particulares. Debería existir una retroalimentación por parte de los responsables de archivos y los usuarios, en cuanto a la identificación de documentos mejor organizados y catalogados.

La promulgación de leyes y demás instrumentos jurídicos debe ser acorde a las sociedades que las producen, sin embargo, la transformación urbana y social es mucho más dinámica que la reforma a una ley establecida o a la generación de nuevas leyes. Los vacíos legales generan deterioro en la preservación de los inmuebles, tanto como su desconocimiento histórico o de sus valores y distintos usos a través del tiempo. En estas labores todos los responsables y dueños de edificios históricos deberán confluir para procurar su adecuada conservación.

[42] *Ivi*, p. 169.

[43] AHPJE, *Acueducto de Guadalupe, Delegación Gustavo A. Madero D. F.*, Leg. V, año 2009, p. 180-184 que corresponden a las p. 1-5. Hago esta aclaración porque el legajo está en proceso de catalogación en este Archivo Histórico.

REFERENCIAS BIBLIOGRÁFICAS / REFERENCES

1. Archivo Histórico y Planoteca Jorge Enciso, Centro de Documentación de la Coordinación Nacional de Monumentos Históricos del Instituto Nacional de Antropología e Historia, Intervenciones a inmuebles, *Acueducto de Guadalupe*, alcaldía Gustavo A. Madero, Ciudad de México, Exp. Legajo I, años 1932-1978, 161 hojas, 76 fotografías numeradas y 7 sin numerar, y 5 planos, 4 croquis, 3 recortes de periódico. Legajo II, años 1979-1993; Legajo III, años 1994-2005; Legajo IV, año 2006 y Legajo V, año 2009-.
2. Archivo Histórico y Planoteca Jorge Enciso, Centro de Documentación de la Coordinación Nacional de Monumentos Históricos del Instituto Nacional de Antropología e Historia, Intervenciones a inmuebles, *Zona de Monumentos Históricos de la Ciudad de México*, 1973-1986, s/numerar.
3. Archivo Histórico y Planoteca Jorge Enciso, Centro de Documentación de la Coordinación Nacional de Monumentos Históricos del Instituto Nacional de Antropología e Historia, Intervenciones a inmuebles, *Centro Histórico Monumental de la Ciudad de México*, 1980-1984, s/numerar.
4. Diario Oficial. Órgano del gobierno constitucional de los Estados Unidos Mexicanos, *Ley Federal sobre Monumentos y Zonas Arqueológicos, Artísticos e Históricos*, México 1972. Reformada en 2018, Recuperado: https://www.diputados.gob.mx/LeyesBiblio/pdf/131_160218.pdf, consultado el 24 de abril de 2024.
5. Flores M., «Algunos conceptos sobre la problemática de la restauración monumental en América Latina», publicación original en *Boletín del Centro de Investigaciones Históricas y Estéticas*, Facultad de Arquitectura y Urbanismo de la Universidad Central de Venezuela, 1973, número 16, p. 66-71, y en *Conversaciones con.*, Año 2023, número 11, febrero, p.79-84. Recuperado: https://revistas.inah.gob.mx/index.php/conversaciones/article/view/19041.
6. Gómez de S., *Diccionario breve de mexicanismos*, Academia Mexicana de la Lengua, 11 de junio de 2024. Recuperado: https://www.academia.org.mx/consultas/obras-de-consulta-en-linea/diccionario-breve-de-mexicanismos-de-guido-gomez-de-silva/item/shishi#:~:text=Cierto%20agave%20cuya%20penca%20y,machacada%20para%20servir%20como%20jab%C3%B3n.
7. López C., coord., *Desenterrando fragmentos de historia: siglos XVI al XIX*, México: Secretaría de Cultura, Instituto Nacional de Antropología e Historia, 2018, 270 p.
8. Musset, A., *El agua en el valle de México, siglos XVI-XVIII*, México, Pórtico de la Ciudad de México, 1992, 245 p.
9. Ríos R., *Catálogo de la Sección B "Actas de la Comisión de Monumentos" del fondo documental de la Coordinación Nacional de Monumentos Históricos del Instituto Nacional de Antropología e Historia, Archivo Histórico, Jorge Enciso" (1914-1968), Tesis* para optar por el título de Licenciada en Etnohistoria, Escuela Nacional de Antropología e Historia, México 2021.
10. Rivera P., «Desde Italia para el mundo: La Carta de Venecia. Entrevista a Carlos Flores Marini», *CR. Conservación y Restauración*, México, Año 2018, número 4, mayo, p. 58-61. Recuperado: https://revistas.inah.gob.mx/index.php/cr/article/view/12068.
11. Rojas R., *La cosecha del agua en la Cuenca de México*, México, Centro de Investigaciones y Estudios Superiores en Antropología Social, CIESAS, 1998, 142 p.

This page is intentionally left blank

Scan to know paper details and
author's profile

Nikolai Marr's Theory of the Labor Origin of the Language and its Sources

Aleksey V. Nikandrov

Lomonosov Moscow State University

ABSTRACT

The article is devoted to the analysis of the theory of the labor origin of the language, which is the most important element of Nikolai Marr. The author reveals some of the nuances of its creation and notes the inconsistency of this theory. Based on this, questions are raised about the relevance of N. Marr's theory of glottogenesis and the relevance of the entire theory of the labor origin of the language as a whole for modern science. Important attention is paid to the sources of N. Marr's "New doctrine of language". First of all, the author analyzes the Marxist theory of the labor origin of man and his language, which was especially developed in the work of Friedrich Engels "The role of labor in the process of the transition from ape to man". The second most important place is occupied by the tool concept of the origin of the language of Ludwig Noiré. This concept received an excellent schematic explication in his work "The tool of labor and its significance in the history of the development of mankind". Of particular importance is the concept of "mimic language" by Wilhelm Wundt, presented in his work The Soul of Man and Animals", which is not related to the labor theory of the origin of language. Two versions of the labor principle of glottogenesis that is, theories of F. Engels and L. Noiré most influenced the formation of the N. Marr's "New doctrine of language", one of the deep developments of which was a detailed, contradictory and extremely complicated concept of the origin of the language.

Keywords: nikolai marr, glottogenesis, labor, tool of labor, "new doctrine of language", manual (linear, kinetic) language, sound language.

Classification: LCC Code: P125

Language: English

Great Britain Journals Press

LJP Copyright ID: 573314
Print ISSN: 2515-5784
Online ISSN: 2515-5792

London Journal of Research in Humanities & Social Science

Volume 24 | Issue 10 | Compilation 1.0

Nikolai Marr's Theory of the Labor Origin of the Language and its Sources

Концепция Трудового Происхождения языка Н.Я. Марра и ее Источники

Aleksey V. Nikandrov

ABSTRACT

The article is devoted to the analysis of the theory of the labor origin of the language, which is the most important element of Nikolai Marr. The author reveals some of the nuances of its creation and notes the inconsistency of this theory. Based on this, questions are raised about the relevance of N. Marr's theory of glottogenesis and the relevance of the entire theory of the labor origin of the language as a whole for modern science. Important attention is paid to the sources of N. Marr's "New doctrine of language". First of all, the author analyzes the Marxist theory of the labor origin of man and his language, which was especially developed in the work of Friedrich Engels "The role of labor in the process of the transition from ape to man". The second most important place is occupied by the tool concept of the origin of the language of Ludwig Noiré. This concept received an excellent schematic explication in his work "The tool of labor and its significance in the history of the development of mankind". Of particular importance is the concept of "mimic language" by Wilhelm Wundt, presented in his work The Soul of Man and Animals", which is not related to the labor theory of the origin of language. Two versions of the labor principle of glottogenesis that is, theories of F. Engels and L. Noiré most influenced the formation of the N. Marr's "New doctrine of language", one of the deep developments of which was a detailed, contradictory and extremely complicated concept of the origin of the language. It was based on the hypothesis of the era of manual language and on the hypothesis of the decisive role of tools in the formation of sound language and logical thinking. The main drawback of the conception of Nikolai Marr was its inconsistency due to the fact that the scientist, without any evidence, introduced into his theory the principles of "labor-magic activity" and the four primary elements of language (SAL, BER, JON, ROŠ). These contradictions and theoretically unsubstantiated constructions did not cancel the originality and constructiveness of a number of ideas embedded in Marrism. However, due to these contradictions and shortcomings, the glottogenetic concept of Nikolai Marr could not develop into a coherent theory. It remained a collection of interesting and important, but often strange, fantastic, grotesque ideas.

Keywords: nikolai marr, glottogenesis, labor, tool of labor, "new doctrine of language", manual (linear, kinetic) language, sound language.

Author: Lomonosov Moscow State University.

АННОТАЦИЯ

Статья посвящена анализу концепции трудового происхождения языка, являющейся составной частью «Нового учения о языке» Н.Я. Марра. Вскрывая коллизии ее создания и противоречивость, автор ставит вопросы о ее актуальности для современной лингвистики и антропологии, а также об актуальности теории трудового происхождения языка в целом. Особое внимание уделяется источникам «Нового учения о языке» Н.Я. Марра. К этим источникам в первую очередь принадлежит марксистская теория трудового происхождения человека и его языка, яркое развитие получившая в работе Ф. Энгельса «Роль труда в процессе превращения обезьяны в человека». Второе по значению место занимает орудийная

концепция происхождения языка Л. Нуаре, наиболее выраженную концептуализацию получившая в его работе «Орудие труда и его значение в истории развития человечества». Особняком стоит концепция первичности «мимического языка» В. Вундта, представленная в его работе «Душа человека и животных». Версии трудового принципа глоттогенеза Ф. Энгельса и Л. Нуаре в наибольшей степени повлияли на формирование «Нового учения о языке» Н.Я. Марра, одной из важнейших сторон которого стала панорамная, сложная и очень спорная концепция происхождения языка. Важнейшими составными частями данной концепции стали гипотеза об эпохе ручного языка и гипотеза об определяющей роли орудий труда в формировании звукового языка и логического, понятийного мышления. Основным недостатком концепции Н.Я. Марра были ее противоречия, рожденные некоторыми аксиоматично введенными Н.Я. Марром принципами, связанными с построением схемы происхождения звукового языка: принципом «труд-магизма» и гипотезой учением четырех первоэлементов языка. Эти противоречия не отменяли оригинальность и определенную конструктивность ряда идей, заложенных в марризме, однако они стали причиной того, что глоттогенетическая концепция Н.Я. Марра не могла развиться в цельную теорию, оставшись суммой интересных и прорывных, – но вместе с ними также и фантастичных идей.

Ключевые слова: н.я. марр, глоттогенез, труд, орудие труда, «новое учение о языке», ручной (линейный, кинетический) язык, звуковой язык.

I. ВВЕДЕНИЕ: АКТУАЛЬНО ЛИ УЧЕНИЕ Н.Я. МАРРА?

«Новое учение о языке» создавалось академиком Н.Я. Марром в сотрудничестве с его единомышленниками, сотрудниками и соратниками, многие их которых становились «адептами», начиная приблизительно с середины 1920-х гг. Основой «Нового учения», или марризма, была яфетическая теория Марра, декларируемым же методом переработки и развития было марксистско-ленинское учение; и как синтез яфетидологии и марксизма «Новое учение» представлялось создателями во главе с Марром как «марксизм в языкознании». На рубеже 1920–1930-х гг. марризм приобрел почти монопольное положение в советской лингвистике, превратившись в императивную методологическую систему, и оставался таковой вплоть до первого выступления И.В. Сталина по проблемам языкознания – 20 июня 1950 г. в «Правде» в ходе дискуссии по вопросам языкознания, объявленной 9 мая этого года, была опубликована первая статья из серии его работ по языкознанию. Эта акция имела исключительно политические мотивы и основания (Никандров 2023), и по обыкновению тех лет, марризм был разгромлен и прекратил свое существование, а труды Марра, как и работы марристов, были преданы забвению.

Интерес к этой истории был возрожден с выходом фундаментального исследования В.М. Алпатова «История одного мифа: Марр и марризм» в 1991 г. (Алпатов 2018), и с тех пор не угасал. Однако, по сути дела, центральной фигурой всей истории, связанной с Марром и его «Новым учением», был вовсе не Марр, а Сталин. Исходя только из этого и только этим определялась актуальность всех исследований в области отечественной и зарубежной маррологии. Теория Марра как таковая начиная с 1950 г. стала восприниматься и исследоваться в первую очередь преиму щественно со стороны своих недостатков, противоречий и попросту нелепостей; во вторую же – со стороны политической заостренности и идеологического наполнения. Основное внимание уделялось политическим сторонам марризма – принципу классовости языка и рассмотрению его истории исходя из трактовки «язык как надстройка», опровергнуты и справедливо отвергнуты Сталиным. Но вместе с этим Сталин если не поставил под сомнение, то в любом случае вывел из центра лингвистических исследований трудовую теорию происхождения языка, которая была важнейшей составной частью не только марризма, но, собственно, марксизма. Всем известна сталинская характеристика учения Марра как «трудмагической тарабарщины» (Сталин 1953: 38). В самом деле, магия в конструкциях Марра играет огромную роль, будучи прямо и прочно связана с возникновением звукового языка. Магия в объяснениях происхождения языка Марра приобретает гипертрофированное значение, и по сути, оттесняет труд, заслоняя собой картину глоттогенеза. Однако эти противоречия учения Марра не могут снизить его значения и не могут «дезавуировать» новизну и вычеркнуть его существенный вклад в трудовую теорию глоттогенеза.

II. ТЕОРИИ ТРУДОВОГО ПРОИСХОЖДЕНИЯ ЯЗЫКА

Ф. Энгельса и Л. Нуаре: краткий эскиз

По времени написания статья «Роль труда в процессе превращения обезьяны в человека» формально была первой работой, в которой была развернуто и ясно сформулирована трудовая гипотеза происхождения языка. Название принадлежит самому Энгельсу. Работа была написана к 1876 г., а чуть позже он собирался включить ее в состав будущей «Диалектики природы», оставшейся незавершенной. Как отдельная публикация «Роль труда» впервые была опубликована спустя год после смерти Энгельса, а в составе неоконченной «Диалектики природы» – в 1925 г. в СССР. Впервые на русском языке под названием «Роль труда в процессе развития обезьяны в человека» работа вышла в 1906 г. в серии брошюр «Знание – польза» знаменитого издательства Марии Малых (Энгельс 1906).

Труд концептуализируется Энгельсом как осмысленная и целесообразная, целенап равленная коллективная деятельность с применением искусственных орудий (общественное производство), в отличие от инстинктивного «труда» животных. Труд в философской мысли Маркса и Энгельса является фундаментальной категорией и, говоря словами первого, составляет родовую сущность человека. Не мышление и даже не язык, но именно труд является гранью, отделяющей человека от животных. Идея о созидании трудом человека предшествует рассуждениям Энгельса, который не приходит к этому выводу, а исходит из него: «...Мы в известном смысле должны сказать: труд создал самого человека» (Энгельс 1940: 134). – И далее: «Сначала труд, а затем и вместе с ним членораздельная речь явились двумя самыми главными стимулами, под влиянием которых мозг обезьяны постепенно превратился в человеческий мозг...» (Там же: 137). Как легко увидеть, труд предшествует иным факторам антропогенеза, тогда как коллективность и коммуникация являются необходимыми условиями, но не собственно факторами. Язык является отличительной способностью человека, но как антропогенетический фактор он безусловно подчинен труду.

Труд стал возможен начиная строго с того момента, как обезьяна (определенный вид обезьян) обрела способность прямохождения, которая «развязала» ей руки, чем «был сделан *решающий шаг для перехода от обезьяны к человеку*» (Там же: 134). Рука в этой конструкции – перводвигатель антропогенеза, человек сотворяет себя сам «трудовой рукой» (это выражение любил Марр), которая «является не только органом труда, *она также и продукт его*» (Там же: 135). Обезьяна постепенно становится человеком в процессе орудийного труда, ибо, по Энгельсу, «специализация руки означает появление *орудия*, а орудие означает специфически человеческую деятельность, преобразующее обратное воздействие человека на природу – производство» (Там же: 16).

Труд в концепции Энгельса связан с появлением языка, речи напрямую: роль орудий особым образом им не акцентируется, ибо они необходимым образом уже включены в процесс коллективного труда, производства. Язык возникает в процессе труда и трудового общения как элемент производственного процесса, наряду со сплочением и взаимной поддержкой членов первобытных «трудовых коллективов». Едва ли Энгельса хотя бы и в самых общих чертах занимал механизм глоттогенеза: от этой проблемы он избавляется довольно малозначительной фразой «Коротко говоря, формировавшиеся люди пришли к тому, что у них явилась *потребность что-то сказать* друг другу» (Там же: 136). А.А. Леонтьев справедливо переформулирует это утверждение следующим образом: «...Применительно к первобытному коллективу можно сформулировать это так: речь – это не столько общения *во время* труда, сколько общения *для труда*» (Леонтьев 1972: 141).

Мышление у Энгельса предшествует труду, то есть, иными словами, поскольку обезьяна, приступившая к труду, – потенциально уже человек, то для того, чтобы труд стал вообще возможен в этой конструкции, Энгельс, вдохновившийся дарвиновской работой «Происхождение человека и половой отбор» (1871), постулирует наличие способности мышления, т.е. всех видов рассудочной деятельности (индукция, дедукция, анализ, синтез и т.д.), у животных: «По типу все эти методы – стало быть, все признаваемые обычной логикой средства научного исследования – совершенно одинаковы у человека и у высших животных» (Энгельс 1940: 178).

В работах, посвященных происхождению языка, часто говорят о трудовой теории происхождения языка Энгельса-Нуаре (иногда Нуаре-Энгельса). Удивительным образом эти две гипотезы, связывающие происхождение языка с трудом, с трудовой деятельностью проточеловеческих коллективов, сложились практически одновременно и были выдвинуты формально чуть ли не в один год: известная статья Энгельса была написана, повторим, к 1876 г., книги Людвига Нуаре «Происхо ждение языка» и «Орудие труда и его значение в истории развития человечества» были опубликованы соответственно в 1877 и 1880 г.; так что если бы Энгельс дописал и опубликовал «Роль труда» в 1876 г., то ему принадлежал бы безусловный приоритет в выдвижении трудовой теории глоттогенеза.

Нуаре исходит из того, что «как язык, так и орудие труда, инструмент, является специфически характерным для человека. В этом отношении человеческий мир и животный мир без единого исключения резко разграничены» (Нуаре 1925: 138). Главным, отправным глотто- и антропогенетическом фактором у Нуаре является не труд как интегральное целое (как у Энгельса), но именно орудие труда как отдельно взятый элемент процессе производства, поскольку это орудие «имеет характер универсальной или *всеобщей идеи*» (Там же: 184). Нуаре принадлежит детальная разработка, фактически алгоритм преобразования и формирования человеческой природы силой инструментального, орудийного труда. В совокупности двух работ немецкого мыслителя мы обнаруживаем детальные схемы, зарисовки порождения языка под влиянием использования орудий труда; показываются свойства орудия труда как такового, которые и позволяют ему стать фактором глотто- и антропогенеза.

Рука – орудие орудий (Аристотель) – в его концепции занимает примерно такое же место, как и в картине Энгельса: она, если мы берем ее аналитически выделенно, как своего рода отдельную «сущность», а не элемент процессе, предшествует разуму, однако и «развитие разума составляет необходимую предпосылку совершенной формы и многосторонней деятельности руки» (Там же: 124). Но рука, «вооруженная» орудием труда, «трудовая рука», – это перводвигатель человеческой истории: «...Решительный шаг из области животной активности в область человеческой активности был сделан тогда, когда в руку вложены были инструменты, орудия труда...» (Там же: 135).

Орудие труда, согласно мысли Нуаре, не может быть создано и применено без участия разума. Если Энгельс приписывает способность мышления животным, то Нуаре, для которого мышление и язык – proprium человека, вынужден допустить доорудийное состояние разума человека: «Как бы ни противилась тому наша фантазия, мы все же должны принять, что между первобытной мглой, окружающей беспросветное существование многих поколений наших предков при совершенном отсутствии языка и разума, и начавшимся впоследствии человеческим развитием, лежала полоса едва освещенных редкими проблесками сумерек, в которых человек уже владел языком и разумом, но не владел еще орудиями труда» (Там же: 57). Это состояние не может быть концептуализировано более развернуто, и так в учении Нуаре остается фундаментальное зияние: объяснить появление протоязыка и проторазума невозможно, так что приходится принимать это положение без каких-либо обоснований.

III. ТРУДОВАЯ КОНЦЕПЦИЯ ПРОИСХОЖДЕНИЯ ЯЗЫКА Н.Я. МАРРА

И.В. Сталин задается вопросом: «Был ли прав Н.Я. Марр, причислив язык к разряду орудий производства?» (Сталин 1953: 37). Ответ, конечно, отрицательный, ибо «орудия производства производят материальные блага, а язык ничего не производит или “производит” всего лишь слова» (Там же). В самом деле, сводит к абсурду Сталин, «если бы язык мог производить материальные блага, болтуны были бы самыми богатыми людьми в мире» (Там же). Именно так, утрированно, и стало восприниматься учение Марра после выхода сталинских работ, – хотя в упрощении проблемы сущности языка логичнее упрекнуть самого Сталина: фраза «язык ничего не производит или “производит” всего лишь слова», мягко говоря, нелепа (как и фраза «орудия производства производят материальные блага» не в меньшей степени). Однако, как было подчеркнуто, труды и идеи Марра после 1950 г. воспринимались почти исключительно сквозь призму сталинских работ, и тезис о языке как об орудии производства, который будет разобран дальше, воспринимался именно в сталинском видении, как тезис о языке, который напрямую производит материальные блага.

Сталинская постановка такова: «Звуковой язык, или язык слов, был всегда единственным языком человеческого общества, способным служить полноценным средством общения людей» (Там же: 46). За этим и вышеприведенными утверждениями, кажущимися на первый взгляд тривиальными, а то и упрощенными («язык слов»), стоят совсем нетривиальные коллизии, связанные с учением Н.Я. Марра прежде всего в его глоттогенетической части: Сталин (помимо прочего) энергично отвергает марровскую концепцию ручного языка. Что же утверждал Марр, в чем состоит его концепция?

Марр конструирует панорамный процесс зарождения языка в связи с прогрессом материального производства. Эту картину он разделяет на два этапа, даже две эры: эра ручного (синонимы Марра: «кинетического», «линейного», редко «графического») языка и эра звукового языка. Звуковой язык, разумеется, является языком более высокого порядка; и именно он связывается в картине Марра с созданием искусственных орудий труда. Однако ручной язык, хотя и примитивен по сравнению с позднейшим звуковым, но это – полноценное средство общения, в котором реализуется способность к символизации, т.е. язык в собственном смысле слова: «Ручной язык предполагает технически развитость регулирующего мозгового аппарата и связи с ним, идеологически общественность, хотя и примитивную, и ее отражение в образах, указывавшихся рукой с дополнительной линейной изобразительностью посредством лица, мимикой» (Марр 1936: 202).

Как ученый, полагавший себя марксистом в языкознании, Марр ставит цель создать марксистскую концепцию происхождения языка, т.е. объяснить порождение языка из труда. Эту задачу он, надо сказать, решает весьма изящно: постулированный им ручной первоязык – это также одновременно и «первотруд», «первопроизводство», в котором главным и *первым* орудием труда была рука. Она же – и орган, орудие языка, синтаксис которого был производным самого процессе производства: «Человек до звуковой речи, культовой, располагал обиходной, говорил линейным языком – жестами и мимикой, причем главную роль в линейной речи играла рука. Этот язык движений, кинетический язык, по господствующему в нем орудию производства был, можно сказать, ручным» (Марр 1936: 85). Иначе, по Марру, и быть не могло, так как первоначально выразить что-либо (образ) с помощью звука было принципиально невозможно, т.к. звуки сами по себе не могут ничего выражать, и пока «не возникало членораздельной звуковой речи, наследственно воспринявшей все достижения линейного языка с помощью руки, это природой данное орудие, собственно две руки, являлись выразителями речи: рука или руки были языком человека. Жесты, мимика и в некоторых случаях вообще телодвижения исчерпывали средства языкового производства» (Там же: 201).

Введением ручного языка Марр как бы снимает противоречия концепций Энгельса (мышление животных) и Нуаре (допущение некоей неконцептуализируемой «сумеречной полосы мышления и языка»), сохраняя принцип первичности труда и принцип языка как proprium человека. Поскольку рука предшествует труду, являясь как бы его условием и будучи его первоорудием, то она же в комплексе ручного языка предшествует и языку, сама являясь его орудием. Язык подчиняется труду тем, что постулируется его изначальное соответствие производству: поскольку протолюди руками трудились, то, следовательно, ими же они осуществляли коммуникацию в процессе первопроизводства. Язык таким образом рождается из труда как бы напрямую, ибо сам он изначально и есть труд и орудие труда (и уже затем – орудие общения). Поскольку Марр часто употребляет термин «язык-мышление», но здесь можно обозначить этот первокомплекс труда и языка, «первопроизводства», термином «язык-труд». С овладением же человеком искусственными орудиями труда возникает звуковой, т.е. привычный нам язык.

Философ-марксист и одновременно маррист А.М. Деборин, автор единственного филосо фски фундированного марристского текста «Новое учение о языке и диалектический материализм» (1935), подмечает глубокую философско-лингвистиче скую новизну Марра и ее связь с идеями Энгельса: «Труд создал самого человека, говорит Энгельс. Но первым орудием труда была рука как орган тела, отделившийся по своей функции от задних конечностей, от ног. <...> Можно сказать, что рука и труд рождаются одновременно, и с этого именно исторического момента начинается господство человека над природой. Энгельс правильно подчеркивает, что вместе с развитием руки и труда развиваются и органы чувств, из них прежде всего чувство осязания. Из непосред ственного процесса труда Энгельс выводит также и происхождение языка. Однако, Энгельс говорит лишь о звуковой речи. Новейшие исследования – а из них первое и главное место занимают работы Марра – привели к выводу о существовании ручного языка, причем ручной язык, как и звуковая речь были вначале производственными, а не разговорными языками» (Деборин 1935: 30). Труд-производство находится в центре картины Марра: возьмем его определение языка в сравнении со сталинским, с их одинаковым genus proximus, но совершенно разными подходами, отлично выражающи мися в коротком «жанре» определения. Марр не может обойтись без глоттогенетического экскурса, довольно-таки, кстати, развернутого, несмотря на лаконичность: «Язык есть орудие общения, возникшее в трудовом процессе, точнее – в процессе творчества человеческой культуры, т.е. хозяйства, общественности и мировоззрения» (Марр 1936: 127). Сталина же происхождение языка не заботит совершенно, и для него вполне достаточно, что «язык есть средство, орудие, при помощи которого люди общаются друг с другом, обмениваются мыслями и добиваются взаимного понимания» (Сталин 1953: 12).

Таким образом, концепция ручного языка является составной частью трудовой теории глоттогенеза Марра и безусловной новацией ученого. Ни у Энгельса, ни у Нуаре не то чтобы предположения о ручном языке, но даже и отделенных намеков на него мы не находим (хотя Марр и марристы пытались приписать истоки этой идеи Энгельсу). Однако у этой идеи имеются предшественники. Непосредст венным источником вдохновения гипотезы ручной речи Марра была концепция миметического языка В. Вундта, выдвинутая им в работе «Душа человека и животных» (1863), в которой, помимо прочего, он ставил задачу с помощью методов психологии прояснить происхождение языка. Понимание и определения языка у Вундта прочно связывается с психологией: «Понятие языка не связано исключительно со словом. Язык есть всякое выражение чувств, представлений или понятий посредством движения» (Вундт 1966: 484). Именно Вундт впервые выдвинул и предпринял попытки обосновать гипотезу, суть которой заключалась в том, что «языку звуков» предшествовал «мимический язык», «язык телодвижений», «язык жестикуляции» (Там же: 480–485). Общим основанием этой гипотезы было предположение, принимаемое и Марром, согласно которому звук изначально не может служить средством выражения и передачи представления, сообщения, ибо никаким образом не может быть связанным со смыслом; тогда как мимика и телодвижения могут и должны выполнять такие функции, которые отнюдь не сразу и не быстро перейдут к слову, к звуковому языку. Вывод Вундта таков: «...Вопрос о происхождении языка мы свели к вопросу о происхождении мимических движений вообще. Этим он упрощается настолько же, насколько обобщается» (Там же: 485). Заметим, что связь человека и животного мира пролегает именно в плоскости мимического языка, который аналитически, по Вундту, «уничтожает даже границу между человеком и животным» (Там же: 483).

Признавая влияние концепции Вундта на разработку Марром его теории глоттогенеза (сам Марр прямо это влияние не признавал, но и не отрицал), следует уточнить, что рассуждения Вундта не носят характер той стройности и развернутости, которая наблюдается у Марра. Более того, как таковой концепции ручного языка у Вундта попросту нет, или же она дана в расплывчатом, контурном виде. К тому же представления / сообщения у Вундта транслируются не только (и, может быть, не столько) с помощью рук, сколько всем комплексом телодвижений и мимики: недаром основной термин Вундта звучит как «мимический язык». Отсутствует в работе Вундта и конструкция перехода к звуковой (словесной, если точно следовать его тексту) речи, тем более нет и не может быть у него целой эпохи ручного языка. У Марра же этот переход от одной эпохи к другой прописан очень четко, с полной антропологической и даже «политической» (производство, порождающее «пра-классы») концептуализацией.

Появление звуковой речи напрямую связывается Марром с развитием труда, а именно с овладением человеком искусствен ными орудиями труда: звуковая речь формируется «в связи с переходом человечества с естественных орудий производства на искусственные, им созданные и обработанные...» (Марр 1933: 212); или же: «Второй язык, звуковой, возник лишь после того, как человечество перешло на труд с помощью искусственного, им изобретенного орудия» (Марр 1936: 129). С орудийным трудом и звуковым языком у Марра, как и у Нуаре, связано появление и развитие абстрактного, понятийного мышления, причем эта концептуальная линия выстроена Марром даже более четко, чем это показано Нуаре.

В свою палеонтологическую конструкцию развития звукового языка Марр вводит много спорных, а то и сомнительных элементов, что во многом затеняет тот постулат, что главным движущим мотивом в этом процессе был труд, развитие орудийного труда. Вместо продуктивного поиска в обозначенном направлении Марр, добавляя в конструкцию магию, тотемы и пр., попросту сбивался в бессвязные рассуждения; и проблема перехода от ручного языка-мышления к логическому (отвлеченному, понятийному) не получила у Марра конструктивного решения, а его «магические штудии» обрекли как последователей, так и исследователей путаться в «труд-магической тарабарщине» и дебрях четырех элементов, которые представляются то как тотемы, то как коллективные орудия производства и потому «средства эксплуатации». Постулировав «труд-магизм» вместо «труд-символизма», Марр, по сути, свел собственную трудовую теорию глоттогенеза к абсурду. Звуковая речь с момента своего появления трактуется Марром как магическое средство, используемое соответственно первым в истории классом – магами. Звуковой язык изначально был, по Марру, одновременно и одним из орудий труда (наряду с топором, молотом и т.п.), и частью, а впоследствии и основой новой технологии, нового, более эффективного *способа производства*. Однако социальный аспект в генезисе звуковой речи благодаря «магизму» получил деформированное преломление, фактически ретушировав проблему развития у людей способности к символизации, которая была не так уж и неудачно поставлена в связи с ручной речью и «снята» из-за введения постулатов о магизме звуковой.

IV. ЗАКЛЮЧЕНИЕ

Для продвижения своего учения Марру было важно оформить его как «марксизм в языкознании». Именно так с середины 1920-х гг. разрабатывалось и подавалось «Новое учение о языке». При этом сам Марр не был хорошо знаком с марксизмом, и дело сводилось лишь к тому, чтобы проводить соответствующую риторику и приводить как можно больше цитат из Маркса и особенно из Энгельса, которого с определенным успехом можно поставить в ряду истории языкознания. Таким образом, к марксизму он относился вполне прагматично, потребительски, по словам В.М. Алпатова, преследуя цель «использовать марксистское учение часто путем явной фальсификации, как источник своего учения» (Алпатов 2018: 73). В плане потребительского отношения тот же подход характерен и для обращения Марра и марристов с идеями Нуаре, но в обратном смысле: если роль классиков марксизма следовало любыми способами подчеркнуть, то роль Нуаре – наоборот, нивелировать или, во всяком случае, свести к минимуму. Получилось в итоге так, что ряд интересных и продуктивных идей Нуаре, особенно некоторые элементы его развернутой картины «орудийного» происхождения языка, остались практически вне поля научного внимания Марра и марристов, что явным образом обеднило «Новое учение о языке» в его глоттогенетической части. Однако при всем этом его идеи были достаточно интересны и в каком-то смысле – если не эвристически, то как минимум в отношении «метафизики языка» – ценны, даже плодотворны, особенно если учитывать тот факт, что гипотеза об изначальной жестовой речи в связи с развитием способности человека к символизации с 1970-х гг. привлекает все больше внимания в мире лингвистов.

ЛИТЕРАТУРА

- *Алпатов В. М.* История одного мифа: Марр и марризм. М.: УРСС, 2018. 284 с.
- *Аптекарь В. Б.* Н.Я. Марр и новое учение о языке. М.: Госсоцэкгиз, 1934. 185 с.
- *Деборин А. М.* Новое учение о языке и диалектический материализм. М.; Л.: АН СССР, 1935. 66 с.
- *Вундт В.* Душа человека и животных. Т. II. СПб.: Типография Н. Тиблена и К°, 1866. 551 с.
- *Леонтьев А. А.* Проблема глоттогенеза в современной науке // Энгельс и языкознание / Под ред. В.Н. Ярцевой. М.: Наука, 1972. С. 135–157.
- *Марр Н. Я.* Избранные работы. Т. 1. Этапы развития яфетической теории. М.; Л.: АН СССР, 1933. 400 с.
- *Марр Н. Я.* Избранные работы. Т. 2. Основные вопросы языкознания. М.; Л.: АН СССР, 1936. 524 с.

- *Никандров А. В.* Лингвистика и политика: политические мотивы и цель «свободной дискуссии по вопросам языкознания» 1950 г. // Дискурс-Пи. 2023. Т. 20. № 1. С. 46–70.
- *Нуаре Л.* Орудие труда и его значение в истории развития человечества. Давидзон И. (пер., предисл, прим.). [Харьков]: Гос. изд-во Украины, 1925. 396 с.
- *Сталин И. В.* Марксизм и вопросы языкознания. М.: Госполитиздат, 1953. 56 с.
- *Энгельс Ф.* Диалектика природы. М.: ОГИЗ, Госполитиздат, 1940. 338 с.
- *Энгельс Фр.* Роль труда в процессе развития обезьяны в человека. СПб.: Изд-во Марии Малых, [1906]. 14 с.

REFERENCES

1. *Alpatov V. M.* Istoriya odnogo mifa: Marr i marrizm [A story of one myth: Marr and Marrism]. Moscow: URSS, 2018. 284 p. (in Russian).
2. *Aptekar' V. B.* N.Ya. Marr i novoe uchenie o yazyke [Nikolai Marr and new doctrine of language]. Moscow: Sotsekgiz, 1934. 185 p. (in Russian).
3. *Deborin A. M.* Novoe uchenie o yazyke i dialekticheskiy materialism [The new doctrine of language and dialectical materialism]. Moscow; Leningrad: Academy of Sciences of the USSR, 1935. 66 p. (in Russian).
4. *Engels F.* Dialektika prirody [Dialectics of nature]. Moscow: OGIZ, Gospolitizdat, 1940. 338 p. (in Russian).
5. *Engels Fr.* Rol' truda v protsesse razvitiya obez'yany v cheloveka [The role of labor in the process of the transition from ape to man]. Saint Petersburg: Maria Malykh Publishing House, [1906]. 14 p. (in Russian).
6. *Leont'ev A. A.* Problema glottogeneza v sovremennoi nauke. [The problem of glottogenesis in modern science] // Engel's i yazykovoznanie. Yartseva V.N. (ed.). Moscow: Nauka, 1964. P. 135–157. (in Russian).
7. *Marr N. Ja.* Izbrannye raboty. T. 1. Etapy razvitiya yafeticheskoi teorii [Selected works. Vol. 1. Stages of development of Japhetic theory]. Moscow; Leningrad: Academy of Sciences of the USSR, 1933. 400 p. (in Russian).
8. *Marr N. Ja.* Izbrannye raboty. T. 2. Osnovnye voprosy yazykoznaniya [Selected works. Vol. 2. Basic questions of linguistics]. Moscow; Leningrad: Academy of Sciences of the USSR, 1936. 524 p. (in Russian).
9. *Nikandrov A. V.* Lingvistika i politika: politicheskie motivy i tsel' "svobodnoi diskussii po voprosam yazykoznaniya" 1950 g. [Linguistics and politics: political motives and purpose of Free discussion on problems of linguistics of 1950] // Diskurs-Pi. 2023. Vol. 20, No 1. P. 46–70. (in Russian).
10. *Noiré L.* Orudie truda i ego znachenie v istorii razvitiya chelovechestva [The tool of labor and its significance in the history of human development]. I. Davidzon (transl., pref., notes). [Kharkov]: State publishing house of Ukraine, 1925. 396 p. (in Russian).
11. *Stalin J. V.* Marksizm i voprosy yazykoznaniya [Marxism and problems of linguistics]. Moscow: Gospolitizdat, 1953. 56 p. (in Russian).
12. *Wundt W.* Dusha cheloveka i zhivotnykh [The soul of man and animals]. Vol. II. Saint Petersburg: Printing house of N. Tiblen and Co., 1866. 551 p. (in Russian).

This page is intentionally left blank

Scan to know paper details and author's profile

Invisible Giants. The Research Seminar as a space of Interdisciplinary Convergence and Propitiation of Creative Research (I+C)

Diego Alexander García Gaviria, Jeinsbert Jensen Gomez & Mariana Cruz

Fundación Universitaria del Área Andina

ABSTRACT

Through the Mixed Realities research group of the Faculty of Design, Communication and Fine Arts, Pereira Section, of the Fundación Universitaria del Área Andina, the research project creation (I+C) Invisible Giants was generated, whose objective is to understand why the monuments in the center of the city of Pereira have become a landscape and are invisible to the inhabitants and passers-by of the sector.

All this mediated by the interdisciplinary convergence generated through the collaborative work of teachers and students of the Audiovisual and Digital Communication, Architecture and Animation Technology and Audiovisual Postproduction programs.

Keywords: research creation, convergence, inter- disciplinarity, interdisciplinarity, semillero.

Classification: LCC Code: LC5219

Language: English

Great Britain Journals Press

LJP Copyright ID: 573315
Print ISSN: 2515-5784
Online ISSN: 2515-5792

London Journal of Research in Humanities & Social Science

Volume 24 | Issue 10 | Compilation 1.0

Invisible Giants. The Research Seminar as a space of Interdisciplinary Convergence and Propitiation of Creative Research (I+C)

Diego Alexander García Gaviria[α], Jeinsbert Jensen Gomez[σ] & Mariana Cruz[ρ]

ABSTRACT

Through the Mixed Realities research group of the Faculty of Design, Communication and Fine Arts, Pereira Section, of the Fundación Universitaria del Área Andina, the research project creation (I+C) Invisible Giants was generated, whose objective is to understand why the monuments in the center of the city of Pereira have become a landscape and are invisible to the inhabitants and passers-by of the sector.

All this mediated by the interdisciplinary convergence generated through the collaborative work of teachers and students of the Audiovisual and Digital Communication, Architecture and Animation Technology and Audiovisual Postproduction programs.

Keywords: research creation, convergence, inter-disciplinarity, interdisciplinarity, semillero.

Author α: Bachelor's Degree in Educational Communication and Informatics and Master's Degree in Audiovisual Communication. Research professor of the Audiovisual and Digital Communication Program of the Fundación Universitaria del Área Andina. DICART Research Group.

σ: Architect designer, Master in Habitat from the Universidad Nacional de Colombia, with residential and institutional design processes, university professor in the fields of design, technology, urbanism and architectural representation.

Research professor of the Audiovisual and Digital Communication Program of the Fundación Universitaria del Área Andina. DICART Research Group.

ρ: Social Communicator - Journalist. Student of the Master's Degree in Cultural Studies and Contemporary Narratives. Coordinator of Professional Growth of Areandina. DICART Research Group. Fundación Universitaria del Área Andina, Sectional Pereira.

RESUMEN

A través del semillero de investigación Realidades Mixtas de la Facultad de Diseño, Comunicación y Bellas Artes, Seccional Pereira, de la Fundación Universitaria del Área Andina, se generó el proyecto de investigación creación (I+C) Gigantes Invisibles, cuyo objetivo es comprender el por qué los monumentos del centro de la ciudad de Pereira se han convertido en paisaje y son invisibles para los habitantes y transeúntes del sector.

Todo ello mediado por la convergencia interdisciplinar generada a través del trabajo colaborativo de docentes y estudiantes de los programas de Comunicación Audiovisual y Digital, Arquitectura y Tecnología en Animación y Postproducción Audiovisual.

Palabras Claves: investigación creación, convergencia, interdisciplinariedad, semillero.

I. INTRODUCTION

University life reveals interactions that strengthen its immediate environment. Its identity is defined by social and cultural dynamics that not only involve the university community, but also all the inhabitants of the area where it is located. The study of these dynamics is fundamental for the design and projection of future interventions, contributing to the sustainable and harmonious development of the urban environment.

From the academy, in this case the Fundación Universitaria del Área Andina Seccional Pereira, a university located in the center of the city, research is conducted on the social dynamics of the sector where it is located. This research seeks to strengthen the knowledge of the area and understand the social and cultural exchanges of the entire academic community. Thus, the Mixed Realities research group, attached to the DICART research group, aims to provide tools in the study of the center of the city of Pereira, focusing specifically on the urban elements of the landscape.

The strategic location of the university and the social fabric that can be strengthened through urban projects generate a unique opportunity for intervention and reflection. The Invisible Giants project arises, which seeks to generate a reflection about the monuments located in the center of the city of Pereira, which have become part of the urban landscape and have lost their recognition by the inhabitants and passers-by. This project aims to revitalize the memory and cultural value of these monuments, integrating them back into the daily life of the city.

In 2003, the city of Pereira was ranked as the Latin American city with the largest number of sculptures. This distinction highlights the importance of studying these monuments, updating their detailed information, their location and their relationship with their immediate surroundings. This study is crucial to preserve and enhance the cultural and artistic heritage of the city, promoting greater appreciation and recognition by the community.

Pereira, a city located in the heart of the Colombian Eje Cafetero, is known not only for its coffee-growing wealth and economic dynamism, but also for its impressive collection of monuments and sculptures that inhabit its public spaces. These monuments, located throughout the city, embellish the urban environment and tell deep and meaningful stories about the cultural identity, history and values of the Pereira community. From the iconic Naked Bolivar in the Plaza de Bolivar to the imposing Christ the King on Cerro Canceles, each work of public art in Pereira offers a unique window into the city's historical and contemporary narratives, underscoring the importance of preserving and revitalizing these cultural symbols for future generations.

To mention a few gigantic inhabitants of the city center:

- *The Naked Bolivar:* Located in the Plaza de Bolivar, it is one of the most representative of the city. It was created by sculptor Rodrigo Arenas Betancourt and shows Simon Bolivar in a heroic and naked posture, symbolizing the freedom and purity of his ideals.
- *Monument to the Founders:* It is located in the Olaya Herrera Park and commemorates the founders of the city. It is a work of the same sculptor Rodrigo Arenas Betancourt and represents the colonizing deed and the efforts of the pioneers.
- *La vendedora de Mangos:* Located on carrera séptima between twenty-first and twenty-second streets.
- *The muleteer:* Located on the corner of Calle Quince and Carrera VIII, a tribute to the Antioquian settlers who came to the city.
- *Bust of General Rafael Uribe Uribe:* Located on 24th Street on the lake park, erected in honor of the general of the same name.
- *Gracias a la Vida (Thanks to Life):* Located on Carrera Quinta between eighteenth and nineteenth streets, in honor of the newborns.
- *In Search of Light:* Located on Calle 20 and Carrera 10, at the foot of the El Diario del Otún building.

Among fifteen other monuments, since in the perimeter of the center of the city of Pereira there are about twenty-two monuments on pedestals, not counting those that are inside buildings, murals and/or busts protruding from the buildings, which were discarded because they are inside private property.

To address the challenge of the Invisible Giants project, three key conceptual categories have been defined to guide its development and methodology. These categories establish a clear and structured path for the work, in order to obtain a deep understanding and an effective intervention in the study and revitalization of Pereira's monuments:

- *Research Semillero:* Semilleros are academic spaces where students and teachers collaborate in research projects, fostering active learning and the development of new competencies.

- *Interdisciplinarity:* The integration of different disciplines allows problems to be addressed holistically, combining different perspectives and methodologies to enrich the analysis and proposed solutions.
- *Creative Research (R+C):* This approach combines academic research with creative practice, allowing the results not only to remain in the theoretical realm, but to be translated into practical interventions that have a direct impact on the community.

Through these categories, the project seeks not only to study and document the monuments of downtown Pereira, but also to revitalize their presence in the urban space and in the consciousness of citizens. This interdisciplinary and collaborative approach not only enriches the training of students, but also contributes to the strengthening of the social and cultural fabric of the city, promoting a more inclusive and participatory urban development.

II. INVISIBLE GIANTS: CATEGORIES

2.1 Research Semillero

The interaction between teachers and students is not only developed in the classroom; there are university mission activities that go beyond academics, such as extension projects and research. The latter is strengthened by the research groups associated with the research groups, in this case, the Dicart group belonging to the faculty of design, communication and fine arts of the Fundación Universitaria del Área Andina.

Starting from the word seedbed, which insinuates the idea of sowing, planting and cultivating a great interest of the students in research and that its sprout unfolds in the best way during their university path, the seedbed seeks that the students can explore, investigate, learn, debate, use different tools and develop methods in the resolution of problems of their immediate environment as well as regional, national and even international ones.

Involving students in research processes allows them to broaden their knowledge in their field of study, strengthen teamwork and develop interdisciplinary relationships, an important concept in the development of this mission activity. For this, it is necessary to understand the micro-curricula of each academic program and carefully study both generic and professional competencies to guide students in the construction of their character and professional profile. In addition, students should be encouraged, from the first semesters, to participate in research processes, reiterating the importance of work outside the classroom in the generation and application of knowledge.

The research workshops bring significant benefits to the students, among them:

- *Development of Skills in Reading, Analysis and Comprehension of Information:* Students learn to review scientific literature, analyze data and draw relevant conclusions. In addition, they improve their skills in writing and presenting reports and results, which is essential for their academic and professional training.
- *Teamwork and Professional Networking:* Participating in research workshops allows students to collaborate with other students and professionals, strengthening their teamwork skills and developing a valuable network of contacts for their future career.
- *Cognitive and Technical Knowledge Development:* Seminars promote critical thinking and foster creativity by confronting students with real problems that require innovative and well-founded solutions.
- *Practical Application of Knowledge:* Through specific projects, students can apply what they learn in the classroom to real-world situations, which enriches their understanding and provides them with hands-on experience.
- *Innovation and Problem Solving:* Seminars allow students to use different research tools and methodologies to address both local and global problems. This not only contributes to their personal and professional development, but can also have a positive impact on the community and society at large.

2.2 Projects in Research Seminars

A key example is the "Sustainable Architecture" project developed by DICART students, where they researched and designed ecological architectural solutions for rural communities. This project not only allowed them to apply technical knowledge of architecture and design, but also to understand the social and environmental implications of their proposals. This approach aligns perfectly with research-creation, as it combines research rigor with creative practice to generate innovative solutions that not only contribute to technical knowledge, but also have a tangible impact on the community.

Another project is "Digital Narratives for the Preservation of Cultural Heritage", where Audiovisual and Digital Communication students collaborated with experts in history and anthropology to create documentaries and interactive platforms that promote and preserve the cultural heritage of indigenous communities in Colombia. This interdisciplinary work enriched their understanding of cultural value and allowed them to develop advanced technical skills in audiovisual production. Here, research-creation is clearly manifested as students research, document and use creative media to disseminate and preserve knowledge, transforming the understanding and appreciation of cultural heritage.

III. IMPACT ON THE INTEGRAL FORMATION OF THE STUDENT

By integrating these aspects, the research workshops not only improve students' technical and academic competencies, but also foster the development of a global vision and a proactive attitude towards professional and social challenges. This integrated approach prepares students to effectively and creatively face the challenges of their future careers and contributes significantly to their personal and professional development. The research-creation methodology is important in this process, as it promotes continuous exploration and experimentation, allowing students to apply their theoretical knowledge in practical projects that have real and tangible relevance.

Finally, interdisciplinarity and active collaboration between students and teachers in the research seedbeds invite to leave academic biases aside, valuing the solution of confusing and complex research problems. They also create different perspectives that involve multiple actors, facilitating the exchange of knowledge as a visible and tangible impact on students, teachers, the academic community and the external sector. This approach not only enriches the educational process, but also generates results that can be applied in real contexts, demonstrating the practical and theoretical value of interdisciplinary research. Research-creation, when integrated with interdisciplinarity, enhances these benefits, as it fosters innovation and creativity, which are crucial to effectively address complex problems.

3.1 Interdisciplinary

A key concept in the structuring of any research project is interdisciplinarity, which has different views and approaches that seek to propose and develop research strategies in the Invisible Giants project. Research takes on a significant value as an articulating axis in the resolution of questions. From multiple perspectives, not only a result is obtained, but also the development of new methodologies and research methods is achieved.

Interdisciplinarity takes a leading role as an element that derives in multiple aspects present in a multifaceted research approach. Therefore, it is necessary to highlight the following aspects:

- Comprehensiveness in the Assumption of Problems and Concerns: Approaches problems from a holistic perspective, allowing for a more complete and deeper understanding.
- Innovation through Collaborative Work: Encourages creativity and the generation of novel solutions through collaboration among diverse disciplines.
- Integral Knowledge Transfer: Facilitates the dissemination and application of knowledge among different areas and contexts.

- Consolidation of Different Viewpoints: Enriches the analysis and interpretation of data, integrating multiple perspectives.
- Study of Complex Problems: Allows addressing issues that are too complicated to be solved by a single discipline.
- Teamwork: Promotes collaboration among researchers from different fields, articulating their efforts towards a common problem.
- Continuous Follow-up of Research Processes: Establishes mechanisms for the evaluation and continuous improvement of projects.
- Innovative Knowledge Dissemination Strategies: Develop new ways to communicate findings in an effective and accessible manner.
- Encouraging Co-creation: Involves different actors in the creation process, from the beginning to the implementation of solutions.
- Formulation of Results Monitoring Strategies: Design methods to evaluate the impact and effectiveness of the interventions carried out.
- Academic Strengthening and Exchange: Promotes collaboration and knowledge exchange between teachers and students.

From the application and articulation of this concept as the main axis of the research, we intend to venture our students in the concerns that, from different objects of study, we can deepen thanks to collaborative work. This becomes the fundamental guideline to answer the multiple questions that may arise during the research.

For example, in the Invisible Giants project, students of Audiovisual and Digital Communication, Architecture and Animation and Audiovisual Postproduction Technique work together to address issues such as the representation of urban spaces that are invisible to the majority of the population. This approach not only allows them to apply their specific knowledge, but also to develop skills in collaborative research and complex problem solving.

Interdisciplinarity invites to leave academic biases aside, valuing the solution of confusing and complex research problems. It also creates different perspectives that involve multiple actors, facilitating the exchange of knowledge as a visible and tangible impact on students, teachers, the academic community and the external sector. This approach not only enriches the educational process, but also generates results that can be applied in real contexts, demonstrating the practical and theoretical value of interdisciplinary research.

Now, how to relate research creation (R+A) with interdisciplinarity?

Research-creation emerges as an innovative approach that transcends traditional disciplinary boundaries, embracing interdisciplinarity as a driving force of knowledge. In this paradigm, artistic creation is not limited to being a mere end product, but becomes a generative process of inquiry and discovery. Artists, researchers and academics from diverse disciplines converge in dialogue, intertwining their perspectives and methodologies to address complex issues from multiple angles.

Interdisciplinarity permeates every stage of research-creation, fostering a fruitful interaction between seemingly disparate fields. The visual arts, literature, music, design, social sciences, humanities and other domains intertwine, generating new ways of understanding and expressing reality. This holistic approach challenges established paradigms, encouraging research-creators to explore unexplored territories and question the conventional boundaries of knowledge. Thus, research-creation stands as a catalyst for transdisciplinary innovation, where creativity and academic rigor merge in a fruitful embrace.

IV. RESEARCH AND CREATION (R+C)

As proposed by Ballesteros, M., & Beltrán, E. M. (2018), research seeks to generate new knowledge that contributes significantly to the advancement of an area of knowledge. However, artistic creation also has an important role in human development, offering valuable contributions to the aesthetic world and to people's enjoyment. From the authors' point of view, creative practice not only involves the generation of new knowledge, but its product itself incorporates a transformative perspective of the world around us.

In both scientific research and creative practice, experimentation is fundamental, since through the senses and the interpretation of external stimuli, human beings construct the world and propose new knowledge. Both processes, research and creation, share etymological roots and require imagination, passion and creativity, as well as structured, rigorous processes and high levels of conceptualization.

The Faculty of Communication and Fine Arts of the Areandina University Foundation, from the essence of its academic programs promotes the development of artistic, cultural, social and innovative expressions that systematically require the application of the previously elucidated concept, however, through creative research, the products obtained in the search for answers to problems raised extrapolate from traditional research to a creative complement.

For the Ministry of Science, Technology and Innovation - Ministry of Science, Technology and Innovation - Minciencias, the research creation The processes of artistic creation, like research, manage disciplined and planned structures where constant experimentation plays an important role in achieving the final product, which is characterized by handling a plastic language (such as music, sculpture, dance, audiovisual, among others) that in countless cases, besides being original and unpublished (i.e. new knowledge), has moved the frontiers of knowledge of these disciplines. Minciencias (May 9, 2024): What is I+C? MINCIENCIAS. https://acortar.link/Dwr T3T.

The versatility of R+C (Research + Creation) includes the implementation of different methodologies that can be adopted according to the context to be investigated. Indeed, this adaptation contributes directly to an ambitious and meaningful production. With the above, we can infer in an iterative creation process, i.e., it is not linear or predetermined; on the contrary, from these conditions it seeks to transcend and articulate the disciplines in tangible processes of co-creation.

The use of different research techniques and methods is included in these creative processes, which not only lead to scientific academic publications, but also to tangible results that can be measured and that contribute to the solution of concrete problems. For example, the implementation of methodologies such as user-centered design, participatory action research and rapid prototyping allows researchers and creators to continuously adjust and improve their projects, responding to the specific needs and contexts in which they are developed.

During the development of the Invisible Giants project, the iterative processes and debates between teachers and students have been fundamental for the generation of critical thinking in students. This critical thinking has been strengthened by the interdisciplinary work that integrates all the academic programs of the faculty. For this project, the Mixed Realities seedbed brought together students from its three academic programs: Audiovisual and Digital Communication, Architecture and the Animation and Audio Visual Post Production Technique.

Working together, the students have been able not only to develop technical and conceptual skills in their respective areas, but also to learn to collaborate effectively in multidisciplinary teams. Through workshops, co-creation sessions and periodic evaluations, participants have explored diverse perspectives and approaches, enriching the creative process. The results obtained so far include prototypes of innovative solutions, audiovisual products that reflect the researched reality and architectural proposals that address urban issues identified during the project.

V. CONCLUSIONS

Although the research project is still under development, several partial appreciations can be taken into account, focused on the interdisciplinary interaction of both teachers and students.

First of all, there has been an enthusiasm for collaborative work among students, motivated by the amazement and discovery of processes of ideation, projection and materialization of specific designs, as well as by the research dynamics of each program. This interaction is reflected in the progress deliveries that have been satisfactory and have contributed significantly to the overall development of the research project.

The role of orienting and guiding the teachers in the research processes, framed within the objectives of the Mixed Realities research group, has been crucial. Through collective meetings, the generic and professional competencies that students must develop and strengthen in each academic program have been thoroughly reviewed. This has allowed a precise and effective direction of the students in each role and activity necessary for the development of the project.

Finally, a significant appropriation by the participating students is evidenced, fostered by the research + creation methodology. This methodology allows for greater exploration and experimentation both inside and outside the classroom. Although the process is supported by theoretical classes and specific concepts of each program, the collaborative practical work facilitates a better understanding of these concepts. In addition, this approach allows for tangible results and strengthens students' critical thinking. The combination of theory and practice in a collaborative environment has proven to be an effective strategy to boost students' academic and professional development, as well as to achieve significant advances in the research project.

BIBLIOGRAPHIC REFERENCES

1. Ballesteros, M., & Beltrán, E. M. (2018). Research creating? A guide for research-creation in the academy. Bogotá: Universidad El Bosque.
2. Bourriaud, Nicholas, 2002, Relational aesthetics, Paris, Les presses du réel.
3. Leavy, P. (2015). Methods meets art. art-Based Research Practice. New York, NY: The Guilford Press.
4. MINISTRY OF SCIENCE AND TECHNOLOGY COLOMBIA (May 16, 2023). *What is I+C?* Ministry of Science, Technology and Innovation. Retrieved from https://minciencias.gov.co/investigacion-creacion/que-es-ic.

This page is intentionally left blank

Scan to know paper details and author's profile

New Ways of Telling Stories: Usage of Transmedia Narratives for Science Communication in Museums

Dr. Lida María Robelto Cantor

ABSTRACT

This paper elucidate the results of the research "Museological Digital Storytelling in the Social Communication of Science," which aimed to identify innovations in digital and transmedia narratives from the museums of Bogotá D.C., Colombia. A systematic review methodology was employed, using web content analysis and netnography to collect both quantitative and qualitative data. The results obtained here enabled the identification of the current state of publications on transmedia narratives, science communication, and museology, as well as their implementation in museums from Bogotá D.C. Colombia.

Keywords: transmedia narratives, science, museology, communication.

Classification: LCC Code: AM151

Language: English

Great Britain Journals Press

LJP Copyright ID: 573316
Print ISSN: 2515-5784
Online ISSN: 2515-5792

London Journal of Research in Humanities & Social Science

Volume 24 | Issue 10 | Compilation 1.0

New Ways of Telling Stories: Usage of Transmedia Narratives for Science Communication in Museums

Dr. Lida María Robelto Cantor

ABSTRACT

This paper elucidate the results of the research "Museological Digital Storytelling in the Social Communication of Science," which aimed to identify innovations in digital and transmedia narratives from the museums of Bogotá D.C., Colombia. A systematic review methodology was employed, using web content analysis and netnography to collect both quantitative and qualitative data. The results obtained here enabled the identification of the current state of publications on transmedia narratives, science communication, and museology, as well as their implementation in museums from Bogotá D.C. Colombia.

Keywords: transmedia narratives, science, museology, communication.

I. INTRODUCTION

In contemporary society, scientific communication is essential for disseminating progress and innovation to diverse audiences (Ferrer & León 2008). Media, as a significant source of scientific content, have the power to influence public knowledge and understanding of academic and technological development. Moreover, these media allow to explore ways to overcome challenges and improve the quality of life (Martínez 2012). Consequently, scientific communication has been characterized by innovation in the use of languages, narratives, and various formats with the purpose of communicating science in privileged settings that foster learning in scientific, artistic, and social realms (Ferrer & León 2008; Jenkins 2008). Specifically, this way of communication seeks to promote social change in the communities by disseminating information that inspires individuals to act consciously and critically in the face of contemporary challenges (C. A. Scolari 2014; C. A. Scolari et al. 2014).

The way scientific information is disseminated has undergone significant changes over time. Traditional media are no longer the only means of transmitting scientific messages, as digital media have opened new spaces (Amado 2014; C. A. Scolari 2014). In this context, new opportunities have emerged to experiment with participatory, interactive, playful, and visual formats (Harmatiy 2021). For instance, numerous science communicators are using social networks like Instagram and TikTok to disseminate a wide variety of content related to scientific research or new technological applications of knowledge (Matin et al. 2023).

In the current museological trend, museums are conceived as communication media, as highlighted by Torres (2012). Compared to other media, museums offer an ideological vision of the world, narrate stories, and construct arguments by reconstructing the past and present, bringing research and knowledge closer to society. Within this framework, the transformation experienced by museums is an example of the evolution in scientific communication (Gonzalez & García 2022). Today, museums have become interactive spaces that aim to establish a connection with visitors and generate new ways of accessing knowledge (Torres 2012).

New museology focuses on interacting with communities and fostering enriching encounters (Wagensberg 2001). Consequently, the role of museums as memory devices innovating and communicating with their audience is questioned when the level of adoption and appropriation of transmedia narratives is evaluated (C. A. Scolari 2014). According to José Luis Brea (2016), the museum must be restructured to transform into a space for social communication through multimedia technologies, innovating in public reception methods and modes of contemplation. Similarly, the fundamental role of museums as social transformers telling stories alongside the innovation and invention of concepts and practices has been highlighted (Chagas 2009).

In Colombia, museums are characterized by being cultural, social, and artistic representation spaces of events that have marked the country's history over the years (Ayala 2019; Llanos 2015). Many of these museums have been declared heritage spaces internationally (ILAMDIR 2023). In the country's capital, Bogotá, there are 63 museums registered with the District Institute of Tourism (IDT 2016), mainly located in tourist and cultural aggregation zones (Gonzalez & García 2022). According to a study published by Statista Research Department, Bogotá is the most populous city in Colombia and one of the most populous in Latin America, making it the city with the highest number of museum visitors nationally (Statista Research Department 2023). Due to its cultural diversity, architectural heritage, artistic variety, and innovation in scientific communication, Bogotá has currently consolidated as one of the cultural capitals of Latin America (Gonzalez & García 2022).

Considering the above, a netnographic analysis of 25 museums in Bogotá was conducted in this work, accompanied by the construction of key bibliographic bases for the theoretical formulation of concepts associated with transmedia narratives and museology. This was done to address the implementation of transmedia narratives in Bogotá museums as a communication and scientific dissemination tool. This work highlights the importance of using these narratives as a challenge and commitment to ensure their survival within the new cultural logics of museology, scientific dissemination, and access to knowledge and culture.

II. MATERIALS AND METHODS

2.1 Unit of Analysis

The unit of analysis for this study comprises the museums in Bogotá D.C. The selection process for the museums included in this study was based on two specific criteria: (I) alignment with the National Strategy for Social Appropriation of Science, Technology, and Innovation by Minciencias, and (II) the use of various digital media and platforms for the scientific communication of their exhibitions.

Out of the 63 museums identified by the Bogotá District Institute of Tourism, 25 were selected that met these criteria. These include the Museo Arqueológico Casa del Marqués de San Jorge (MUSA), the Museo Botero, the Museo de Arte Colonial, the Museo de Arte Contemporáneo (MAC), the Museo de Bogotá, the Museo de la Independencia, the Museo de Arte Moderno de Bogotá (Mambo), the Museo de Trajes Regionales de Colombia, the Museo del Oro, the Museo Santa Clara, the Museo Nacional de Colombia, the Museo Quinta de Bolívar, the Museo Oficial Millonarios Fútbol Club, the Museo Casa Caro y Cuervo, the Museo del Espacio, the Casa Museo Ricardo Gómez Campuzano, the Museo de Ciencia y Tecnología Interactiva Maloka, the Museo de Historia Natural de la Universidad Nacional de Colombia, the Teatro Colón, the Museo Militar, the Museo de Artes Visuales de la Universidad de Bogotá Jorge Tadeo Lozano, the Museo Claustro de San Agustín, the Museo Sociedad de Cirugía de Bogotá-Hospital San José, the Museo de Historia de la Escuela Militar de Cadetes General José María Córdova, and the Observatorio Astronómico Nacional.

2.2 Literature Review

To complement this study, a robust literature review was conducted, allowing the construction and understanding of the main thematic concepts used in this analysis. The methodological process outlined by Codina (2020) was followed to determine publication trends and build a state of the art of the topics of interest. A systematic review of the SciELO and Scopus bibliographic databases was carried out, searching for the terms "Narrative," "Transmedia," "Communication," and "Museology" for the period from 2015 to 2023. For each search, variables such as the total number of articles published, the country with the highest number of publications, the year with the highest number of publications, and the number of annual publications were recorded.

2.3 Netnography and Description of Digitalization of Bogotá Museums

During the netnographic analysis, a descriptive-analytical method was employed to observe and analyze the implementation of transmedia content in the scientific communication of museums in Bogotá D.C. Visits to the selected museums were conducted between June and August 2022, where detailed observation and exhaustive analysis were fundamental tools for describing and understanding these characteristics.

Four aspects of interactive digital communication that define user experience and presentation of works in the 25 selected museums were considered. These aspects are: (1) Digitalization, focused on evaluating the transformation and adaptation to technological media; (2) Networkability, focused on evaluating the configuration of spaces to favor interactions among different attendees; (3) Hypertextuality, focused on evaluating non-sequential textual structures; and (4) Interactivity, focused on evaluating user participation with the content. Specific questions for each aspect were employed to evaluate the museums analyzed, as outlined in Table 1.

Subsequently, specific criteria were described as a tool to detail the communication characteristics in each museum. Factors such as the existence of social media accounts (Twitter, Facebook, Instagram, and TikTok) dedicated to each museum, the presence of publications or strategies focused on disseminating and informing about works related to scientific communication, and the presence of individual or joint websites were evaluated.

Table 1: Concepts, questions, and criteria corresponding to the aspects of interactive digital communication studied for the 25 museums in Bogotá.

Topic	Concept	Question	Criteria
1	Networkability	How varied is the museum experience in terms of content presentation?	3 = Much 2 = Some 1 = None
2	Hypertextuality	How much do museum visitors have space to interact with each other?	3 = Much 2 = Some 1 = None
3	Digitalization	How does the museum use transmedia content to present its exhibitions in an innovative or interesting way?	3 = Good 2 = Regular 1 = Absent
4	Interactivity	How do new technologies facilitate access and dissemination of scientific knowledge of the works present in the museum?	3 = Good 2 = Regular 1 = Absent

III. RESULTS AND DISCUSSION

3.1 Literature Review

The results of the systematic search using key terms in bibliographic databases are presented in Table 2. The keywords were chosen due to their relevance in current research on media and digital culture. The selected databases, SciELO and Scopus, are among the most important in the field of academic and scientific research. By using these keywords, the aim was to obtain a selection of articles discussing transmedia communication and its impact on various areas, thereby providing a description of the state of publications related to the keywords and the countries with the highest scientific output.

Table 2: Results of the keyword search in bibliographic databases (Scopus and SciELO). Source: Own elaboration

Keyword	Database	Number of publications	Country with most publications	Country with most publications	Number of publications per year
Narrative	Scopus	1647	Spain	2021	313
	SciELO	4935	Brazil	2021	727
Transmedia	Scopus	1478	Spain	2021	223
	SciELO	124	Colombia	2021	22
Communication	Scopus	3113	Spain	2022	484
	SciELO	14599	Colombia	2021	1568
Museology	Scopus	70	Brazil	2012	12
	SciELO	125	Brazil	2019	20

Table 2 indicates that there is a significant amount of research on the key terms studied. It was found that for the terms "Narrative," "Communication," and "Museology," SciELO hosts a greater number of publications compared to Scopus. Conversely, regarding the term "Transmedia," Scopus led in the number of available articles with a total of 1478 articles, compared to 124 publications available in SciELO. Similarly, the countries with the highest number of publications vary depending on the search term and the database used, with Spain, Brazil, and Colombia standing out as the countries with the highest scientific production related to the keywords used. Additionally, it was observed that 2021 was the year with the highest number of publications across all the keywords presented in the table, which could indicate an increase in research in these areas in recent years.

It is important to note that the analysis was conducted with terms in Spanish because the objective of this research focuses on the specific context of Bogotá D.C., which is why the language in the systematic search was restricted. This restriction may explain the significant difference in the number of publications available in each database, as Scopus is a bibliographic database that covers a wide variety of thematic areas primarily from Europe and is therefore mostly in English. SciELO, on the other hand, provides access to scientific journals that mostly correspond to research from Latin America and Spain, which causes these publications to be primarily in Spanish.

3.2 Concept construction

Based on the conducted literature review, an adequate conceptual construction was achieved for the most relevant terms in current research on media and digital culture.

IV. NARRATIVES

The initial frameworks of digital narratives focus on audiovisual and multimedia narratives. Hermann (2015), as one of the main authors in this aspect, mentions that since the advent of the internet, social practices have transformed, and the use of Information and Communication Technologies has contributed to the production of audiovisual discourses in the search for identity construction and the imaginaries of subjects. In this sense, the concept of narrative has had several guidelines supported by the development of new technologies and the appropriation of these technologies by users. Phillippi and Avendaño (2011) address the concept of narratives from a multidisciplinary perspective, recognizing their importance in various fields of knowledge and highlighting that narratives play a fundamental role in the construction of personal and collective identity. Thus, narrative implies a sequential, structured, coherent, and meaningful way of telling a story, whether written, oral, visual, or digital (Jauregui & Ortega, 2020; Phillippi & Avendaño, 2011).

V. TRANSMEDIA

Regarding transmedia narratives, recent authors such as Jauregui and Ortega (2020) and Sáiz (2016) mention that transmedia tools are characterized by the use of interactive elements, linking, and creation by users, which can contribute to facilitating the social appropriation of scientific knowledge. Thus, the importance of implementing these tools in museology lies in the need to provide more immersive and participatory user experiences that engage the public in the learning and dissemination process of science, allowing for flexibility that considers the audience's needs and various platforms (Jauregui & Ortega, 2020; Peñafiel, 2016). As UNESCO stated in 2014, heritage is something built from collective memories of the past and traditional practices, with their social and cultural functions, continuously reviewed and updated in the present. This is essential for societies to relate these memories to current problems and maintain their meaning and function in the future (UNESCO, 2014, p. 132).

VI. COMMUNICATION

Internationally, communication is defined as a complex process involving the transmission and reception of information, whether verbal or non-verbal, between two or more individuals or groups (Jenkins, 2008). Habermas regards that communication is a continuous process developed in social interaction with the aim of creating a public space where relevant societal issues can be discussed (Habermas, 1981). In the same museological trend, museums are currently conceived as social communication media. Carlos Scolari emphasizes that museums play an important role in transmitting cultural narratives and constructing collective identity (C. Scolari, 2018). Consequently, Henry Jenkins has highlighted that effective communication strategies in museums involve creating a coherent and attractive narrative that connects exhibited objects with the public, allowing for a meaningful and enriching experience (Jenkins, 2008).

VII. MUSEOLOGY

In general terms, museology is an interdisciplinary science that studies and practices the management, interpretation, and exhibition of cultural and heritage objects in museums and similar environments, combining knowledge and skills in areas such as art history, anthropology, archaeology, cultural management, education, and communication (Wagensberg, 2001). According to Burcaw, museology focuses on the theory and practice of creating, developing, and operating museums and related cultural institutions. Additionally, museology also concerns understanding and analyzing the social and cultural function of museums and their role in preserving and promoting cultural heritage (Burcaw, 2015). Museology has evolved over time, adapting to societal and cultural sector changes. Currently, it focuses on democratization and inclusion, seeking to make museums more accessible and relevant to communities. It has also adopted a more critical and reflective approach to museums' roles in creating memory and cultural identity, using new technologies, decolonizing museological practices, and returning cultural objects to their communities of origin (Mensch, 2015).

6.1 Netnography and Digitalization Description of Museums from Bogotá D.C.

From the netnographic analysis conducted on the 25 selected museums, clear differences were evidenced regarding the aspects and criteria set forth, as shown in Figure 1. With visits and the determination of specific criteria, it was identified that there is great variety in how each museum presents its exhibitions and uses different tools for scientific communication.

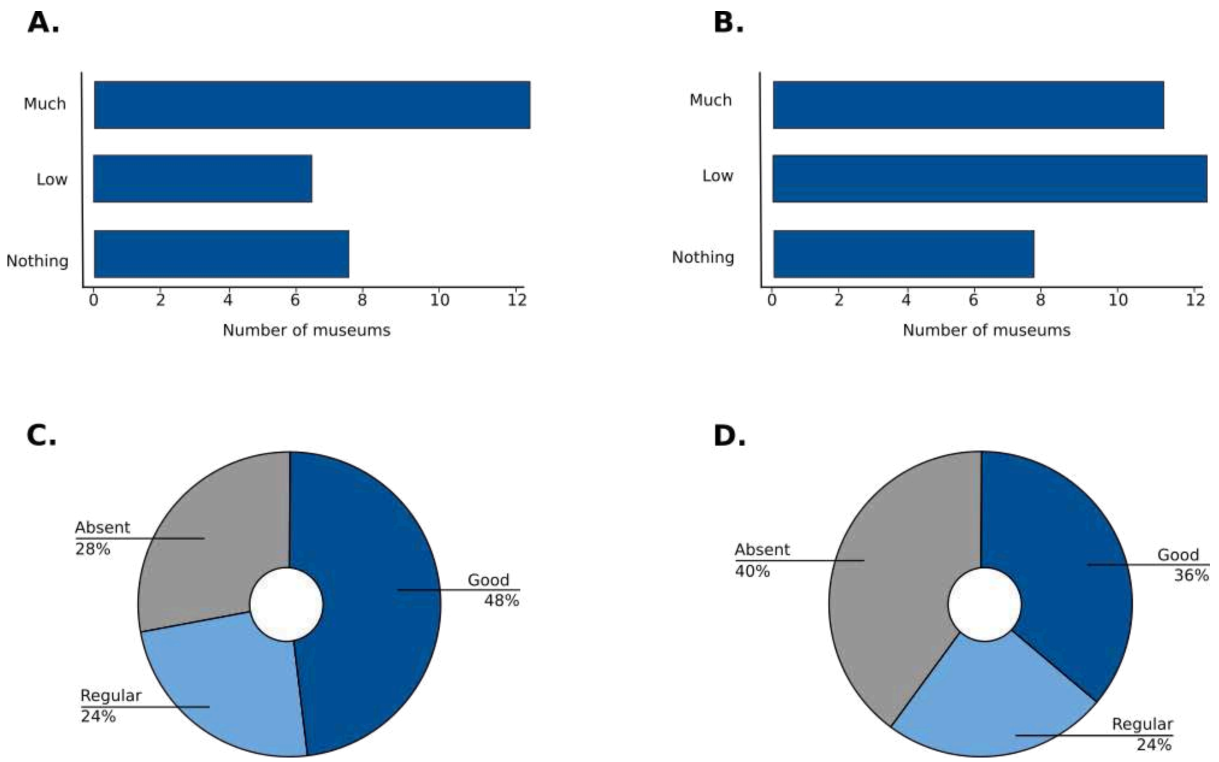


Figure 1: Graphical representation of the aspects of interactive digital communication analyzed based on specific criteria for the 25 museums in Bogotá. Where: Panel A. corresponds to the results obtained for Reticularity concept. B. Hypertextuality. C. Digitalization and D. Interactivity.

In Figure 1A, it is evident that approximately 50% of the studied museums have a highly varied content presentation, which is fundamental for achieving a satisfying and enriching experience for visitors (Riveros, 2016). The fact that most of the studied museums are categorized under the criterion "High" in this aspect indicates that Bogotá museums not only act as information providers but are also becoming access points to a wide variety of resources and knowledge. This promotes multiculturalism and interdisciplinarity in the dissemination of scientific content, broadening the diversity of the visiting public. Conversely, other museums exhibit very little or no variety in their exhibitions, mainly corresponding to historical museums that aim to maintain the colonial history they wish to portray.

On the other hand, analyzing the aspect of hypertextuality, it was found that most museums present low levels of interaction among visitors (Figure 1B). It is important to consider that depending on the type of exhibitions and content displayed in museums, interaction levels among visitors will vary. Science and modern art museums, such as the Interactive Science and Technology Museum, the National Astronomical Observatory, the Museum of Modern Art of Bogotá, and the Colón Theater, stood out in this aspect. This is due to their promotion of interaction through the exhibition of elements, interactive experiments, and innovative artistic representations via immersive scientific experiences, fostering dialogue and discussion among participants.

However, it is crucial to highlight that most studied museums correspond to classic art and history museums, where interaction is based more on the analysis and contemplation of displayed works. Consequently, this implies that spaces and common areas of most studied museums are primarily established for individual analysis and interpretation of works. Several experts in current museology, such as Lynn D. Dierking and John H. Falk and Nina Simon, suggest that visitors want to feel part of the museum's creative process, not just passive observers, learning better when they have the freedom to explore and experiment for themselves (Falk, 2009; Falk & Dierking, 2000;

Simon, 2010). The results of this research indicate that there is still a need to implement more participatory strategies to enhance interaction levels among visitors to museums in Bogotá, aligning museums with the community rather than merely serving as information providers.

Regarding the use of transmedia narratives, it was observed that 72% of the studied museums have implemented these types of narratives in their exhibitions (Figure 1C), with 48% categorized as having a good handling of these narratives and 24% as regular. Notably, most of these museums correspond to those with higher levels of variety in their presentations (Figure 1A) and greater levels of interaction among visitors (Figure 1B). This suggests that, as Jenkins states, technology can be used to create transmedia experiences that combine physical, digital, and social elements and foster visitor participation. Consequently, transmedia narratives become a fundamental tool for disseminating scientific knowledge to a more diverse audience by promoting curiosity and discovery (Jenkins, 2008).

Finally, regarding the use of new technologies to facilitate access and dissemination of scientific knowledge, it was demonstrated that although the majority of museums use social media, a significant percentage (40%) currently do not utilize these communication channels to disseminate information (Figure 1D). The analysis revealed that museums in Bogotá have yet to fully exploit the potential of content dissemination to attract audiences. This aligns with Figure 2, which shows that Facebook is the most utilized social network by museums, while they have not yet integrated the use of social media platforms popular among younger communities, such as TikTok. It is crucial for museums in Bogotá to better exploit new technologies as social media allows for reaching diverse audiences and expanding the cultural institution's reach (Matin et al., 2023). As communication and museum expert Elena Villaespesa notes: “social media allows reaching audiences who would otherwise not approach the museum, such as young people, tourists, or individuals who do not habitually visit exhibitions” (Villaespesa, 2018, p. 49).

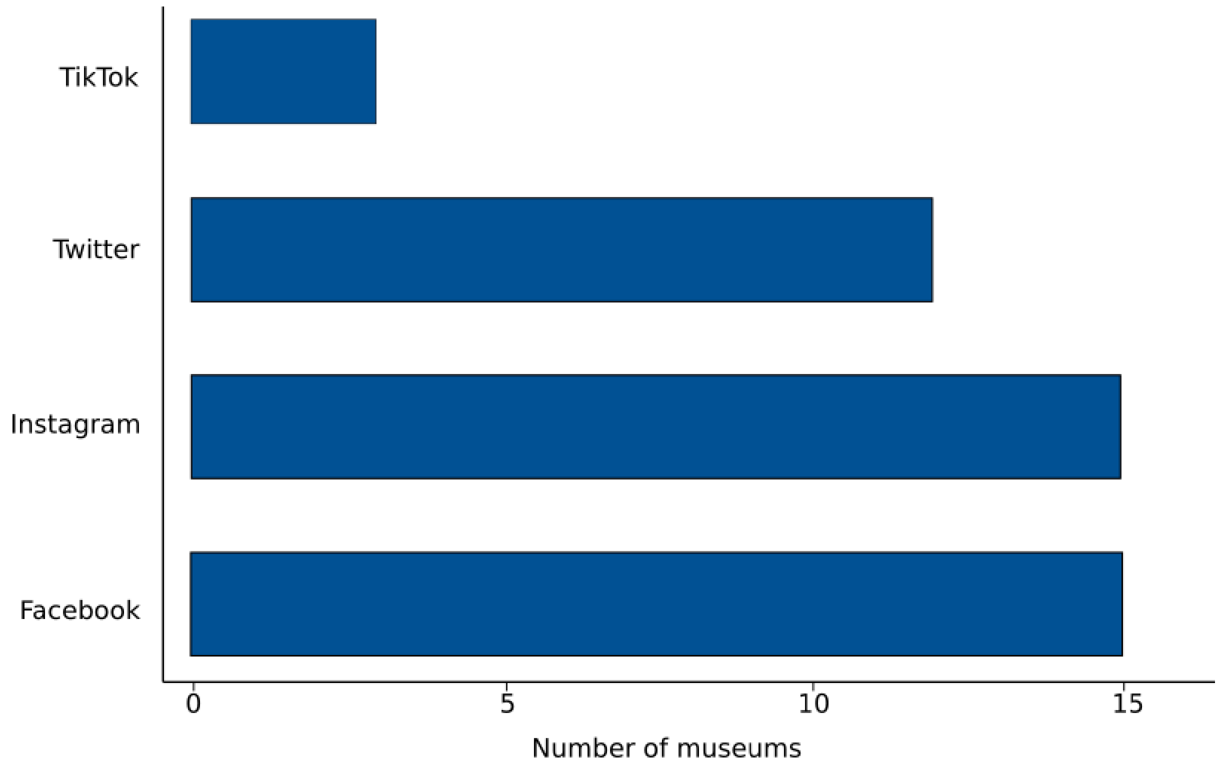


Figure 2: Number of museums studied that use social media as a tool for disseminating their exhibitions. Source: Own elaboration.

VIII. CONCLUSIONS

One of the main pillars of the social appropriation of scientific knowledge is the active participation of various social groups that act as knowledge generators. Transmedia narratives are an increasingly important tool in scientific communication. This study determined that such narratives are key to disseminating scientific knowledge to a broad and diverse audience, including those without prior experience or interest in science. This fosters greater participation in public debate on important scientific topics and their relevance in decision-making. However, it is essential to emphasize that a robust theoretical foundation is required for the proper implementation of these narratives in the dissemination of scientific knowledge.

The results of the systematic search for key terms in the Scopus and SciELO databases demonstrated that the topics of "Narrative," "Transmedia," "Communication," and "Museology" are areas of interest to the academic community. The results also showed that the countries with the highest scientific production in these areas can vary depending on the search term and database used. These findings highlight the importance of considering regional variations in scientific production and suggest the need to establish collaborations and research networks in specific areas across different countries. Overall, these results can be useful for planning and designing future research in these areas, as well as for identifying potential collaborators or research networks in various countries.

Additionally, this research determined that museums, as spaces of encounter and knowledge, can be considered a valuable source of scientific information as they allow for the dissemination of the cultural heritage of humanity. Similarly, they have great potential to spread knowledge through the implementation of transmedia narratives and the use of different resources and media, making information more accessible and attractive to the public. However, the implementation of transmedia narratives as communication tools presents challenges in creating accessible, diverse, and interactive spaces, achievable only through the collaboration of all involved stakeholders. For these reasons, it is important to continue researching and developing new strategies to improve scientific communication through museums as cultural spaces.

The netnographic analysis conducted on the 25 museums in Bogotá identified significant differences in how each museum presents its exhibitions and uses scientific communication tools. While most museums have varied content presentations, visitor interaction is still limited in most cases, except for science and modern art museums. Additionally, it was found that museums using transmedia narratives have higher levels of variety in their presentations and greater levels of visitor interaction. Furthermore, a high percentage of museums do not use social media to disseminate information, indicating significant potential to exploit this field for content dissemination.

In general, the results of this research indicate that although there has been significant development in the use of innovative strategies for disseminating scientific information in Bogotá's museums, more participatory and technological dissemination strategies are needed to improve visitor interaction levels and access to information. This study highlights the importance of these narratives as a challenge and commitment to ensure their survival in the new cultural logics of museology, scientific dissemination, and access to knowledge and culture. This is necessary to enhance the visitor experience, positioning museums as part of the community and not just as information providers.

REFERENCES

1. Amado, J. C. (2014). Transmediaciones, Nativos Digitales y Educación. *ComunicaRed*, *1*(1), 193–216.
2. Ayala, D. T. (2019). Museo de Memoria Histórica de Colombia (2012-2019) ¿Un lugar para el diálogo memorial? *Historia y Memoria*, *20*, 135–168. https://doi.org/10.19053/20275137.n20.2020.9549.

3. Brea, J. L. (2016). El arte en el contexto contemporáneo. *Lápiz: Revista Internacional Del Arte, ISSN 0212-1700, Nº Extra 291-293, 2016 (Ejemplar Dedicado a: 35 Aniversario Revista Lápiz), Págs. 109-109*, *291*, 109–109. https://dialnet.unirioja.es/servlet/articulo?codigo=5911897
4. Burcaw, G. (2015). *Introduction to Museum Work* (Rowman & Littlefield Publishers (ed.); 3rd ed.).
5. Chagas, M. (2009). Los museos en el marco de la crisis. *Museos.Es: Revista de La Subdirección General de Museos Estatales*, *5–6*, 86–101.
6. Codina, L. (2020). Fundamentos. In Anuario de Métodos de Investigación en Comunicación Social (Ed.), *Revisiones bibliográficas sistematizadas en Ciencias Humanas y Sociales*. (pp. 50–60).
7. Falk, J. H. (2009). *Identity and the Museum Visitor Experience* (Routledge (ed.)).
8. Falk, J. H., & Dierking, L. (2016). *The museum experience revisited* (Routledge (ed.)).
9. Ferrer, A., & León, G. (2008). Cultura científica y comunicación de la ciencia. *Razón y Palabra*, *65*. https://dialnet.unirioja.es/servlet/articulo?codigo=2769570&info=resumen&idioma=SPA
10. Gonzalez, J. A., & García, M. (2022). Los museos como elementos clave para la proyección de la Marca Ciudad. Análisis de los museos Botero de Bogotá y Guggenheim de Bilbao. *Diferents Revista de Museus*, *7*, 26–51. https://doi.org/10.6035/diferents.6663
11. Habermas, J. (1981). *Teoría de la acción comunicativa*. (Taurus (ed.)).
12. Harmatiy, O. (2021). Science Coverage: What Does the Audience Want and Really Need? Exploring Media Consumption in Ukraine. *Journal of Creative Communications*, *16*(4). https://doi.org/10.1177/0973258620981799
13. Hermann, A. (2015). Narrativas digitales como didácticas y estrategias de aprendizaje en los procesos de asimilación y retención del conocimiento. *Sophia, Colección de Filosofía de La Educación*, *1*(19), 253–269. https://doi.org/10.17163/soph.n19.2015.12.
14. IDT. (2016). Museos que integran atractivos turisticos de Bogotá. *Instituto Distrital de Turismo*. https://www.elnuevosiglo.com.co/articulos/07-2016-63-museos-integran-atractivos-turisticos-de-bogota
15. ILAMDIR. (2023). *Directorio Latinoamericano de Recursos Patrimoniales*. https://ilamdir.org/pais/colombia
16. Jauregui, A., & Ortega, C. (2020). Narrativas transmediáticas en la apropiación social del conocimiento Transmedia. *Revista Latina de Comunicacion Social*, *2020*(77), 357–372. https://doi.org/10.4185/RLCS-2020-1462
17. Jenkins, H. (2008). *Convergence Culture. La cultura de la convergencia en los medios de comunicación* (Paidós Ibérica (ed.)).
18. Llanos, S. A. (2015). *Espacios de la museología en Bogotá: La comunidad, el museo y el archivo* [Universidad Nacional de Colombia]. http://bdigital.unal.edu.co/47207/
19. Martínez, P. (2012). La ciencia al alcance de la sociedad a través de los medios de comunicación. *AdComunica: Revista de Estrategias, Tendencias e Innovación En Comunicación*, *3*, 217–220. https://doi.org/10.6035/2174-0992.2012.3.15
20. Matin, J. I., Trillo, M., & Olvera, M. (2023). Comunicación científica tras la crisis del COVID-19: estrategias de publicación en TikTok en el tablero transmedia. *Revista Latina de Comunicacion Social*, *81*, 109–132. https://doi.org/https://www.doi.org/10.4185/RLCS-2023-1841
21. Mensch, P. Van. (2015). Museality at breakfast: the concept of museality in contemporary museological discourse. *Museologica Brunensia*, *4*(2), 14–19. http://hdl.handle.net/11222.digilib/134743
22. Peñafiel, C. (2016). Reinvención del periodismo en el ecosistema digital y narrativas transmedia. *AdComunica. Revista Científica de Estrategias, Tendencias e Innovación En Comunicación*, *12*(12), 163–182. https://doi.org/http://dx.doi.org/10.6035/2174- 0992.2016.12.10 Palabras
23. Phillippi, M., & Avendaño, C. (2011). Empoderamiento comunicacional:

competencias narrativas de los sujetos. *Comunicar*, *36*, 61–68. https://doi.org/10.3916/C36-2011-02-06
24. Riveros, D. (2016). *Estudio de públicos. Lorenzo no como los otros lorenzos*. (pp. 36–47). Museo Nacional de Colombia.
25. Scolari, C. (2018). *El translector. Lectura y narrativas transmedia en la nueva ecología de la comunicación*.
26. Scolari, C. A. (2014). Narrativas transmedia: nuevas formas de comunicar en la era digital. *Anuario AC/E de Cultura Digital*, 71–81. http://hipermediaciones.com/
27. Scolari, C. A., Fernández, S., Azcárate, D. E., Garín, M., Guerrero, M., Jiménez, M., Obradors, M., Oliva, M., Pérez, Ó., & Pujadas, E. (2014). Narrativas transmediáticas, convergencia audiovisual y nuevas estrategias de comunicación. *Quaderns Del CAC*, *15*(1), 79–89. www.cac.cat
28. Simon, N. (2010). *The participatory Museum*. MUSEUM.
29. Statista Research Department. (2023). *Ciudades con la mayor cantidad de habitantes en América Latina en 2022*. https://es.statista.com/estadisticas/1192117/ciudades-sudamericanas-mas-pobladas/
30. Torres, M. (2012). Propuesta de "UCOMuseo virtual", museo y metamuseo de la Universidad de Córdoba (España)". *Revista de Formación e Innovación Educativa Universitaria*, *5*(3), 133–152.
31. UNESCO. (2014). Patrimonio. In *Indicadores UNESCO de cultura para el desarrollo* (p. 132). https://doi.org/10.2307/j.ctv18msqc6.11
32. Villaespesa, E. (2018). Evaluación de la estrategia digital en los museos: métodos y herramientas para web, redes sociales y móviles. *Periférica Internacional. Revista Para El Análisis De La Cultura Y El Territorio*, *19*, 38–53. https://doi.org/10.25267/Periferica.2018.i19.06
33. Wagensberg, J. (2001). *Principios fundamentales de la museología científica moderna*.