The Pursuit

"You are to appoint judges and officers for all your gates [in the cities] your G-d is giving you, tribe by tribe; and they are to judge the people with righteous judgment. You are not to distort justice or show favoritism, and you are not to accept a bribe, for a gift blinds the eyes of the wise and twists the words of even the upright. Justice, only justice, you must pursue; so that you will live and inherit the land your G-d is giving you."
Deuteronomy 16:18 – 16:20

About *The Pursuit* Journal

The Pursuit, a publication of the Criminal Justice Association of Georgia (CJAG) is a peer-reviewed journal that focuses on the broad field criminal justice. *The Pursuit* publishes scholarly articles relevant to crime, law enforcement, law, corrections, juvenile justice, comparative criminal justice systems and cross-cultural research. Articles in *The Pursuit* include theoretical and empirically-based analyses of practice and policy, utilizing a broad range of methodologies. Topics cross the spectrum of policing, criminal law and procedure, sentencing and corrections, ethics, juvenile justice and more, both in the United States and abroad.

Authors interested in submitting manuscripts for consideration should use the link on the CJAG website (http://cjag.us) or email the Editor of *The Pursuit* at cjagjournal@gmail.com

<u>Acknowledgments</u>

Michael B. Shapiro, J.D.
Georgia State University
Editor, *The Pursuit*

Steven Hougland, Ph.D.
Florida Sheriff's Association
Associate Editor, *The Pursuit*

Patrice A. Kerner, D.P.A.
Columbus State University
Associate Editor, *The Pursuit*

About the Criminal Justice Association of Georgia

The Criminal Justice Association of Georgia is a not-for-profit organization of criminal justice faculty, students and professionals. It exists to promote professionalism and academic advancement in all areas of inquiry related to the Criminal Justice field.

The Association holds its annual meeting in October. Those interested in presenting at the conference should contact Professor Lorna Alvarez-Rivera (llalvarezrivera@valdosta.edu).

Readers are encouraged to follow us on Twitter (https://twitter.com/cjag_of) and "like" us on Facebook (https://www.facebook.com/CriminalJusticeAssociationofGeorgia/) and visit our website (http://cjag.us).

President	**Vice President**	**Communications Director**
Jason Armstrong	Leatha Cyprian	Lorna Alvarez-Rivera
Albany State University	Columbus Technical College	Valdosta State University

Asst. Comm. Director	**Treasurer**	**Immediate Past President**
Valerie Cochran	Gary Killam	John Stuart Batchelder
University of North Georgia	Shorter University	University of North Georgia

Criminal Justice Association of Georgia
Post Office Box 681834
Marietta, Georgia 30068

<u>Table of Contents</u>

Police Administrators' Views on the Importance of Higher Education, Training, and Tactical Gear

Dave Ayers, Ph.D.
University of West Georgia

Ericka Wentz, Ph.D.
University of West Georgia

Sarah Napper, Ph.D.
Auburn University at Montgomery

Preston Marlowe
University of West Georgia

Abstract

The purpose of this study was to gain an understanding of the value Alabama police chiefs and sheriffs place on officers having a college education and/or prior military experience. We also examined the value they placed on a number of skills and training programs, including which programs the agencies offer or would like to offer. Finally, this study also inquired about whether agencies used specialized tactical gear on a regular basis and how important they feel having such gear is for their agency. The results shed light on police leaders' perspectives and can help guide college campuses to tailor programs to best serve students and law enforcement agencies.

Introduction

The hiring and leadership practices of police administrators have long been a topic of interest and debate within the field of law enforcement. One area of particular focus is whether police chiefs are more likely to hire college-educated applicants and those with military backgrounds. The pros and cons of requiring a college education have been debated by police scholars for decades, with studies producing mixed results on a number of performance-related measures, including the use of force, arrest rates, and citizen complaints. For example, using official data, Manis, Archbold, and Hassell (2008) found college-educated officers were less likely to be the recipients of citizen complaints than their less-educated colleagues. Conversely, Bruns and Bruns (2015) found no significant difference on the self-reported number of complaints against college and non-college educated officers.

In a similar vein, there is no consensus as to whether prior military service significantly influences the way police officers do their jobs. Some research suggests that having military experience prepares police officers for the stressors they will encounter on the job (Ivie & Garland, 2011; Shernock, 2016), while other research finds no influence (Gau, Brooke, Pauline, & Roman, 2021). A larger body of research exists on the impact of having a police force that is more militarized in appearance and equipment, with some studies showing that citizens are largely uncomfortable with having a militarized police force (Mummolo, 2018).

While studies on the pros and cons of higher education, militarization, and training are abundant, research that examines the views of police chiefs and sheriffs is sparse. Despite the education requirements being set forth by city councils and the states themselves, police chiefs and sheriffs set the tone for higher education in their agencies. Likewise, training priorities and

the use of specialized tactical gear are largely governed by police leaders. The current study serves to explore the viewpoints of police chiefs and sheriffs in Alabama to gain a better understanding of their opinions on higher education, specialized equipment, and training on various topics.

Literature Review

Higher Education in Policing

Requiring police officers to have a college education has been a topic of debate for decades, dating back to the establishment of the first criminal justice program in 1916 at UC Berkeley. At that time, August Vollmer advocated that police have college degrees, which was reinforced in 1931's Wickersham Report. Despite the strong push from education advocates that police officers acquire a college education, as of the latest data available, less than 1% of all police departments in the U.S. require officers to have a four-year-degree (Reaves, 2015). However, most of the highly sought after federal law enforcement agencies typically require a four-year degree as a condition of hire. Likewise, a recent study of police officers in Minnesota, a state which requires police officers have at least an associate's degree, found that 70.5% of officers said they would have still entered law enforcement if a bachelor's degree would have been a condition of employment (Hilal, Densley, & Zhao, 2013).

Proponents argue that college-educated officers may exhibit better job performance (Alpert, MacDonald, & Dunham, 2005; Kakar, 1998), be less likely to use force and discharge their weapons (McElvain & Kposowa, 2008), and receive fewer citizen complaints (Manis et al., 2008). In addition, a college education may lead to more ethical and moral behavior, as well as greater levels of tolerance among officers (Telep, 2011). Furthermore, college-educated officers

may be more receptive to community engagement, which is crucial for professional advancement in modern policing (Rosenfeld, Johnson, & Wright, 2020).

Some scholars argue that a disparity between well-educated officers and a poorly educated public may lead to a disconnect; however, the public has increasingly become more educated, too. According to the Census Bureau's latest findings in 2022, 37.7% of Americans hold a bachelor's degree or higher (U.S. Census, 2023). Other support for a college education stems from the belief that a college education improves police work by sensitizing officers and fostering an appreciation for diverse populations (Pascarella & Terenzini, 2005; Rossler & Terrill, 2012).

Critics argue that a college education may not be necessary for effective policing and that non-college degree officers can perform their duties as well as those with college degrees. In addition, mandating a bachelor's degree for police officers could lead to discrimination against ethnic minorities and potentially result in costly litigation (Gardiner, 2015). Telep (2011) suggests that pre-college characteristics may also confound the relationship between a college degree and officer attitudes; however, officers who had a bachelor's degree prior to becoming a police officer were slightly less likely to hold attitudes supportive of abuse of authority.

Militarization of Policing and Prior Military Experience

It is widely known that police departments function within a military or quasi-military structure. Like members of the military, police officers are trained to encounter highly stressful situations. In this regard, one could reasonably posit that it would be an easier transition into policing for officers with a military background as they are more accustomed to the

organizational design of policing. However, the small body of research examining the impact of prior military service has produced mixed results.

In a study of one police department on police burnout, officers with a military background exhibited less stress when they encountered demanding situations than officers without a military background (Ivie & Garland, 2011). Another study found scores on PTSD and depression symptomology were not different between police officers with military experience and officers without (Hartley, Violanti, Mnatsakanova, Andrew, & Burchfiel, 2013). Research also found that police officers with military experience exhibit traits such as taking more time to assess a situation but being faster to commit to their actions, which can be beneficial in decision-making processes (Shortland, Thompson, & Alison, 2020). Patterson (2002) found that prior military experience did not significantly influence either officer stress levels or police academy success rates.

The body of literature on the influence of military experience on policing is narrow and inconclusive with regard to its impact; however, studies discussing the impact of police militarization raise a few points. First, the use of military tactics and equipment by the police can inspire them to move to more violent solutions than they would in jurisdictions with less militarized departments (Steidley & Ramey, 2019). Such a shift toward a more aggressive approach can lead to an escalation of conflicts and diminished relations with the community (Bieler, 2016). Finally, the militarization of the police can lead to a perception of increased racial profiling and discrimination, increased cynicism and reduced support for the police, and a lack of community engagement (Moule, Fox, & Parry, 2019).

One of the most significant concerns is the potential violation of civil liberties and human rights. The militarization of the police force can create a risk of renewed human rights violations, given the nature of military training and the deviation from the traditional role of a professional military, which is narrowly specialized in defense (Frantz, 2018). This deviation from the core function of a professional military can lead to the use of excessive force and a disregard for civil liberties and constitutional rights (Frantz, 2018). One of the few surveys to inquire of police leaders' opinions found that 64% of the Texas sheriffs who responded believed military tactics, including weaponized vehicles, were necessary due to the "war on police" (Meitl, Wellman, & Kinkade, 2020). This illustrates a disconnect between how citizens believe the police should do their jobs and police leaders who declare military equipment as necessary for the police to be effective, and one which should be explored further.

Current Study

The aim of the current study was to fill a gap in the research by exploring the value Alabama police chiefs and leaders place on college education and prior military experience. By examining the opinions of police chiefs and sheriffs directly as they are instrumental in establishing expectations for the officers under their guidance, we hope to illuminate an under-researched area within policing and also open the dialogue about ways in which colleges and universities might modify future criminology and criminal justice courses to better prepare students pursuing policing and other criminal justice careers with knowledge that will be helpful in practice. We also wanted to learn about the value police leaders place on a number of skills and training programs and identify which programs the agencies currently offer and which they would like to offer. Last, this study sought to understand how often specialized equipment is

used in Alabama police and sheriff departments and the value police leaders' place on specialized tactical gear and equipment.

Methodology

A survey was created that included demographic and community questions, including their own educational and military backgrounds, the population of the jurisdiction in which they serve, and the number of officers at their department. Other sections of the survey that were used in this study asked about the importance of higher education, prior military experience, training, and the use of and importance placed on tactical gear that is beyond officers' standard issues equipment.

The primary dependent variables were the value police leaders place on higher education, prior military experience, and training programs. Questions about higher education and prior military experience asked 1) if their department look more favorably on applicants with college degrees than applicants without college degrees, 2) whether an applicant with a master's degree would be considered more strongly than an applicant with a bachelor's degree, 3) whether an applicant with prior military experience would be considered more strongly than an applicant with a bachelor's degree, and 4) whether an applicant with prior military experience would be considered more strongly than an applicant with a master's degree (all dichotomous).

Three questions were used to assess the importance police leaders placed on specific skills and training, followed by two questions to ask if their department offered training on those skills. Specifically, leaders were asked what level of importance they place on, 1) conflict management skills, 2) cultural diversity training, and 3) officers being bilingual or multilingual. For these questions, there were four response categories ranging from (0) not at all important to

(4) extremely important. Next, two dichotomous questions asked whether their department offered training in 1) conflict management and 2) cultural diversity. Finally, three dichotomous questions asked whether their department had specialized units that focused on 1) de-escalation, 2) cultural diversity, and 3) cross-cultural communication.

The survey also asked which types of crimes their agency worked on the most, followed by which of those crimes their agency had the most training for and which they desired more training for. The crimes that were included were domestic violence, rape/sexual assault, physical assault, child abuse, human trafficking, elder abuse, kidnapping, robbery, identity theft, fraud, theft, and stalking. The survey included space for respondents to add additional crimes not accounted for by those listed.

Upon gaining IRB approval, in October 2022, surveys were distributed by email to all senior law enforcement officers in Alabama (i.e., police chiefs, sheriffs, assistant chiefs, etc.). Out of the 115 emails that were sent, a total of 36 surveys were completed (representing a 31.3% response rate) and are the focus of this study's analyses. All of the responses and data were deidentified to ensure anonymity.   Given the small sample size and the exploratory nature of this study, the results are focused on descriptive statistics to understand the viewpoints of police administrators as they pertain to higher education, training, and tactical gear.

Results

Table 1 shows the demographics of the police leaders surveyed and the departments and communities served. In line with most police and sheriff departments, the vast majority of respondents were White (86.1%) male (97.2%) who were at least 46 years old (80.6%). Slightly over half (52.8%) had been employed at the same agency for more than 20 years. Most of the

respondents (77.8%) attended college for at least one year and the majority (69.4%) did not have prior military experience. Consistent with police and sheriff departments nationwide, the number of sworn officers supervised most commonly was 10 or fewer (41.7%) and the majority (52.8%) served communities with a population of less than 10,000.

Turning to the dichotomous questions inquiring about college education and military experience, slightly less than half of the respondents (45.5%, or n=15) indicated a preference for applicants with college degrees over applicants without. Having an advanced degree was less important as less than one third of respondents (30.3%, or n=10) replied that a master's degree would be favored over a bachelor's degree among applicants. Military experience was viewed slightly more favorably than a college degree as slightly over half of the respondents (51.5%, or n=17) indicated that they would prefer an applicant with prior military experience. Further, when asked whether prior military experience would be preferred over a master's degree, 69.7% (n=23) indicated it would not.

When asked how important certain officer skills and training are to the agency, 94% (n=31) of respondents rated conflict management skills, 69.7% (n=23) rated cultural diversity, and 36.4% (n=12) rated bilingual or multilingual officers as "important" or "extremely important." Figure 1 displays the police chief/sheriffs' responses. Most of the respondents reported that their agencies offer training in conflict management (69.7%, or n=23) and cultural diversity (60.1%, or n=20).

A minority of respondents indicated that specialized units focusing on de-escalation, cultural diversity, or cross-cultural communication exist within their agencies. Specifically, 15.2% (n=5) have specialized units that focus on de-escalation, 9.1% (n=3) have a specialized

unit focused on cultural diversity, and 6.1% (n=2) have a specialized unit focused on cross-cultural communication.

With regard to training, we asked respondents to identify which crimes are most common for their agency to respond to. We then asked which crimes their agency offers training for, followed by a question inquiring about which crimes they would like their agency to have more training on. As shown in Figure 2, the most commonly worked crimes selected by police leaders were domestic violence (69.4%, or n=25), theft (61.1% or n=22), identify theft (36.1% or n=13), and fraud (36.1% or n=13). The crimes police leaders reported their agencies are most trained to respond to include domestic violence (75% or n=27), rape/sexual assault (27.8% or n=10), child abuse (27.8% or n=10), and theft (27.8% or n=10). Finally, leaders desire more training for officers in their agency for identify theft (41.7% or n=15), human trafficking (33.3% or n=12), rape/sexual assault (33.3% or n=12), and fraud (33.3% or n=12).

Finally, police leaders answered questions about their perceptions and use of specialized equipment and tactical gear. When asked what level of importance leaders place on the agency's need for specialized tactical equipment beyond standard issue, 75% (n=27) of respondents indicated this was "critical" (33.3%) or "somewhat important" (41.7%). While police leaders indicated a strong need for specialized equipment, they also reported rarely using such equipment. When asked how often their agencies used night vision or thermal optics in the past 12 months, 42.9% (n=12 of 28) of respondents never used these technologies and 35.7% (n=10 of 28) reported using them once per month or less. When asked how often within the past 12 months NVGs, armored vehicles, or UAVs played a crucial role in de-escalating a violent person(s), 71.4% (n=20 of 28) reported never, while 25% (n=7 of 28) reported once a month or less. Similarly, leaders were asked how often within the past 12 months NVGs, armored

vehicles, or UAVs played a crucial role in protecting the lives of officers. Most respondents (57.1% or n=16 of 28) selected, "never," while 28.6% (n=8 of 28) reported "once a month or less."

Discussion

The results from the opinions of police chiefs and sheriffs in Alabama indicate they value a college education. Nearly half of those who responded would prefer to hire applicants with a college degree than without and nearly 30% reported they would give preference to an applicant with a master's degree over an applicant with a bachelor's degree. Less is known about the reasons why over half of the police chiefs and sheriffs would not be influenced by an applicant's education level. Future research should examine this further, perhaps through focus groups or interviews with Alabama police leaders.

The results of this study also suggest that police leaders in Alabama are largely receptive to training opportunities for their agencies, some of which could be offered by colleges and universities. For example, the two most commonly reported crimes for which police leaders would like to see more training were human trafficking and identity theft, both of which are regularly taught by experts at many colleges and universities. By knowing this information, colleges and universities can reach out and collaborate with police agencies to assist with training. Doing so would open the dialogue between colleges and law enforcement agencies, which might, in turn, increase positive opinions of college education among skeptical police leaders. It would also help colleges by illuminating the areas of skills and knowledge needed by students who plan to pursue careers in law enforcement.

One of the key arguments in favor of requiring police to have a college education is the potential for professionalization and improved performance. Studies have indicated that college-educated police officers may exhibit more ethical and moral behavior, be more receptive to serving the community, be less cynical, and demonstrate a higher level of tolerance. Additionally, research has suggested that professionalizing the police force through adequate education and training can lead to the development of scientifically-grounded methods of crime detection, patrol operations, and police service. This indicates that a college education can contribute to the overall professionalization and effectiveness of the police force.

Furthermore, studies have found that college-educated police officers may be different in their approach to policing. For example, college-educated officers may more willingly adapt to new standards, such as community engagement, as diligently as they have to traditional criteria for reward and promotion in their agencies. This suggests that a college education may influence officers' attitudes and behaviors in ways that align with evolving policing practices and priorities. Moreover, research has highlighted the positive impact of a college education on reducing allegations of police misconduct. This indicates that a college education may contribute to promoting higher standards of conduct and reducing instances of misconduct within police departments.

Along with future research to determine reasons why some police leaders are reluctant to promote higher education, we agree with the recommendation made by scholars who argue education should be embedded within law enforcement (Roberts, Herrington, Jones, White, & Day, 2016). By including higher education within police officers' pathways, officers are equipped with the critical thinking skills and knowledge to help them develop as leaders. This can also help officers to develop the problem-solving skills and empathy that have become more

important than in policing's past. We also recommend that criminology and criminal justice programs incorporate more hands on and skills-based learning opportunities within their curriculum. This can be accomplished in a number of ways, whether through internships, courses with lab components that simulate aspects of law enforcement, special events, or other ways. Introducing students and future law enforcement practitioners to situations they might encounter as a police officer is a great way to bridge the gap between academia and practice.

This study also showed that prior military service is valued by Alabama police chiefs and sheriffs, and in some cases, more valued than higher education. Slightly over half of the chiefs and sheriffs in this study reported they would more strongly consider an applicant with prior military experience than an applicant with a bachelor's degree. It could be that the police leaders in our study believe it would be an easier transition for candidates with military experience since they are accustomed to the rigid organizational structure of the military. However, almost 70% also said they would prefer an applicant with a master's degree over someone with prior military experience, indicating there may be a limit to the value of military experience.

Alabama police chiefs and sheriffs, according to our results, believe training for a number of crimes and situations is important. They overwhelmingly believe conflict management, cultural diversity, and communication skills are important and offer training to their department on these topics. Training is also available for most crimes, but the police leaders in our study indicated wanting more training on some of the most pressing crimes of our current day that they might not have as much training in, such as human trafficking and identity theft. As mentioned above, these would be excellent topics for colleges to teach, so colleges should make an effort to reach out to police leaders and offer training assistance.

Finally, nearly all of the police chiefs and sheriffs in Alabama who responded to the survey believe their specialized gear and equipment are critical for their department in order to effectively do their jobs. When examined further, however, their actual use of the equipment is relatively rare. It could be the case that leaders are cognizant that the police may not need to use force often, but having the equipment available in cases where force is needed is advantageous. Future research should investigate the rationale behind why specialized equipment is viewed as critical.

As with all research, the current study is not without its limitations. First, we only captured the responses from 36 police chiefs and sheriffs, so sophisticated statistical analyses were not possible. Second, and in part due to the small sample, the results are not widely generalizable to other states or regions. Finally, the survey was constrained by the questions asked. Future studies on this topic should include more detailed questions to better understand the "whys" that this study was not able to capture. To reduce survey fatigue, some of this information might best be captured through interviews or focus groups. Despite the limitations, this study contributes to what little is known about police chiefs' opinions on higher education, military service and equipment, and training. We hope it helps to foster discussion between colleges and law enforcement agencies on how colleges can better serve the agencies and students who aspire to work in law enforcement.

Table 1. Demographic and community variables

Variable		Frequency	Percent
Age	26-35	1	2.8
	36-45	6	16.7
	46-55	18	50
	56+	11	30.6
Sex	Male	35	97.2
	Female	1	2.8
Race	White	31	86.1
	Black	3	8.3
	Prefer not to say	2	5.6
Length at current agency	1-5 years	7	19.4
	6-10 years	1	2.8
	11-15 years	6	16.7
	16-20 years	3	8.3
	Over 20 years	19	52.8
Education level	High School/GED	3	8.3
	< 1 year college	3	8.3
	1+ year college, no degree	5	13.9
	Associate's degree	8	22.2
	Bachelor's degree	9	25
	Master's degree	6	16.7
	Professional/doctoral degree	2	5.6
Prior Military Experience	No	25	69.4
	Yes	11	30.6
# Sworn officers	10 or less	15	41.7
	10-20	4	11.1
	21-30	2	5.6
	31-50	5	13.9
	51-80	4	11.1
	81-100	2	5.6
	Over 100	4	11.1
Population served	Fewer than 10,000	19	52.8
	10,001-20,000	7	19.4
	20,001-50,000	5	13.9
	50,001-99,999	1	2.8
	100,000 +	4	11.1

Percentages may not sum to 100 due to rounding

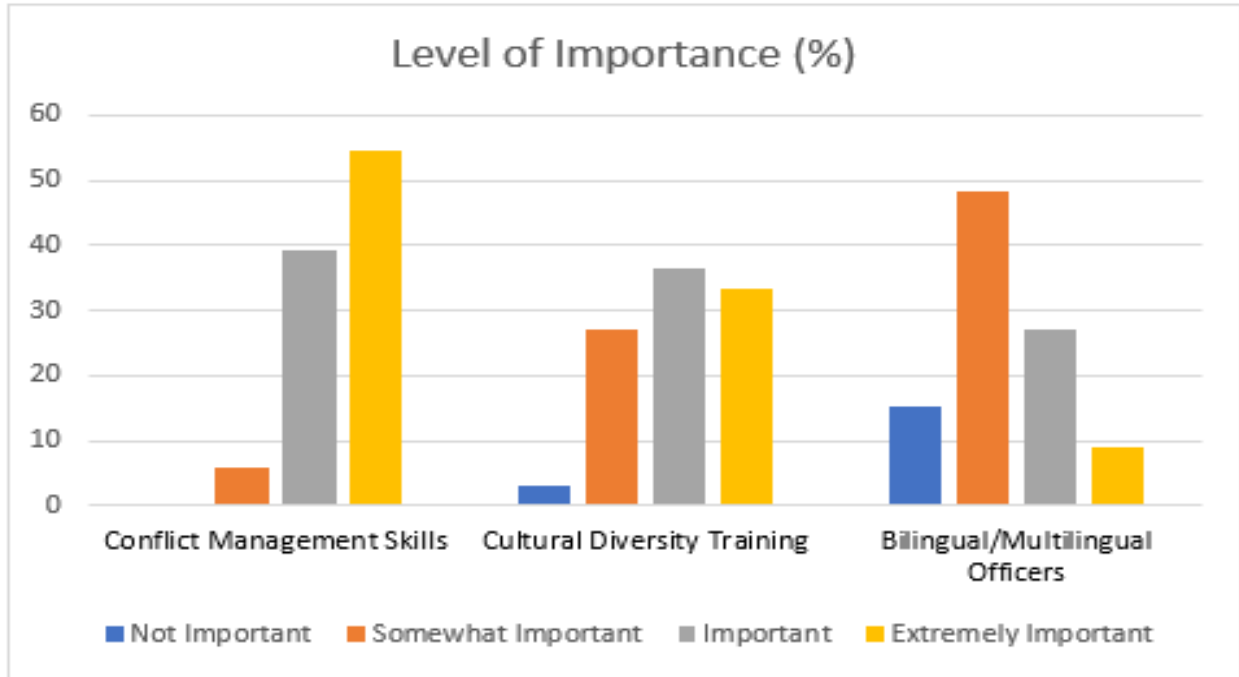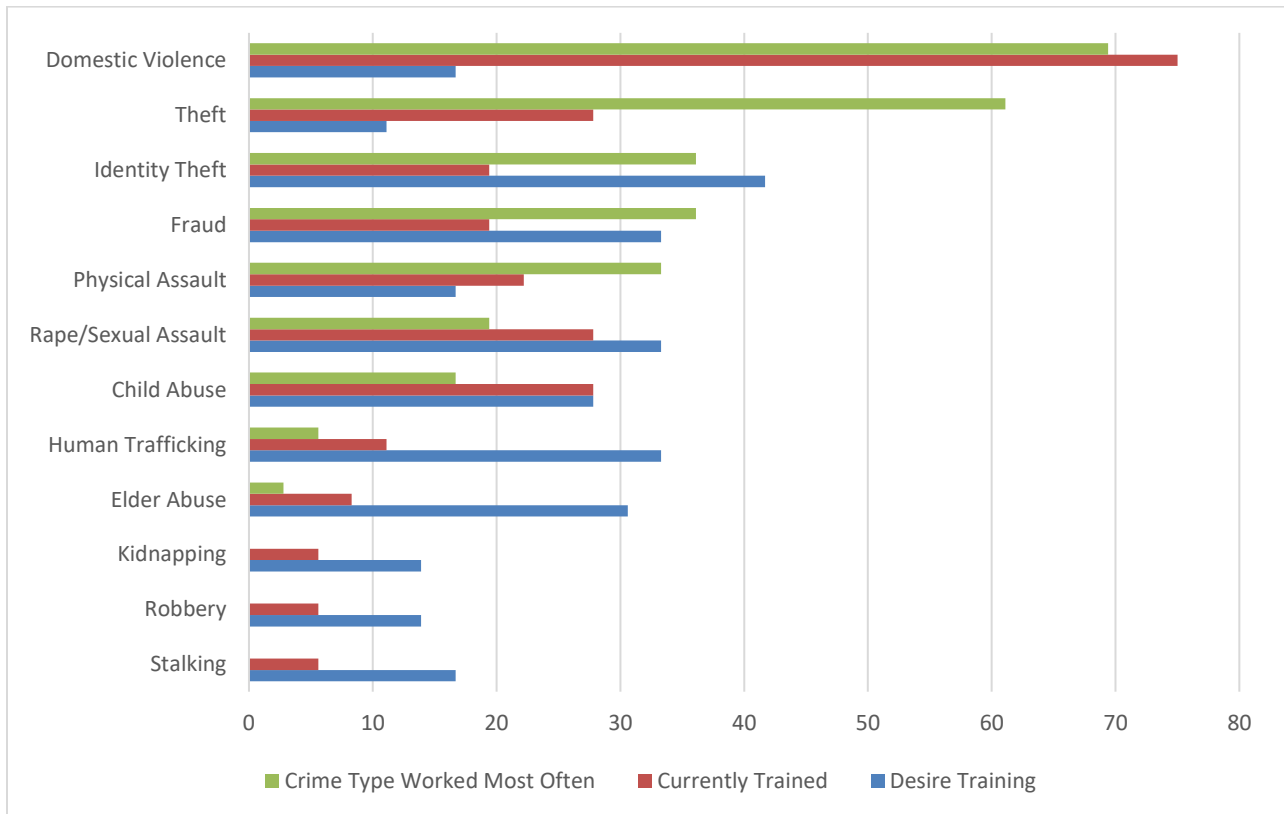**Figure 1.** Importance of skills and training

Figure 2. Response frequency and training status/desires for specific crimes

References

Alpert, G.P., MacDonald, J.M., & Dunham, R.G. (2005). Police suspicion and discretionary decision making during citizen stops. *Criminology, 43*(2), 407-434. https://doi.org/10.1111/j.0011-1348.2005.00012.x

Bieler, S. (2016). Police militarization in the USA: the state of the field. *Policing: An International Journal, 39*(4), 586-600. https://doi.org/10.1108/PIJPSM-03-2016-0042

Bruns, D.L., & Bruns, J.W. (2015). Assessing the worth of the college degree on self-perceived police performance. *Journal of Criminal Justice Education, 26*(2), 121-146. https://doi.org/10.1080/10511253.2014.930161

Frantz, E. (2018). The legacy of military dictatorship: Explaining violent crimes in democracies. *International Political Science Review, 40*(3), 404-418. https://doi.org/10.1177/0192512118769079

Gardiner, C. (2015). College cops: A study of education and policing in California. *Policing: An International Journal, 38*(4), 648-663. https://doi.org/10.1108/PIJPSM-02-2015-0015

Gau, J.M., Brooke, E.J., Paoline, E.A., & Roman, K.L. (2021). Military experience among police officers: An examination of veterans' attitudes toward the community. *Policing: An International Journal, 44*(6), 1060-1076. https://doi.org/10.1108/PIJPSM-05-2021-0070

Hartley, T.A., Violanti, J.M., Mnatsakanova, A., Andrew, M.E., & Burchfiel, C.M. (2013). Military experience and levels of stress and coping in police officers, *International Journal of Emergency Mental Health, 15*(4), 229-239.

Hilal, S., Densley, J., & Zhao, R. (2013). Cops in college: Police officers' perceptions on Formal Education. *Journal of Criminal Justice Education, 24*(4), 461-477. https://doi.org/10.1080/10511253.2013.791332

Ivie, D., & Garland, B. (2011). Stress and burnout in policing: Does military experience matter? *Policing: An International Journal, 34*(1), 49-66. https://doi.org/10.1108/13639511111106605

Kakar, S. (1998). Self-evaluations of police performance: An analysis of the relationship between police officers' education level and job performance. *Policing: An International Journal, 21*(4), 632-647. https://doi.org/10.1108/13639519810241665

Manis, J., Archbold, C.A., & Hassell, K.D. (2008). Exploring the impact of police officer education level on allegations of police misconduct. *International Journal of Police Science & Management, 10*(4), 509-523. https://doi.org/10.1350/ijps.2008.10.4.102

McElvain, J.P., & Kposowa, A.J. (2008). Police officer characteristics and likelihood of using deadly force. *Criminal Justice and Behavior, 35*(4), 505-521. https://doi.org/10.1177/0093854807313995

Meitl, M.B., Wellman, A., & Kinkade, P. (2020). Armed and (potentially) dangerous: Exploring sheriffs' perspectives of police militarization. *Policing: An International Journal, 43*(5), 845-859. https://doi.org/10.1108/PIJPSM-05-2020-0079

Moule, R.K., Fox, B.H., & Parry, M.M. (2019). The long shadow of Ferguson: Legitimacy, legal cynicism, and public perceptions of police militarization. *Crime & Delinquency*, *65*(2), 151-182. https://doi.org/10.1177/0011128718770689

Mummolo, J. (2018). Militarization fails to enhance police safety or reduce crime but may harm police reputation. *Proceedings of the National Academy of Sciences of the United States of America, 115*(37), 9181-9186. https://doi.org/10.1073/pnas.1805161115

Pascarella, E., & Terenzini, P. (2005). *How college affects students: Findings and insights from twenty years of research.* San Francisco, CA: Jossey-Bass.

Patterson, G.T. (2002). Predicting the effects of military service experience on stressful occupational events in police officers. *Policing: An International Journal, 25*(3), 602-618. https://doi.org/10.1108/13639510210437050

Reaves, B.A. (2015). *Local police departments, 2013: Personnel, policies, and practices.* Washington, DC: Bureau of Justice Statistics.

Roberts, K., Herrington, V., Jones, W., White, J., & Day, D. (2016). Police leadership in 2045: The value of education in developing leadership. *Policing: A Journal of Policy and Practice, 10*(1), 23-33. https://doi.org/10.1093/police/pav045

Rosenfeld, R., Johnson, T.L., & Wright, R. (2020). Are college-educated police officers different? A study of stops, searches, and arrests. *Criminal Justice Policy Review, 32*(2), 206-236. https://doi.org/10.1177/0887403418817808

Rossler, M.T., & Terrill, W. (2012). Police responsiveness to service-related requests. *Police Quarterly, 15*(1), 3-24. https://doi.org/10.1177/1098611111432679

Shernock, S. (2016). Conflict and compatibility: Perspectives of police officers with and without military service on the military model of policing, *Policing: An International Journal, 39*(4), 740-755. https://doi.org/10.1108/PIJPSM-11-2015-0131

Shortland, N., Thompson, L., & Alison, L. (2020). Police perfection: Examining the effect of trait maximization on police decision-making. *Frontiers in Psychology, 11.* https://doi.org/10.3389%2Ffpsyg.2020.01817

Steidley, T., & Ramey, D.M. (2019). Police militarization in the United States. *Sociology Compass, 13*(4). https://doi.org/10.1111/soc4.12674

Telep, C.W. (2011). The impact of higher education on police officer attitudes toward abuse of authority. *Journal of Criminal Justice Education, 22*(3), 392-419. DOI: https://doi.org/10.1080/10511253.2010.519893

United States Census Bureau. (2023). *Years of school completed by people 25 years and over, by age and sex: Selected years 1940 to 2022.* Retrieved November 12, 2023, from https://www.census.gov/data/tables/time-series/demo/educational-attainment/cps-historical-time-series.html

Dave Ayers, Ph.D. is an Assistant Professor in the Department of Civic Engagement and Public Service at the University of West Georgia.

Ericka Wentz, Ph.D. is an Associate Professor in the Department of Civic Engagement and Public Service at the University of West Georgia.

Sarah Napper, Ph.D. is an Assistant Professor in the College of Liberal Arts and Social Sciences at Auburn University at Montgomery.

Preston Marlowe, B.S. is a Deputy Sheriff with the Coweta County Sheriff's Office.

Diligent Democracies or Banana Republics

Is the Arrest of Current or Former Leaders Good or Bad for Freedom?[1]

John A. Tures, Ph.D.
LaGrange College

Introduction

The Case of Classified Documents at Mar-a-Lago

Shortly after the FBI executed a search warrant on Mar-a-Lago to investigate whether former President Donald Trump had certain classified documents, the charges started flying that the move made the U.S. look like a "Banana Republic."

"The raid of MAL is another escalation in the weaponization of federal agencies against the Regime's political opponents, while people like Hunter Biden get treated with kid gloves. Now the Regime is getting another 87k IRS agents to wield against its adversaries? Banana Republic," Florida Governor Ron DeSantis tweeted (Scully 2022).

Former House Speaker Newt Gingrich (2022) wrote, "I think we are wavering between restoring the rule of law and the Constitution and decaying into a third-world banana republic system of greed, dishonesty, political power, and law breaking on a grand scale."

Withholding classified documents at Mar-a-Lago is hardly the only legal hot water former President Donald Trump finds himself facing. There are issues concerning his taxes, business practices, sources of income, and actions on January 6, 2021, just to name a few. Facing possible state and Federal prosecutors, as well as Congressional investigations, it is realistic to assume that there is a good chance that the ex-President could face formal legal charges, and possibly punishment leading to some degree of detention, triggering a great deal of anxiety not just among his MAGA supporters, but others in the Democratic and Republican Parties as well in the U.S.

Asking the Question: Should Current or Ex-Chief Executives Be Legally Pursued?

Several American presidents have indeed found themselves on the wrong side of the criminal justice system, like Bill Clinton and Richard Nixon. But only one has ever been arrested. The only U.S. president to be arrested was Ulysses S. Grant. In December 1872, Grant was caught speeding in his horse and buggy in the nation's capital. He paid a $20 bond but didn't show up in court.

But plenty of other countries have arrested, indicted, or imprisoned their current or former leaders. My students and I found nearly 250 cases (Tures et.al. 2022) where leaders have gone after top political figures since 1972. Our theoretical question remains whether or not such acts are good for freedom or not.

In this research, we will test several hypotheses. First, what kinds of countries tend to go after current or former chief executives: free countries, unfree countries, or something in between? Second, what happens when free countries hold their current or former leaders legally accountable for their actions? Will they maintain their democracy, or lose it? Third, how do

countries which pursue legal remedies against current or former leaders compare to those which do not experience such actions, or choose not to do so?

Literature Review

Unfortunately, the arrests of current or former leaders have not served as a popular subject in the scholarly literature, at least in the form of a large-n analysis. The only exceptions appear to be case studies of situations involving individual leaders, and quantitative data only tangentially related to our case, such as the fall of an autocracy, the killing or capture of terror leaders, and why leaders fear arrest and detention more than defeat at the ballot box. Yet even these studies can provide insight into our important but overlooked subject in the literature.

Domestic Arrests and Deadly Conflict

Facing legal accusations, charges, and the prospect of arrest and detention is a terrifying prospect to current and former heads of state. Chiozza and Goemens (2011, 5) write of how political figures fear legal consequences more than defeat at the ballot box, or being forced into retiring by political calculations. "Leaders who lose office as a result of a lost election, term limits or voluntary retirement – more broadly, in a regular manner – rarely suffer subsequent personal punishment. Leaders who lose office in a violent or forcible manner such as a coup or revolution, however, almost always suffer additional punishment in the form of exile, imprisonment or death."

Such actions could have deadly consequences domestically and internationally. Chiozza and Goemens (2011) contend that such fears of going to prison compel leaders to launch international wars, ostensibly to distract the public or push for nationalistic unity in the face of conflict. The impacts of legal charges against a current or former leader can also lead to civil

war, as it did in Cote d'Ivoire in 2010-2011, where an electoral contest led to charges of electoral fraud by each side against the other, according to Aiba Atsin (2011, 13).

"The first results announced by the president of the Independent Electoral Commission were [i]n favor of Alassane Ouatara and the second one was announced by the Constitutional Court In favor of Laurent Gbagbo. Each of the candidates claimed to be elected President of the Republic of Ivory Coast. Despite the calls by national and [i]nternational community to reconcile the two camps, the road to reason [i]n the country stalled and the war at the time was [i]nevitable."

Leader Arrests: Good Government or Partisan Politics?

Part of the problem with holding current and former leaders accountable is that it is hard to disentangle the issue from party politics, whether the country is free, partly free or not free. Several authors covered cases which show the difficulty of prosecuting a sitting or ex-head of state.

The Case of El Salvador

On May 6, 2014, a Salvadoran judge issued an arrest warrant for former President Francisco Flores' arrest, calling for his assets to be seized. El Salvador's Attorney General office had filed criminal charges for embezzlement of funds provided by Taiwan, and refusing to appear before the country's legislature that was conducting the investigation (Witte-Lebhar 2014, 1).

The current El Salvadoran President Mauricio Funes announced that Flores was "being pursued not for political reasons, as some have suggested, but because of alleged 'crimes he committed while he was president.'" This was because former President Flores was the campaign manager for a right-wing candidate opposing leftist Funes' Vice-President in a tight

election; his supporters accused Funes of play politics. For his part, President Funes said "the fact that this case is now going through legal channels is a democratic conquest without precedent," a challenge to an amnesty law passed by Flores' political mentor, which critics claimed led country's leaders to act with impunity (Witte-Lebhar 2014, 2).

The Case of Brazil

Cammarosano (2018, 441) writes about the arrest and conviction of former Brazil's President Lula Ignacio da Silva (as well as the impeachment of his successor Dilma Rousseff) as being politically motivated. "As one of the most popular presidents in Brazilian history, who held the presidency for two consecutive terms, for a total of eight years, and with a high approval rate, his conviction and commencement, especially in the election year, caused national and international repercussions. Jurists of renown, from Brazil and abroad, have manifested themselves, and several of them in the sense that Lula has been the victim of exceptional measures, and can be considered, strictly speaking, political prisoner."

The fact that such prosecutions were occurring during an election year was not lost on observers. "The discussions and controversies regarding the conviction and imprisonment of the former president have occurred in an atmosphere of outcropping of political-partisan passions that are, in our view, harming the desirable rationality and exemption of the contenders. The radicalization between those who defend and accuse the former president is compromising the argument, tainted by politics and ideology (Cammarosano 2018, 441)."

Challenges to Charging a Sitting or Political Leader

Newly-minted republics find a series of challenges to delivering justice, especially if the country is trying to find accountability for prior corruption, even past atrocities, as the case of Malawi demonstrates. Meinhardt (2020) writes about how the failure of the legal system to hold

current or former leaders accountable hurt the democratic institutions in Malawi. Longtime

strongman Hastings Kamuzu Banda agreed to end the autocratic regime he had ruled by, and

submit to democratic elections, which he won in the first year at the ballot box, in 1994, allowing

him to prolong his already 30 years in office. But the newly independent court systems could not

hold him accountable for past crimes when he ruled as a dictator.

"An example was the so-called Mwanza Accident. Although it was obvious that the

ministers and a member of parliament were killed, it was impossible to prove this in court.

Banda, his right-hand man John Tembo, and the Official Hostess (former First Lady), Cecilia T.

Kadzamira were acquitted of conspiracy of murder charges because of the lack of sufficient

evidence in December 1995. This failed trial was the first blow to the democratic system of

government because in large parts of the population it was difficult to understand that they were

not sentenced. The outcome of the highly publicized trial discouraged government to bring any

other atrocities of the Banda regime to court (Meinhardt 2020, 31)."

But even without the shadow of a former dictator casting fear upon the new democratic

leaders, former elected heads of state have other means of escaping justice. LADB (2001)

document how the Corte Suprema de Justicia (CSJ) overruled an Argentine judge and appeals

court, ordering an end to the house arrest of former President Carlos Menem, who ruled for a

decade throughout the 1990s. Menem, who had been convicted of "an illicit association

involved in the illegal arms deals" (to Croatia and Ecuador) benefitted from having appointed

most members of the CSJ (LADB 2001). "In 1990, Menem increased the number of judges on

the CSJ from seven to nine to ensure a court sympathetic to his interests. Five of the six judges

who voted in favor of the decision were part of the 'automatic majority,' which backed most

executive decisions during Menem's presidency (LADB 2001)." In addition, two of these had closer personal connections to Menem, but refused to recuse themselves (LADB 2001).

And in other cases, the type of party system may help allies of a disgraced former leader can keep power. Toyozo (1982) covers the fall of the Tanaka government as a result of the Lockheed bribery case. But this author also notes that Tanaka's Liberal Democratic Party (LDP) would win subsequent elections, the result of the dominant party system in the country that favors the clique in charge.

In America, there are additional judicial barriers to pursuing chief executives, because of the wide berth its Supreme Court has accorded U.S. Presidents. Amar and Katyal (1994-1995) write about the protection of ex-President Richard Nixon from a lawsuit brought by Ernest Fitzgerald, though the courts seemed to afford less protection to Clinton for pre-presidential behavior, a conclusion that was born out in the Paula Jones lawsuit case.

Blowback Against Actually or Perceived Repression

Whether a country is a democracy or not, going after a contemporary or past president or another type of ruler has the potential to be seen as an act of repression. Hess and Martin (2006, 249) find that "repressive events that are perceived as unjust have the potential to generate enormous public outrage against those seen as responsible." They also conclude that "some repressive events may be transformative for social movements (Hess and Martin (2006, 249)," citing cases in India and Timor.

Jordan (2009) finds that the policy of removing a leader does not always enable the current regime to defeat political foes, in her analysis of leadership decapitation. "As an organization grows in size and age, it is much more likely to withstand the removal of its leadership," Jordan (2009, 719) writes. She adds "data show that decapitation does not increase

the likelihood of organizational collapse beyond a baseline rate of collapse for groups over time. Organizations that have not had their leaders removed are more likely to fall apart than those that have undergone a loss of leadership." The relevant lesson is that locking a leader of a political movement may not necessarily destroy the organization itself.

Even bringing down an authoritarian leader may not improve the legal situation within a country. Geddes, Write and Frantz (2014, 313) reveal "Yet in the nearly 75 years since World War II, only about 45 percent of leadership changes in autocracies led to regime change, and more than half of regime breakdowns were transitions from one autocracy to another. In other words, fewer than one-quarter of leadership changes resulted in democratization." The rule of law may not return just because a dictator falls from power.

Attempts to help countries deal with powerful international lawbreakers with the creation of the International Criminal Court may not be enough to provide accountability, especially to a sitting leader of a country. Kiyani (2013) writes about the troubling case of the International Criminal Court's attempt to prosecute the Sudanese head of state, President Omar al-Bashir. Al-Bashir is protected by "head of State immunity" and can only be overridden by the U.N. Security Council or creating an exception to the law of immunities. Kiyani (2013) argues that either move would threaten international participation in the ICC by states, weakening the court for other cases. Eventually, the aforementioned Ivorian President Laurent Gbagbo became the first former head of state to go on trial for charges of crimes against humanity in 2011 (BBC 2021). But he was acquitted of all charges in 2019. In March of 2021, the ICC Appeals Court upheld the ruling in favor of Gbagbo, as well as an ally (BBC 2021).

Summary: Ten Lessons About Legally Pursuing a Retired or Sitting Leader

Despite the failure of existing studies to provide a comprehensive analysis of leadership arrests among sitting and once-sitting rulers, the literature review has produced several lessons for our research. First of all, we have learned that leaders are more worried about facing legal trouble than electoral anxiety. Second, these concerns can cause rulers to take actions that could precipitate international war or domestic conflict; in other words, the consequences of deciding to go after a president or prime minister or monarch could be severe. Third, it is nearly impossible to perceive trying to hold a sitting or previously sitting chief executive legally accountable as anything but a partisan affair, or perhaps an ideological move. Fourth, fears about revenge from the prior politician's supporters face the would-be prosecutors. Fifth, the ex-ruler could have allies remaining in positions of power that could torpedo even a successful conviction, either in the judicial branch or the justice department.

Sixth, the party dynamics or internal politics could favor allies of the convicted chief executive. Seventh, the country may have legal roadblocks toward holding the head of state in prison or otherwise accountable for actions. Eighth, procedures perceived as repression (even if they are merely legal avenues of action) can produce a backlash by domestic supporters of that leader. Ninth, removing a leader alone won't finish an organization. And tenth, even cross-border attempts to pursue justice against a current or former head of state have their challenges.

Theories, Hypotheses and Tests

Negative Theory: Arrests of Current or Former Leaders is Bad for Democracy

From this negative theory of the deleterious effects of prosecuting a current or former leader, we conclude that arresting a current or former leader might produce consequences for a country's democratic system. Given that not all countries are of one mind (most have several

parties or factions), the pursuit of charges against a current or former leader might be viewed by fellow members of that side as a politically-motivated attack, leading to less trust in the system. Certainly, the targeted leader's party or faction might seek revenge through the justice department or judicial system when they come back in power, producing political in-fighting that could tear a country's political institutions apart.

Positive Theory: Arrests of Current or Former Leaders is Good for Democracy

But this is not the only possible outcome. A more positive outlook on such events may conclude that bringing charges against a current or former leader might be necessary for freedom. If a country's leader has broken the rules and demonstrated evidence of corruption, prosecuting that person would demonstrate that no one, no matter how politically powerful, is above the law. In fact, it may be worse for a democracy if such a current or former political leader is not held accountable for actions. Such a scenario may produce a great deal of mistrust in the system.

For the purpose of this analysis, given the conclusions of the literature review, the negative theory of prosecuting politicians will be evaluated in the form of the hypotheses. However, a lack of support for these hypotheses will indicate stronger support for the positive variation of this theory of leadership accountability, and perhaps a new angle to consider when deciding whether a chief executive currently or formerly in office must be pursued through the legal system.

Testable Hypotheses

Hypothesis 1: Countries Which Arrest Current or Former Leaders Are Less Likely To Be Free

In our study, we look at which countries have used their law enforcement or judicial mechanisms to pursue current or former leaders. For these, we looked at cases of cases against presidents, prime ministers, emperors or kings, or whoever holds a position of executive decision making, either in a presidential system, parliamentary system, or semi-presidential system. Cases involving vice-presidents, ceremonial presidents or monarchs, or legislative leaders in a non-parliamentary system were not considered for this study.

Our study looked at 243 cases of countries which pursued a current or former chief executive, where those in this sample that are free are almost the same number as those which are unfree (Tures et.al. 2022). The modal category in our sample was the "partly free" country, as determined by Freedom House.
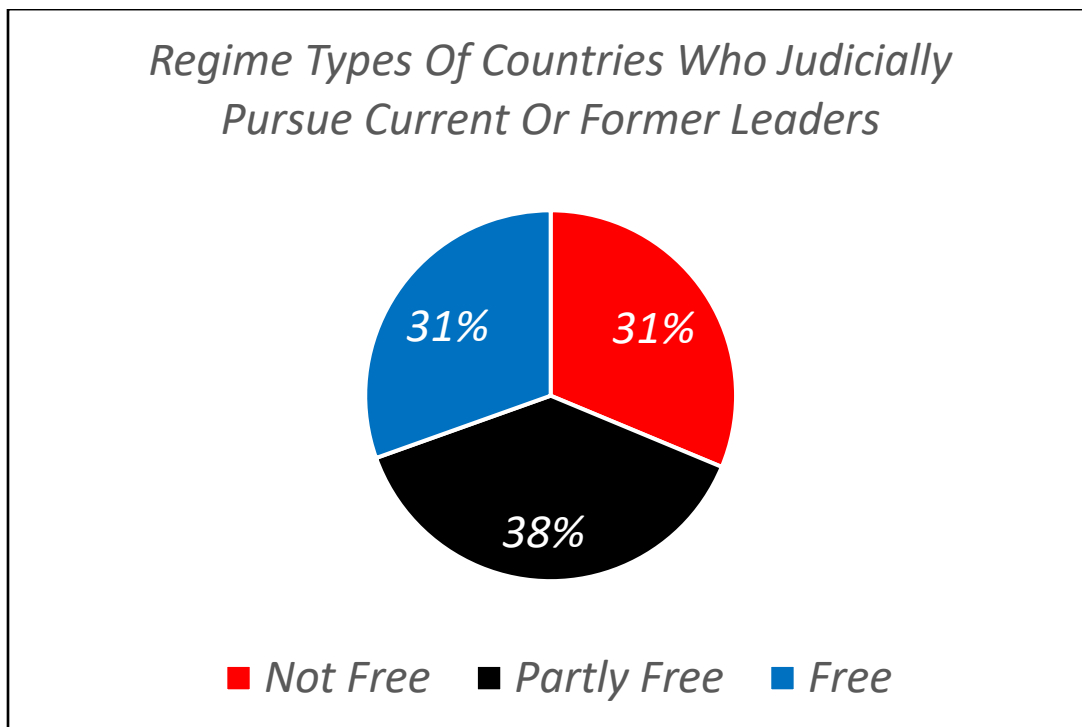

Figure 1: Governments of Countries Which Pursue Their Sitting or Former Rulers, 1972-2022

This non-profit group examines countries for a checklist of civil liberties (protections people have against government encroachment on freedom) and political rights (the rights of individuals to run for office, join political parties, etc.). This forms the "Freedom of the World" dataset that forms the basis of our analysis (Freedom House 2022).

From the Freedom House site, it reads "The *Freedom in the World* report is composed of numerical ratings and supporting descriptive texts for 195 countries and 15 territories. External analysts assess 210 countries and territories, using a combination of on-the-ground research, consultations with local contacts, and information from news articles, nongovernmental organizations, governments, and a variety of other sources. Expert advisers and regional specialists then vet the analysts' conclusions. The final product represents the consensus of the analysts, advisers, and Freedom House staff. For each country and territory, *Freedom in the World* analyzes the electoral process, political pluralism and participation, the functioning of the government, freedom of expression and of belief, associational and organizational rights, the rule of law, and personal autonomy and individual rights."

Hypothesis 2: Arresting a Current or Former Leader Will Weaken Freedom Levels in a Democracy

In this analysis, we examined all 71 cases where a free country has arrested a current or former leader, to see which of the following countries maintained their freedom scores over the next five years, and which ones declined in their freedom scores over that same period of time.

In our study, we discovered that in 57 of 71 cases (80%), the country was able to pursue a current or former leader in the legal system, and still maintain their "free" designation. Of the

remaining 14 cases (involving nine countries), the country declined from a "free" designation to a "party free" one; none became "not free."

Figure 2: Free Countries Which Pursue Their Sitting or Former Rulers, 1972-2022

Only one free country that lost that "freedom" designation was a member of the Organization for Economic Cooperation and Development: Mexico, which legally pursued former President Luis Echevarria, and became partly-free within five years. It is unlikely that Mexico's downgrade in its freedom rating is because of this action. In the other 24 cases (involving 14 countries), the country maintained its Freedom House designation.
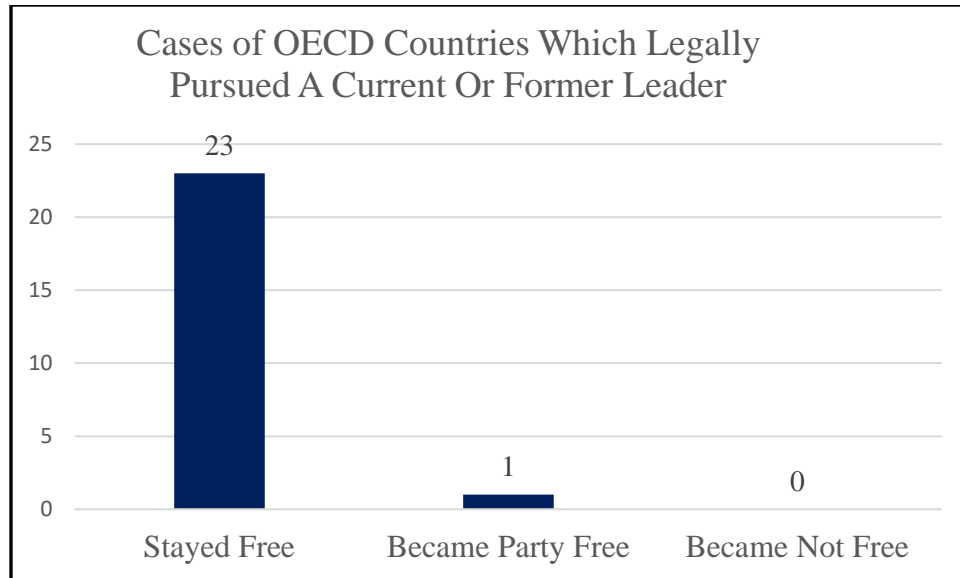
Figure 3: OECD Free Countries Which Pursue Their Sitting or Former Rulers, 1972-2022

What this shows us is that regime change is highly unlikely to come to an economically and politically developed country that legally pursues a current or former leader. OECD members Chile, Costa Rica, France, Germany, Greece, Israel, Italy, Japan, Poland, Portugal, Slovenia, South Korea, and Taiwan were able to do it, on multiple occasions as well (South Korea actually prosecuted seven current or former leaders).

The countries that needed the most help, that slid from free to partly free status, were less politically and economically developed, like Ecuador, El Salvador, Malawi, Mali, Peru, Philippines, Senegal, and Serbia. However, a number of non-OECD countries have been able to successfully arrest a current or former leader and stay free (Argentina, Brazil, Bulgaria, the Dominican Republic, India, Mongolia, Panama, Peru (on different occasions), Sao Tome and Principe, Serbia (on different occasions), South Africa, Uruguay and Vanuatu), greater attention should be paid to these cases for examples and lessons to be learned.

Hypothesis 3: Countries Which Arrest Current or Former Leaders Experience Worse Levels of Freedom Than Those Who Do Not

This was a challenging hypothesis to test. The only fair means of testing this subject involves creating a sample of countries that did not arrest a current or former leader. To do this, I selected countries that could be paired with those that pursued legal action against a current or former leader. These were paired by region as best as possible, taking into account country size and type (where possible, they even share a border). No such pairing could be perfect, but the two samples could be comparable.

In addition, since some countries pursued multiple leaders, it would be difficult to look at the sample of non-leader arrest cases for having several non-actions. That is why the pair were evaluated for the same timeline for when the country attempted to prosecute the first leader. Some countries who went after leaders had no comparable country to pair with, so this whittled down our sample to 65 cases of leader arrests, and 65 similar countries that did not.

Table 1: A Comparison of Countries Which Pursued Their Sitting Or Former Rulers, 1972-2022, And Those That Did Not Do So, Over The Same Five Year Increment

Experimental Group (Arrest)	Regime Type	Years	Control Group (No Arrest)	Regime Type
Afghanistan	NF	1996-2000	Uzbekistan	NF
Armenia	PF	2018-2022	Azerbaijan	NF
Bangladesh	NF → PF	1975-1979	Mauritius	F → PF
Bolivia	PF → F	1995-1999	Guyana	F
Bosnia	PF	2001-2005	Latvia	F
Bulgaria	F	1991-1995	Czechoslovakia/Czech Republic	F
Burma/Myanmar	NF	2002-2006	Vietnam	NF
Cambodia	NF	1977-1981	Laos	NF
Cameroon	NF	2012-2016	Gabon	NF
Central African Republic	NF → PF	1986-1990	Burkina Faso	NF
China	NF	2018-2022	Russia	NF
Comoros	PF	1978-1982	Seychelles	PF → NF

Congo-Kinshasa	NF	2016-2020	Angola	NF
Costa Rica	F	2004-2008	Honduras	PF
Cote d'Ivoire	NF → PF	2011-2015	Botswana	F
Croatia	F	2012-2016	Austria	F
Dominican Republic	F	1987-1991	Jamaica	F
Ecuador	F → PF	2005-2009	Venezuela	PF
Egypt	NF → PF	2011-2015	Jordan	NF
Ethiopia	PF → NF	1975-1979	Kenya	PF
Fiji	PF	2006-2010	Tonga	PF
France	F	2017-2021	Spain	F
Georgia	PF	2013-2017	Switzerland	F
Germany	F	1992-1996	United Kingdom	F
Greece	F	1974-1978	Belgium	F
Grenada	PF → F	1983-1987	Dominica	F
Guinea	NF	2004-2008	Eritrea	NF
Haiti	PF	2011-2015	Cuba	NF
Iceland	F	2010-2014	Denmark	F
India	F	1977-1981	Sri Lanka	F
Indonesia	PF	2000-2004	Brunei	NF
Iran	PF → NF	1979-1983	Bahrain	NF
Iraq	NF	2003-2007	Kuwait	PF
Israel	F	2016-2020	Syria	NF
Italy	F	2012-2016	Norway	F
Kazakhstan	NF	2015-2019	Turkmenistan	NF
Liberia	PF	2006-2010	Sierra Leone	PF
Libya	PF → NF	2011-2015	Tunisia	PF → F
Malaysia	PF	2018-2021	Singapore	PF
Mexico	F → PF	2006-2010	Canada	F
Moldova	PF	2015-2019	Lithuania	F
Nepal	NF → PF	2005-2009	Bhutan	NF → PF
Nigeria	NF → PF	1993-1997	Ghana	PF
North Macedonia	PF	2007-2011	Netherlands	F
Pakistan	PF → NF	1977-1981	Saudi Arabia	NF
Panama	PF → F	1990-1994	Trinidad & Tobago	F
Papua New Guinea	PF	2012-2016	Timor-Leste	PF
Paraguay	PF	2006-2010	Suriname	F
The Philippines	F → PF	2006-2010	Solomon Islands	PF
Poland	F	2006-2010	Belarus	NF
Portugal	F	2014-2018	Ireland	F
Romania	NF → PF	1989-1993	Hungary	PF → F
Sao Tome & Principe	F	2004-2008	Cabo Verde	F
Senegal	F → PF	2005-2009	The Gambia	PF
Serbia	PF → F	1999-2003	Estonia	F
Slovenia	F	2014-2018	Slovakia	F
Somalia	NF	1978-1982	Djibouti	PF → NF

South Korea	F	1995-1999	North Korea	NF
Sudan	NF	2019-2022	South Sudan	NF
Togo	NF → PF	2002-2006	Benin	F
Turkey	PF	1997-2001	Lebanon	NF
Vanuatu	F	2014-2018	Tuvalu	F
Yemen	NF	2015-2019	United Arab Emirates	NF
Zambia	PF	1997-2001	Tanzania	PF
Zimbabwe	PF → NF	1997-2001	Namibia	F

Of the 65 countries in our control group that did not arrest their leader, 59 did not experience any change in freedom levels over the five years in question (when paired with a country that did). Three became freer, and three became less free.
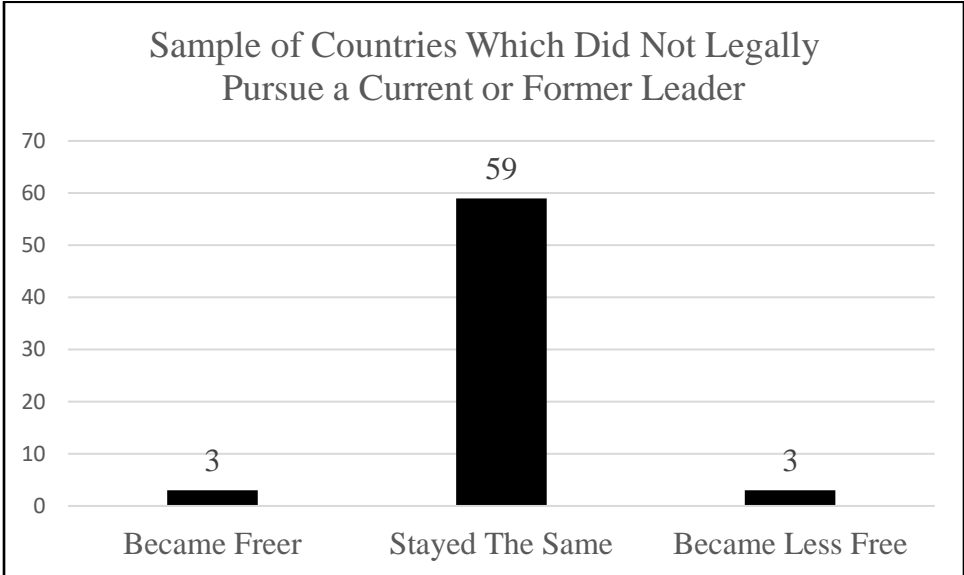
Figure 4: Sample of Countries Which Did Not Legally Pursue
Their Sitting or Former Rulers, 1972-2022

As for the 65 countries from our experimental group that did arrest their leader, 43 did not have a change in their freedom designation from Freedom House. Nine did become less free, or three times more than their control group sample. But equally important, 13 countries became freer during this time, or more than four times as many cases as the control group.
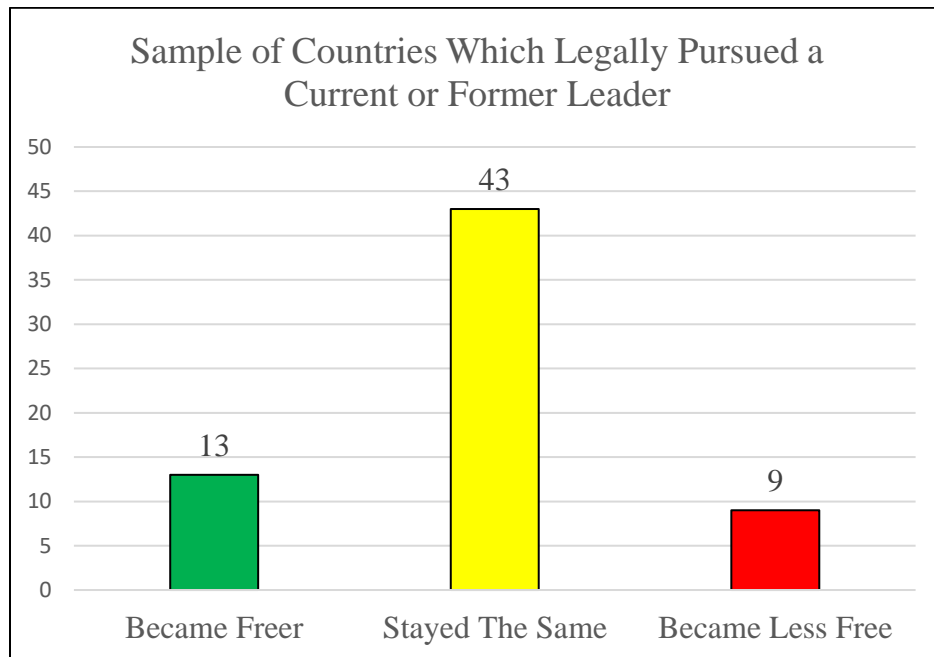
Figure 5: Sample of Countries Which Did Legally Pursue
Their Sitting or Former Rulers, 1972-2022

What this shows us is that arresting a current or former leader is a more disruptive event.

Nearly a third of our experimental group experienced a regime change, as opposed to the less

than ten percent that did in our control group. But it is worth noting that not all such arrests were

bad for democracy. In fact, our research showed that it was a little more likely to be positive for

freedom within a country.

Analysis and Conclusion

Imagine you are the Minister of Justice of a country. A former president is accused of

corruption for actions taken while in power. That president is from a different party, who still

remains popular among those supporters. The current chief executive of your country asks what

should be done.

If you are in a free country, chances are pretty good that such an action won't adversely

affect your democratic institutions, especially if you come from an economically and politically

developed democracy. If you come from a free country that does not have the advantages of an

OECD member, you've got the potential for trouble, but thankfully there are a number of

precedents of cases where countries respect civil liberties and political rights and can hold sitting

heads of state, or those who once held that position.

It is worth noting that while countries that pursue this avenue against rulers (once or

currently in power) which are partly free or not free are more likely to see a regime type

disruption in the next five years than countries that didn't seek justice against an accused current

or ex-leader. But it is also encouraging for supporters of democracy to note that while there were

clearly more cases of autocratization in such arrests, charges and detentions, there were far more

cases of democratization than not only the sample control group (those states that did not go after

a former ruler), but also more instances where legally going after a leader meant more freedom

for a country over the subsequent half-decade.

References

Amar, Akhil Reed and Neal Kumar Katyal. 1994-1995. "Executive Privileges and Immunities: The *Nixon* and *Clinton* Cases." *Harvard Law Review*. 108: 701-726.

Atsin, Aiba. 2011. "Women Subjected to the Law of the Jungle." *Women's World*. 46: 13-14.

BBC. 2021. "Ivory Coast's Ex-President Gbagbo Returns Home After ICC Acquittal." *British Broadcasting Company*. June 17.

Cammarosano, Marcio M. 2018. "The Lula Case. *DPCE Online*. 35 (2): 1-3.

Chiozza, Giacomo and H. E. Goemans. 2011. *Leaders and International Conflict*. Cambridge, UK: University Press.

Freedom House. 2022. "Freedom in the World" Dataset.

https://freedomhouse.org/report/freedom-world

Geddes, Barbara, Joseph Write and Erica Frantz. 2014. "Autocratic Breakdown and Regime Transitions: A New Data Set." *Perspectives on Politics.* 12, 2 (June): 313-331.

Gingrich, Newt. 2022. "Crossing the Rubicon at Mar-a-Lago." *Newsweek*. August 12.

https://www.msn.com/en-us/news/world/crossing-the-rubicon-at-mar-a-lago-opinion/ar-AA10Avop

Haltiwanger, John. 2018. "President Ulysses S. Grant Was Once Arrested for Speeding On A Horse-Drawn Carriage, Proving POTUS Is Not Above the Law." *Business Insider*. December 17.

https://www.businessinsider.com/can-a-president-be-indicted-ulysses-s-grant-was-once-arrested-for-speeding-2018-12

Hess, David and Brian Martin. 2006. "Repression, Backfire and the Theory of Transformative Events." *Mobilization: An International Journal* 11 (2): 249-267.

Jordan, Jenna. 2009. "When Heads Roll: Assessing the Effectiveness of Leadership

      Decapitation." *Security Studies*. 18 (4): 719-755.

Kiyani, Asad G. 2013. "Al-Bashir & the ICC: The Problem of Head of State Immunity." *Chinese*

      Journal of International Law. 12: 467-508.

LADB Staff. 2001. "Former President Menem Released From House Arrest." Latin American

      Data Base: News & Educational Services. November 30.

Meinhardt, Heiko. 2020. "Malawi's Rocky Route to Democratic Consolidation." In *Malawi:*

      Economy, Society and Political Affairs, pgs. 31-51. Matthias Rompel and Reimer

      Gronemeyer, eds. New York, NY: Bloomsbury Publishing.

Scully, Rachel. 2022. "DeSantis: FBI Mar-a-Lago Search an 'Escalation in the Weaponization of

      Federal Agencies.'" *The Hill*. August 9. https://thehill.com/homenews/3593881-desantis-

      fbi-mar-a-lago-search-an-escalation-in-the-weaponization-of-federal-agencies/

Toyozo, Tanaka. 1982. "The LDP Presidential Election – A Foregone Conclusion?" *Japan*

      Quarterly. 29, 4 (October): 412.

Tures, John A. et.al. 2022. "The USA Isn't a 'Banana Republic' for Investigating Trump – Just

      Look at the Data." *Politico*. August 24.

      https://www.politico.com/news/magazine/2022/08/24/the-usa-isnt-a-banana-republic-for-

      investigating-trump-just-look-at-the-data-00052769

Witte-Lebhar, Benjamin. 2014. "Arrest Warrant Issued for Ex-President Francisco Flores."

      NotiCen. LADB: Latin American Data Base: News & Educational Services. May 15.

John A. Tures, Ph.D. is a Professor of Political Science, Coordinator of Political Science
Program, and Director of Undergraduate Research at LaGrange College.

The Pursuit of Chaos

A Historical Examination of Ted Bundy and David Berkowitz Through the Lens of Criminal Profiling

Pamela Pitman Brown, Ph.D.

Albany State University

Jason Armstrong, Ph.D.

Albany State University

Abstract

This study provides a historical examination of two notorious American serial killers, Theodore (Ted) Bundy and David Berkowitz, through the lens of criminal profiling. By analyzing their crimes, captures, and the investigative techniques employed, we explore the evolution and efficacy of criminal profiling methods from the 1970s to the present day. The paper applies various profiling approaches, including the FBI's organized/disorganized dichotomy and Rossmo's geographic profiling, to these cases. Our analysis reveals the complex nature of these offenders, challenging the simplistic organized/disorganized classification and demonstrating the value of more nuanced, multifaceted profiling approaches. The study also considers how modern technology and profiling techniques might have impacted these cases if they occurred today. Our findings highlight both the potential and limitations of criminal profiling, emphasizing the continued importance of traditional police work alongside evolving profiling methodologies. This historical perspective offers valuable insights into current law enforcement practices and suggests directions for future research in criminal profiling.

Keywords: Criminal profiling, Serial killers, Historical case study

The 1970s saw a surge in serial killings that captured public attention and challenged law enforcement. Among the most infamous were Ted Bundy and David Berkowitz, whose crimes terrorized multiple states and cities, respectively. They are also two of the most studied and have had movies, books, academic journal articles, and television shows that featured their lives. While different in their murders/killings, both Bundy and Berkowitz are considered organized serial killers.

Despite criminal profilers, criminal investigative analysts, or behavioral analysts' extensive knowledge and understanding of criminals, particularly serial killers, sometimes the offender is captured by a surprise event. For example, Ted Bundy's capture was due to his driving a stolen vehicle with stolen plates and speeding in Pensacola, Florida. Officers heard a "splash" in the Chattahoochee River in Atlanta and detained Wayne Williams. Cecilia Davis submitted a tip to the police, allowing them to locate David Berkowitz. An angry group of neighbors in East L.A. chased down Richard Ramirez. Despite profiling the offenders, the arrests of the offenders were due to good "police work."

This paper examines Bundy's and Berkowitz's cases through the lens of criminal profiling, a technique that gained prominence during this era. The paper also provides an in-depth historical examination of their crimes, locations, and subsequent capture. Additionally, we analyze the effectiveness of profiling techniques, particularly the FBI's organized/disorganized dichotomy. The paper also considers the role of chance or "good luck," as well as effective police work in their apprehensions. The paper aims to contribute to the efficacy of criminal profiling and its evolution since the 1970s, including an ongoing discussion on whether a modern-day Bundy or Berkowitz could navigate the landscape with today's modern technology and evade capture as long as they did.

Evolution of Criminal Profiling

Turvey (2011) defines criminal profiling as "the process of inferring the characteristics of an offender from the way that offender acted when committing the crime." While the media has popularized it, its efficacy in actual investigations has been a subject of debate among criminologists and law enforcement professionals. Criminal profiling has evolved significantly since the Bundy and Berkowitz cases. Early profiling methods, such as those used by the FBI in the 1970s, relied heavily on the organized/disorganized dichotomy (Ressler & Burgess, 1985).

Criminal Profiling: Nomothetic and Idiographic

Criminal profiling has been considered a handy tool in capturing some of the most heinous criminal serial killers. However, profiling to identify an unknown offender's characteristics is not always the case. As Hulburt and Knapp (2006) noted, two types of studies assist in profiling: nomothetic and idiographic. Nomothetic uses an inductive approach, while idiographic uses a deductive approach.

According to Petherick and Turvey (2008), nomothetic profiling methodology uses criminal investigative analysis, diagnostic evaluations, investigative psychology, and geographic profiling. Idiographic profiling methods using only behavioral evidence analysis Thornton (1997, p. 13) further explains nomothetic/inductive approaches as a

> type of inference that proceeds from a set of specific observations to a generalization called a premise. This premise is a working assumption, but it may not always be valid. A deduction, on the other hand, proceeds from a generalization to a specific case, and that is generally what happens in forensic practice. Providing that the premise is valid, the deduction will be valid. But knowing whether the premise is valid is the name of the game here; it is not difficult to be fooled into thinking that one's premises are valid when

they are not.

Petherick and Turvey note that the FBI uses criminal investigative analysis as its profiling method, which is the most recognized method for the public (2008). With serial killers, it is crucial to use both concepts as nomothetic studies (group/macro) would assist a profiler in patterns or universal characteristics that occur across the serial killers that have already been captured and studied and idiographic characteristics that are specific to the individual serial killer (micro) (Petherick & Turvey, 2011).

Canter (2004) proposed the investigative psychology approach, which emphasizes the importance of understanding the interpersonal coherence in an offender's actions. This method seeks to identify patterns in criminal behavior that reflect the offender's characteristic ways of interacting with others. Salfati and Canter (1999) further developed this idea, proposing a thematic approach to analyzing crime scenes. They argued that offenders' actions could be categorized into themes such as hostility, involvement, or control, providing a more nuanced understanding than the binary organized/disorganized classification.

Petherick and Petherick (2005, p.55) state that profiling is a valid "investigative tool only designed to narrow and define suspect pools." In other words, profiling can be used to narrow the suspect list but cannot confirm the suspect. While profiling can provide useful insights, its reliability and validity need further empirical support. Snook et al. (2008) have critically examined the scientific basis of criminal profiling.

Geographic Profiling

Rossmo (2000) introduced geographic profiling, which uses the locations of a connected series of crimes to determine the most probable area of an offender's residence. This technique

has since been refined and is now used by law enforcement agencies worldwide. Geographic profiling focuses on determining the location of an offender's residence, work location, or other anchor point. Geographic profiling considers the offender's familiarity with places such as their home or work and may be determined from the crime locations (Petherick & Turvey, 2008).

Beauregard et al. (2005) have expanded on this work, examining how environmental factors influence a serial offender's spatial behavior. Their research suggests that offenders' geographic patterns are more complex than initially thought, influenced by factors such as familiarity with an area, perceived risk, and target availability. However, geographic profiling may only be used in some individual cases, as it is based on theory or speculations. Additionally, it is essential to note that geographic profiling has limitations, and in some cases, the practice has been abandoned (Petherick & Turvey, 2008).

Advances in Behavioral Evidence Analysis

Turvey (2011) developed Behavioral Evidence Analysis (BEA), which emphasizes a more holistic, evidence-based approach to profiling. BEA considers not only crime scene evidence but also victimology, forensic analysis, and equivocal death analysis to create a more comprehensive offender profile.

Kocsis (2006) has conducted empirical research on the accuracy of various profiling methods, including BEA. His work suggests that while profiling can be useful, its accuracy varies significantly based on the type of crime and the specific method used.

The Radford/FGCU Serial Killer Database

The Radford/FGCU Serial Killer Database, developed by Enzo Yaksic and Michael Aamodt, represents a significant advancement in the study of serial killers. This comprehensive database contains information on over 5,000 serial killers and provides researchers with valuable data for analyzing patterns and trends in serial killing (Yaksic, 2016).

Offender Classification: Organized and Disorganized

The FBI's Criminal Profiling Project constructed the organized/disorganized classification of offenders. The classification in basic terminology assists those looking for the offender in viewing the level of sophistication of the crime, as well as the planning and the competence evident at the crime scene. The terminology is simple and is not full of academic jargon that we often use as behavioral/social scientists. An organized crime scene looks different from a disorganized crime scene. As Ressler and Burgess note (1985), an organized or psychopathic crime scene reflects control.

In contrast, the offender has planned the offense with a targeted stranger, restraints are used, and the aggressive acts are before death. The body may be hidden and transported to another area away from the crime scene. The disorganized or psychotic crime scene reflects a spontaneous or opportunistic offense, a random and sloppy crime scene with sexual acts after death and having the body left at the location of the death scene, often with evidence or a weapon present (Ressler & Burgess, 1985).

Later, Burgess et al. (1992, p. 9) note that "crime scene(s) rarely will be completely organized or disorganized. It is more likely to be somewhere on a continuum between the two extremes..." This statement tells us that most crime scenes are on a continuum, as Burgess et al.

(1992) consider. Turvey (2008) discusses that using the dichotomy may fail to consider the offender's development over time, with some becoming more competent and skilled. However, others become less competent due to a "deteriorating mental state" or the use of controlled substances (p. 78). Turvey also noted that the dichotomy has been debunked but is continuously used today by nomothetic analysts who may not know the literature. It is at this point that good police work enters the picture.

Methodology

This paper employs a historical case study approach, examining the crimes, investigations, and captures of Ted Bundy and David Berkowitz. The cases are analyzed through the lens of criminal profiling techniques, particularly the FBI's organized/disorganized dichotomy. Consideration of the more recent profiling approaches and how they might have been applied to these cases is discussed.

Our primary sources include police reports, court documents, and interviews with investigators involved in the cases. Secondary sources include academic literature on criminal profiling and serial killers and reputable media reports from the time of the investigations.

Case Studies

Theodore Robert Bundy (November 24, 1946-January 24, 1989)

In thinking of serial killers, the most notorious name is that of Ted Bundy. Ted was born November 24, 1946, as Theodore Robert Cowell. He was born in a home for unwed mothers in Vermont, and his mother, Eleanor Louise Cowell, would take him to her parent's home, where she posed as his sister, and they posed as his parents (Estep, 2021). Bundy was raised in a household where his grandfather was prone to violent rages and with a grandmother who was

severely depressed (Estep, 2021). Louise moved to Tacoma, Washington, and married John Bundy when Ted was around four. Reports show that Ted never had a close relationship with his stepfather nor had a relationship with his biological father (Estep, 2021).

While we know of approximately 36 women/girls that Bundy murdered, it is suspected that the numbers rise into the 100s. The times of his killings are from 1974 to 1979, but there are more years in question. Bundy also escaped from prison twice and had three interventions with police officers that ended up bringing him finally to justice.

In January 1974, Ted assaulted 18-year-old Karen Sparks in her bedroom near the University of Washington (Estep, 2021). He entered her off-campus house through an open window in the basement and beat her with a section of the metal bed frame. He also sexually assaulted her with the metal frame (Estep, 2021). Sparks survived but with significant brain damage (Estep, 2021).

On February 1, 1974, in Washington, Ted Bundy abducted and killed 21-year-old Linda Ann Healy in Seattle's University District (Yang et al., 2019). Healy's partial remains were at Washington's Taylor Mountain (Smith, 2018). March 12, 1974 (Washington) Bundy abducted and killed 19-year-old Donna Gail Manson; her remains were never recovered (Yang et al., 2019). On April 17, 1974, in Ellensburg, Washington, he abducted and killed 18-year-old Susan Elaine Rancourt (Yang et al., 2019); her partial remains were recovered from Washington's Taylor Mountain (Smith, 2018). On May 6, 1974 (Oregon/Washington), he abducted and killed 20-year-old Roberta "Kathy" Parks from Corvallis, Oregon (Yang et al., 2019); her partial remains were located at Washington's Taylor Mountain (Smith, 2018). Rancourt, Healy, and Parks' remains would be located on Taylor Mountain in March 1975 (Yang et al., 2019).

In June of 1974 (Washington), Bundy abducted and killed at least two women. Brenda Carol Ball, 22 years old, was abducted in Burien, Washington, on June 1, and Georgeann Hawkins, 18 years old, was abducted near her sorority house on June 11 (Yang et al., 2019; Smith, 2018). Ball's partial remains were later found at Taylor Mountain (March 1975), and Hawkins' remains would be found outside of Issaquah, Washington, on September 6, 1974, along with two others, Janice Ott and Denise Naslund (Yang et al., 2019). Janice Ann Ott, 23, was abducted from Lake Sammamish State Park, and Denise Naslund, 19, went missing from the Lake's beach area on the same day, July 14, 1974 (Yang et al., 2019; Smith, 2018).

On October 2, 1974, he raped and murdered 16-year-old cheerleader Nancy Wilcox (Estep, 2021). Her body has never been recovered, with Bundy admitted to raping and killing Wilcox before his execution (Smith, 2018). On October 18, 1974, in Utah, Bundy kidnapped, raped, and murdered Melissa Anne Smith in Midvale and Laura Ann Aime (October 31), both 17 years old. Smith, the daughter of the local chief of police, was found nine days later, and Aime's body was found on Thanksgiving (Yang et al., 2019). Rhonda Stapley later came forward and stated that Ted Bundy raped and assaulted her in an isolated canyon on October 11, 1974, when she accepted a ride in his VW rather than waiting for the bus (Estep, 2021).

Posing as a police officer, Bundy attempted to abduct 18-year-old Carol DaRonch at a mall in Utah on November 9, 1974 (Yang et al., 2019). Later that day, Bundy abducted 17-year-old Debra Jean Kent (Bountiful, Utah); Kent's remains have never been located (Yang et al., 2019; Smith, 2018).

On January 12, 1975, a 23-year-old Michigan nurse, Caryn Campbell, was abducted from Snowmass, Colorado, at the Wildwood Inn (Smith, 2018). She was taken from her hotel room

with her husband and friends in the lobby, waiting for her to return (Estep, 2021). Campbell's nude body was located five weeks later (Smith, 2018). On March 15, 1975, 26-year-old Julie Cunningham was abducted in Vail, and she has never been located. Three weeks later, on April 6, 1974, 25-year-old Denise Lynn Oliverson was abducted during a bike ride in Grand Junction, Colorado; she also was never found (Estep, 2021). Bundy later said that he threw Oliverson into the Colorado River (Smith, 2018). On May 6, 1975, 12-year-old Lynette Culver was abducted by Bundy on her way home from school in Pocatello, Idaho (Smith, 2018). Bundy confessed to her abduction and murder just before his execution and stated that he dumped her body into the Snake River; her body has never been found (Saunokonoko, 2019). On June 27/28, 1975, 15-year-old Susan Curtis was abducted and murdered; she has never been found (Estep, 2021). Bundy confessed to her abduction and murder before his execution and stated that he buried her body along a highway near Price, Utah (The Charley Project, 2020).

Bundy Gets Caught Again and Again and Again

Bundy's First Arrest (1975). An alert police officer, Sgt. Robert Hayward noticed a Volkswagen Beetle driving with the lights off in the early morning hours (2:30 am) of Saturday, August 16, 1975 (Brockington, 2019). The police officer told him to stop, but Bundy did not comply, and the police finally arrested him for what was considered a minor incident. However, the police found a gym bag that included a ski mask (a stocking mask was noted in the police report), an ice pick, ripped sheets, and handcuffs (Brockington, 2019). This was not a simple mistake, but it was not complying with an officer, and Bundy had his kill kit in his vehicle, which alarmed the officer. Also, he was stalking a potential victim, but fortunately, the officer was friends with the family and knew the situation.

Bundy's Second Arrest (1975). Bundy was arrested again on August 21 for possession of burglary tools by Deputy Darrel Ondrak, and on October 2, 1975, Bundy was identified by Carol DaRonch as the person who tried to abduct her and who assaulted her (Ramsland, 2020). He was subsequently arrested and charged with attempted criminal assault and aggravated kidnapping of DaRonch (Ramsland, 2020) and was held in the Salt Lake County Jail (Yang et al., 2019). The trial began in February of 1976, when Bundy waived his right to a jury trial, was found guilty of the aggravated kidnapping charge on March 1, and sentenced to prison in Utah (Yang et al., 2019).

This arrest was due to the kidnapping of DaRonch, who is one of the few victims who survived Bundy. She was able to identify him. She survived by fighting back and escaping, jumping out of Bundy's car, and jumping into a passing car driven by Wilbur and Mary Walsh with Bundy's handcuffs still on her wrist (Carlson, 2022).

Bundy's First Escape and Capture (1977). In October of that year, Bundy was charged with the January 1975 Colorado murder of 23-year-old nurse Caryn Eileen Campbell (Yang et al., 2019), and her hair was found in Bundy's car, as well as evidence that put him in the same ski lodge the night, she went missing (Brockington, 2019). Bundy was moved to Colorado for this trial (January 1977), pleaded not guilty (May 1977), and then escaped from the Pitkin County jail law library (June 7, 1977), but was caught five days later (Yang et al., 2019).

Again, it was a fluke that he was captured June 13, 1977, around 2 a.m. by two deputy sheriffs (Gene Flatt and Maureen Higgins) when he made a U-turn in a stolen 1966 Cadillac after realizing there was a barricade that closed the road (Brockington, 2019; Jean, 2021b). Another fascinating piece of the capture is that the two officers, Flatt and Higgens, were looking for a

suspect in a sexual assault case when they stopped the Cadillac (Jean, 2021b). Bundy was placed

in the Garfield County jail at Glenwood Springs and charged with escape, burglary, and felony

theft on June 15, 1977 (Jean, 2019b; Yang et al., 2019). This was his first escape.

Bundy's Second Escape, The Chi Omega Murders, and Recapture (1977/1978).

Bundy's second escape was December 30, 1977, when he escaped from the Glenwood Springs

facility and made his way to Tallahassee, Florida, via a plane, trains, a stolen vehicle, and a bus,

where he rented a room at The Oaks (Jean, 2019c; Yang et al., 2019). Less than two weeks later,

Bundy entered the Chi Omega sorority house at Florida State University in Tallahassee and

murdered 21-year-old Margaret Bowman and 20-year-old Lisa Levy. He also severely beat

Karen Ann Chandler and Kathy Kleiner, but they both survived with severe injuries. He left the

Chi Omega house and broke into the apartment of Cheryl Thomas, where her neighbors heard

noises and called the police. Thomas survived the attack, but Bundy escaped. In February 1978,

12-year-old Kimberley Leach was abducted and murdered by Bundy, and this was Bundy's last

murder. Her body was found near the Suwannee River State Park in April of 1978,

approximately 35 miles (60km) from her school (Saunokonoko, 2019).

Bundy's Chance Arrest and Capture in Florida (1978). Bundy was arrested by chance

on February 15, 1978, in Pensacola. Patrol officer David Lee saw a car driving erratically. The

officer then ran the plates to discover the car had been stolen. After refusing to give Officer Lee

his name and resisting arrest, a struggle ensued, but Bundy was subdued and arrested after

Officer Lee fired two shots at him. During the arrest, he gave the officers a stolen ID. On

February 17, 1978, Bundy finally identified himself.

Bundy brought attention to himself via his carelessness. He was detected by loitering, driving a stolen car with stolen plates, and speeding. Officer Lee's alertness led to the arrest and subsequent identification. The police were also able to piece Bundy's last month together, noting that he lived near the Chi Omega sorority house at a rooming house (The Oaks) a few blocks away. Bundy's hair matched hair found on a pantyhose mask from one assault. A bite mark also matched Bundy on one of the Chi Omega victims, and another Chi Omega was able to describe a sketch artist who "looked like" Bundy (Taudte, Gowen, & Francis, 2019).

In July 1978, Bundy was indicted for Bowman and Levy's murders and the attempted murders of Chandler, Kleiner, and Thomas. On July 24, 1979, Bundy was found guilty of both the murders and the attempted murders, and a week later, received the death penalty for Bowman and Levy's murders. In February 1980, he was also found guilty of the kidnapping and murder of Leach, also receiving a death sentence.

Earlier Murders of Bundy

Before Bundy's execution in Raiford, Florida, in January of 1989, he began to confess to at least 30 murders in California, Oregon, Washington, Idaho, Utah, Colorado, and Florida from 1973-1978. However, authorities believe the numbers to be much higher, as in the fall of 1974, while Bundy went to law school in Utah, women disappeared (Picotti, 2023a). Picotti states that criminologist/sociologist at Iowa State, Dr. Matt DeLisi, believes that Bundy murdered more than 100 women and began his killing during his adolescence. DeLisi, whose book *Ted Bundy and the Unsolved Murder Epidemic: The Dark Figure of Crime* was just released in March, noted that his confidence from 1974 to 1978 shows that he would not have "just started" during that period (Iowa State, 2023).

It is posited that Bundy was responsible for the August 31, 1961, murder of an 8-year-old, Ann Marie Burr, who lived near his home in Tacoma, Washington, when he was 14 (Lewis, 2014; Kettler, 2020). Ann Marie was abducted during the night where there was an open window, an unlocked front door, and a footprint (Kettler, 2020). Others were in the house when she was taken, and it is thought that Bundy may have met her when visiting his uncle, who lived nearby or on his paper route (Kettler, 2020). Others state that Ann Marie did know Bundy from the neighborhood (Lewis, 2014). However, when Ann Marie's mother asked Bundy prior to his execution if he killed her, he stated he did not (Kettler, 2020).

Analysis of Bundy's Crimes Through a Profiling Lens

Bundy's crimes initially fit the profile of an organized offender, as described by Ressler and Burgess (1985). He was intelligent, socially competent, and meticulously planned his crimes. However, as Turvey (2008) notes, offenders can shift along the organized-disorganized continuum. This was evident in Bundy's later crimes, particularly the Chi Omega murders, which showed signs of disorganization.

Applying Canter's (2004) interpersonal coherence theory, we see patterns in Bundy's victim selection and approach methods. His consistent targeting of young women with long, dark hair and his use of an "injury" or "authority figure" ruse to approach victims demonstrates a characteristic way of interacting that persisted throughout his criminal career.

Geographic profiling, as developed by Rossmo (2000), would have been particularly useful in Bundy's case, given his extensive travel. His crimes spanned multiple states but often clustered around areas where he lived or frequently visited, aligning with Beauregard et al.'s (2005) findings on the influence of environmental familiarity on offender behavior.

Patterns of Bundy's Murders: Organized or Disorganized. In considering the profile and patterns of Bundy, the Chi Omega murders did not mesh with the information that the Florida police received from Utah and Colorado. His *modus operandi*, as noted by Bonn (2019), was to approach the women/girls in a public place and pretend to be injured or have a disability. He was also known to pretend to be a police officer or an authority figure, as with DaRonch. DaRonch noted that he flashed a badge and asked for help, so she went with him (Carlson, 2022). Bonn notes that Bundy was a power/control serial killer, which means that the primary motivation is domination and that the murder was the final act of power/control (2019).

Bundy's ability to get into law school and complete an undergraduate degree in psychology speaks to his intelligence (organized), and he was socially competent, as evidenced by his ability to get women to go with him. He changed colleges and left towns (organized), and he did have mobility, his Volkswagen (organized). He admitted that in his early killings, he drank alcohol to be able to complete his abduction/murder (organized). However, we would agree that he is not solely an organized offender. He is somewhat of a mix, as Burgess et al. (1992, p. 9) note that "crime scene(s) rarely will be completely organized or disorganized." This becomes more evident with his Florida murders. Toward the end of Bundy's run of murders, there was a series of mishaps and missteps that made it easier for him to be caught.

As Bonn (2014) notes, serial killers get better and bolder with their experience. One of Bonn's key points is that it takes time to gain experience and not be detected, so the serial killer must perfect their skills while avoiding mistakes. As they continue to kill and avoid being caught, they are more willing to take risks (Bonn, 2014). The serial killer then begins to believe they are invincible, but as Bonn notes, they "may become bored, reckless, or sloppy in their work and make mistakes that can lead to their apprehension" (2014). However, the Chi Omega

murders did not follow the idiographic pattern of previous killings. At the sorority house, it was noted that the women were murdered during a "frenzy" (Taudte, Gowen, & Francis, 2019). As Turvey (2011) notes, the organized/disorganized offender dichotomy is the epitome of the inductive/nomothetic approach to profiling, and due to the macro level study of scene and offender traits, they will share traits with both groups.

David Richard Berkowitz (June 1, 1953-Still living)

David Richard Berkowitz was known as the "Son of Sam" across New York in the late 1970s. He took on the moniker in a note he wrote to the New York Police Department. Berkowitz terrorized the New York area from the summer of 1976 to the summer of 1977, killing six individuals and wounding seven in shootings that focused on heterosexual couples (Roger & Bakewell, 2011). Like Bundy, Berkowitz focuses on girls/women with long brunette hair, which leads to many women wearing blond wigs or dying their hair blond. Also, similar to Bundy, his biological mother gave him up for adoption. Berkowitz was born David Falco on June 1, 1953, to Elizabeth Broder, who was Jewish and grew up in Brooklyn (Kuroski, 2023). Another Jewish family adopted Berkowitz, Nathan, and Pearl Berkowitz, who ran a hardware store in the Bronx (Kuroski, 2023). His adopted mother, Pearl, died from breast cancer when Berkowitz was 14; his adopted father, Nathan, remarried and later moved out of the Bronx to Florida (Kuroski, 2023).

Berkowitz First Killing. On Christmas Eve in 1975, Berkowitz stabbed two women; one was not identified, and the other one was a 15-year-old sophomore in high school, Michelle Forman. He stabbed her six times on a bridge near Dreiser Loop, but she survived after hospitalization. These deaths were not associated with the *.44 Caliber Killer* as he was initially

known, but later, Berkowitz acknowledged that it was he who stabbed the two on Christmas Eve. This was an area that Berkowitz knew as he had lived in an apartment at Dreiser Loop from 1967 to 1971.

Berkowitz's First and Subsequent Shootings. On July 29, 1976, Donna Lauria (18) and friend Jody Valenti (19) were sitting in Valenti's Oldsmobile in the Pelham Bay area of the Bronx (Thomas, 1976). The shooting occurred in front of Lauria's parents' apartment around 1 a.m. (Thomas, 1976). As Lauria exited the car, she was shot in the back and died instantly, and Valenti was shot in the thigh (Thomas, 1976). Valenti was hospitalized for a week, survived, and could describe Berkowitz. The description was that the shooter was a white male in his thirties, around 5'8", 175 pounds, with dark, short, curly hair (Thomas, 1976). Lauria's father noticed a yellow car parked nearby, and he and other witnesses confirmed that the individual in the yellow car matched the description Valenti gave the police (Thomas, 1976). Analysis indicated that the weapon was a .44 caliber handgun, and the detectives considered that this may have been a mob hit that took out the wrong individual (Ewings, 2008, p. 36).

On October 23, 1976, Carl Denaro and Rosemary Keenan were sitting in a car in Flushing, and the windows exploded, which caused Keenan to start the car and flee the area (Crime Museum, 2022). It was only afterward that they realized they had been shot, and Denaro had a head wound, where portions of his skull were so shattered that he had to have a metal plate (Ewing, 2008, p. 37). Both survived the attack, but neither of them could describe the shooter (Crime Museum, 2022). The police again noted that the bullets were a .44 caliber. Still, there was no immediate connection considered to the Lauria and Valenti shooting as they were in a different New York borough (Crime Museum, 2022).

The day after Thanksgiving in 1976, November 27, 16-year-old Donna DeMasi and 18-year-old Joanne Lomino sat on Lomino's porch in Bellerose, Queens, around 12:30 am. As they were about to separate, with Lomino heading to the front door and DeMasi headed to the sidewalk, a man approached them, dressed in military fatigues, and said, "Can you tell me how to get to…?" (Ewing, 2008, p. 37). He then took out a revolver from his army-style jacket and shot at them. Lomino was struck in the back and paralyzed from the waist down (Ewing, 2008). DeMasi was struck in the neck/collarbone. Police were able to determine that the bullets were from an unknown .44 caliber gun. They could also make composite sketches based on the testimony of DeMasi, who described him as around 5'10", around 150 pounds or more (Ewing, 2008, p. 37). Around two months later, on January 30, 1977, Christine Freund and John Diel were sitting in Diel's car in an affluent neighborhood in Queens around 12:30 a.m. when the car was shot at (Ewing, 2008, p. 37). Diel suffered minor injuries, and Freund died of head/shoulder injuries at the hospital (Ewing, 2008, p. 37).

After the Freund/Diel shooting, police publicly connected this case with the previous three (Ewing, 2008). They noted that all the shootings involved a .44 caliber gun, and the shooter targeted young women with long, dark hair (Crime Museum, 2022). There was a single shooter responsible, and a .44 caliber handgun was being used (Ewings, 2008).

On March 8, 1977, around 7:30 pm, Columbia University student Virginia Voskerichian was shot while walking home from class at a bus stop (Ewing, 2008). She lived one block from the victim, Christine Freund (Crime Museum, 2022). Voskerichian was shot several times and died instantly of a gunshot wound to the head (Ewing, 2008, p. 38). In the minutes following the shooting, a neighbor who heard the shooting went outside and saw a man running away. The neighbor described the individual as possibly a teen or young adult male, around 5'8",

approximately 160 pounds, wearing a stocking cap and a waist-length coat (Ewings, 2008, p. 38). It was this case where the weapon and the perpetrator were confirmed as the same in the previous murders/shootings. New York City Mayor Abraham Beame announced, "We have a savage killer on the loose. He is singling out women with shoulder-length deep brown hair. We do not know why…" (Ewings, 2008, p. 38).

Berkowitz Taunts Police and Neighbors

Son of Sam Letter. Berkowitz's shooting on April 17, 1977, occurred in the Bronx, blocks away from the Valenti-Lauria shooting. Alexander Esau (20 years old) and Valentina Suriani (19 years old) were shot twice in the head through the windshield (Ewings, 2008, p. 38). When the police arrived at the scene, Esau was seriously wounded, and Suriani was already dead (Ewings, 2008, p. 38). At the crime scene, police discovered a handwritten letter addressed to Capt. Joseph Borrelli of the NYPD (Ewings, 2008, p. 38). Borrelli was noted as the lead investigator into the murders by local media (Ewings, 2008, p. 38). It was in this letter that the police found on the seat of the car that Berkowitz referred to himself as the *Son of Sam*, "Mr. Monster," and stated that he would continue his shooting sprees (Ewings, 2008, p. 38-39).

At this time, a police psychologist, Dr. Harvey Scholossberg, was brought into the case. He would be the first of many to profile *Son of Sam,* with an additional 45 psychiatrists from the state psychiatric hospital giving their opinions (Ewings, 2008, p. 39). Other infamous psychiatrists, Dr. Martin Lubin and Dr. James Brussel, also weighed in on the *Son of Sam* (Ewings, 2008, p. 39). Dr. Lubin was previously the head of forensic psychiatry at Bellevue Prison Hospital in New York. Dr. Brussel was an earlier profiler who created the psychological profile of the "Mad Bomber" George Meteskey (Ewings, 2008, p. 39). Lubin later wrote *Good*

Guys, Bad Guys, From Bellevuew to Berkowitz (1982). Due to the numerous

psychologists/psychiatrists who were weighing in on the profile of the Son of Sam, the police

issued the profile as follows, "neurotic, schizophrenic and paranoid individual who might believe

that he was suffering from a kind of demonic possession, … probably shy and odd, a loner inept

in establishing personal relationships, especially with women" (Ewings, 2008, p. 41).

Brussel also noted that the individual enjoyed "toying" with the police and was confident

that the killer would kill again rather than turn himself in or attempt to communicate with the

police (Ewings, 2008, p. 41). They later suggested he was "polite, very intelligent, probably

college educated, worked days at a white-collar job, and was likely a Catholic or Episcopalian"

(Ewings, 2008, p. 42).

Berkowitz Continued Shootings. On June 26, 1977, in Bayside, Queens, 20-year-old

Sal Lupo, and 17-year-old Judy Placido were sitting in their car around 3 am when they were

shot (Ewings, 2008, p. 40). Lupo was hit with one shot in the arm, and Placido was hit three

times in the head (Ewings, 2008, p. 40). Both survived. Witnesses reported seeing a 5'10" man,

weighing around 170 pounds, wearing a beige three-quarter length coat, and the man leaves in a

yellow car (Ewings, 2008, p. 41).

The last shooting occurred on July 31, 1977, just two days after the anniversary of the

first (Ewings, 2008, p. 42). Twenty-year-olds Stacy Moskowitz and Robert Violante were in

Violante's car, parked near a park in Brooklyn, when a man walked up to the passenger side and

began shooting (Ewings, 2008, p. 42). Moskowitz died at the hospital from gunshot wounds to

her head, and Violante was blinded from his injuries (Ewings, 2008, p. 42).

Several witnesses to this shooting were able to provide descriptions of the shooter to police. Police were able to match bullets and connect the murders/ assaults to the same .44 caliber Charter Arms Bulldog (Ewings, 2008, p. 42). One witness, 49-year-old Cacilia Davis, lived near where Moskowtiz was murdered (Rothman, 2015). She stated that she was walking her dog near her apartment at 2:30 am the morning of the murder when a man rushed past her right before she heard shots and a car horn (Rothman, 2015). Davis recalled seeing a police officer, Michael Cataneo, ticketing a cream-colored vehicle parked by a fire hydrant (Sherman et al., 1977; Rothman, 2015). They also found another ticket that was just prior to Berkowitz killing Esau and Suriani (Sherman et al., 1977). The ticket by Patrolman Jose Pinero was a summons for driving without insurance, just a few blocks from the shooting on Hutchison River Parkway (Sherman et al., 1977). This information led them to Berkowitz's car, a 1970 Ford Galaxie sedan, and was able to locate his Yonkers address (Rothman, 2015).

Berkowitz's Neighbors Respond. Several of Berkowitz's neighbors were also contacting the police, saying that they believed he was the *Son of Sam*. In 1976, Sam Carr, one of Berkowitz's neighbors, received a letter complaining about his dog, Harvey, barking (Weber, 2022). Harvey was shot in September of 1976. In 1977, another neighbor, Jack Cassara, received a get-well card from Sam Carr and his wife; however, Jack was not sick or injured (Weber, 2022). Cassara and Carr determine that Berkowitz writes their letters and cards, and Carr contacts the police to say that he believes Berkowitz is the *Son of Sam* killer. The police do nothing.

Berkowitz also sent another letter to Jimmy Breslin and Craig Glassman, a neighbor, around the same time in May 1977. Breslin, a journalist at the New York Daily News, received a

letter from someone who knew about the murders. It was in the Breslin letter that "The Wicked King of Wicker" and "John Wheaties" were mentioned (Berry, 2021).

On August 6, 1977, Glassman found a bucket on fire outside his door that was filled with gunpowder and .22 caliber bullets (Larosa, 2017). Glassman filed a complaint against Berkowitz and told some of his police force colleagues that he thought Berkowitz could be the *Son of Sam* (Larosa, 2017). On August 9, 1977, New York Police Detective James Justice contacted the Yonkers police to get an interview with Berkowitz, and the dispatcher was none other than Wheat Carr, the daughter of Sam Carr (Weber, 2022). In an early letter to the police, Berkowitz calls himself the Wicked King of Wicker, and they realize that Carr lives on Wicker Street (Weber, 2022). He also mentions John Wheaties, and they can tie it back to Carr's daughter, Wheat (Weber, 2022)

Berkowitz's Arrest. When the New York police showed up to arrest Berkowitz on August 10, 1977, they initially approached Glassman, and Glassman told them he would show them who Berkowitz was (Larosa, 2017). The police searched Berkowitz's car, where they found maps of the crime scenes, a rifle, a duffel bag with ammunition, and a *Son of Sam* letter that was addressed to Sergeant Dowd of the Omega Task Force (Weber, 2022). They waited outside of Berkowitz's apartment, where they were able to arrest him after he got into his 1970 Ford Galaxie sedan, leaving his Yonkers apartment with a .44 caliber Bulldog pistol in a paper bag (Weber, 2022). Glassman was one of the officers who pulled his gun on Berkowitz and told him to "Freeze" (Larosa, 2017).

Berkowitz, like Bundy, has characteristics of both organized and disorganized offenders. When viewed through the organized/disorganized dichotomy, Berkowitz presents a more complex case. While some aspects of his crimes were organized (use of the same weapon, following crime news), others were distinctly disorganized (living alone, socially inadequate). Berkowitz is of average intelligence (organized), but he is socially inadequate (disorganized), and we know he is sexually incompetent (disorganized). He had transportation (organized) yet lived alone (disorganized) and had lived near the crime scenes at one time in his life (disorganized). He also followed crime in the news media (organized) and even began taunting the police. This dichotomy is noted by Petherick and Turvey (2011) as false and arising "from mistaken ideas about the developmental nature of criminal behavior and the role of crime reconstructions" (p. 78). This supports Burgess et al.'s (1992) assertion that most offenders fall somewhere on a continuum between organized and disorganized.

Applying Salfati and Canter's (1999) thematic approach, Berkowitz's crimes show elements of both hostility (random shootings) and involvement (letters to police and media). This multi-themed behavior presents a more nuanced picture than the simple organized/disorganized classification.

Berkowitz's case also demonstrates the potential value of geographic profiling. His crimes were concentrated in specific areas of New York City, and he was eventually caught near his home in Yonkers. This aligns with Rossmo's (2000) theory that serial offenders often operate within a comfortable geographic radius.

<div align="center">**Discussion**</div>

The cases of Bundy and Berkowitz highlight both the potential and limitations of criminal profiling. While certain aspects of their behavior aligned with profiling theories, both ultimately evaded capture for extended periods and were apprehended primarily due to chance circumstances and traditional police work. Using the organized/disorganized dichotomy, which provides a useful starting point, proves insufficient to fully capture these offenders' complexity. As Turvey (2011) argues, a more holistic approach considering multiple factors is necessary for effective profiling. The role of chance in these captures underscores Snook et al.'s (2008) caution about over-relying on profiling. While profiling can provide valuable insights, it should be used in conjunction with, not as a replacement for, thorough investigative work.

Implications for Modern Practice

The historical examination of these cases offers several insights into current law enforcement practices:

- *The importance of flexibility in profiling:* As Bundy and Berkowitz demonstrated, behavioral changes over time. Modern profilers must be prepared to adapt their assessments as new evidence emerges.
- *The value of interdisciplinary approaches:* Combining traditional profiling with geographic profiling and behavioral evidence analysis can provide a more comprehensive understanding of an offender.
- *The continued relevance of basic police work:* While profiling can offer valuable leads, the role of chance in these captures highlights the ongoing importance of thorough, persistent investigative work.

- *The potential of data-driven approaches:* Resources like the Radford/FGCU Serial Killer Database offer opportunities for more empirically grounded profiling techniques.

If They Had Lived Now

Bundy

Bundy and Berkowitz's crimes occurred in the 1970s-1980s, which would have been before police shared databases with other agencies and other states. Additionally, profiling was not used then at the level that it was in the 80s and 90s. It was a relatively new concept, and it was not as accepted. Pinizzotto notes that the FBI only provided profiling assistance on less than 200 cases from 1971 to 1980 (1984). Modern technology would most likely have been able to aid in catching each of them earlier. The idea now is that a serial killer with the magnitude of Bundy's murders' GPS tracking on smartphones, watches, vehicles, and surveillance cameras would have led to his arrest much sooner.

Bundy was not the norm for serial killers, as many have a defined geographic area from which they operate (Bonn, 2018). However, Bundy was atypical, traveling around the Pacific Northwest and Western states until he ran to Florida. Using the familiarity of his previous areas, Bundy was more organized and had a straightforward way of moving his victims using his VW with the passenger seat removed, as well as hiding their bodies. As noted previously within this paper, Bundy's murders were frantic in Florida, particularly in his Chi Omega murders. This is most likely due to his shift from organized to disorganized. The lack of transportation constrained his common patterns, and it is possible that he understood he was running out of time before he was captured again. Bundy was comfortable moving around in the western states,

not only because he knew the area, but because he had his Volkswagen prepared for his abductions. When he relocated to Florida, he was outside his comfort zone. He was no longer in control of his surroundings or previous killing methods. This may have caused him to leave bite marks and a mask with hair. He was also unable to transport his victims until he stole a car and murdered Leach. Before his execution, Bundy confessed to murdering 36 women across multiple states.

After Bundy was executed, Hayward told the news that the first arrest of Bundy was simply luck (Jean, 2021). Hayward noted that he turned right, which was not his normal turn from that neighborhood, but it took him right to where he saw Bundy's Volkswagen parked outside a family friend's house (Jean, 2021). Hayward knew that the family (Gregson) had teenage daughters, and the parents were out of town (Jean, 2021).

Berkowitz

In modern times, it would have been much more difficult for Berkowitz to escape capture and commit violence to so many victims. New York City is one of the most surveilled cities in the world. Between public and private camera systems, smartphones, license plate readers, and other advanced technology, Berkowitz and his vehicle could have been identified much earlier in the investigation.

Berkowitz's arrest was a good bit of luck. It was also some of his arrogance in writing letters to his neighbors, the police, and the newspaper that allowed some pieces to fit together. Additionally, the location of his car and the parking tickets, which placed him in the area of the Moskowitz, Esau, and Suriani shootings, were fortuitous. This allowed the police to search for his address. If the dog walker, Cacilia Davis, had not noticed the ticketing and had not been

walking her dog during that time, even recalling that she had seen the police officer giving out tickets (Sherman et al., 1977), Berkowitz may have evaded arrest for a more extended period.

A police officer who attended the Moskowitz funeral, Irving Levitan, said it would be something "silly" that would get him, like a traffic ticket (Sherman et al., 1977). Police Inspector Levitan knew that there were often pieces of evidence that were sheer "luck" that allowed them to capture offenders.

Conclusion

The cases of Ted Bundy and David Berkowitz marked a pivotal moment in the history of criminal profiling. While profiling techniques provided some insights, they also demonstrated limitations that have driven the field's evolution over the past several decades. The newer methodological tools for profiling allow profilers, investigators, and law enforcement to "learn from our mistakes." As we continue refining profiling techniques, these historical cases serve as important reminders of this investigative tool's potential and limitations. They underscore the need for a balanced approach that combines profiling insights with rigorous, evidence-based police work.

Today's profilers have a more diverse toolkit, incorporating geographic analysis, behavioral evidence analysis, and large-scale data analysis. However, the fundamental challenges remain: accurately inferring offender characteristics from crime scene evidence and translating those inferences into actionable intelligence for law enforcement.

References

Beauregard, E., Proulx, J., Rossmo, K., Leclerc, B., & Allaire, J. F. (2007). Script analysis of the hunting process of serial sex offenders. *Criminal Justice and Behavior*, 34(8), 1069-1084.

Berry, J. (2021, May 6). What did David Berkowitz's letters say? *RadioTimes*. https://www.radiotimes.com/tv/documentaries/true-crime/david-berkowitzs-letters-the-sons-of-sam/

Bonn, S. (2019, December 30). Examining Serial Killer Ted Bundy: A classic power/control killer. *Psychology Today.* https://www.psychologytoday.com/us/blog/wicked-deeds/201912/examining-serial-killer-ted-bundy

Beauregard, E., Proulx, J., Rossmo, K., Leclerc, B., & Allaire, J. F. (2007). Script analysis of the hunting process of serial sex offenders. *Criminal Justice and Behavior*, 34(8), 1069-1084.

Bonn, S. (2018, July 16). Most Serial Killers Hunt Close to Home. *Psychology Today.* https://www.psychologytoday.com/us/blog/wicked-deeds/201807/most-serial-killers-hunt-close-home

Brockington, A. (2019, May 3). How one mind-blowingly simple mistake stopped Ted Bundy. *Refinery29.* https://www.refinery29.com/en-us/2019/01/222447/how-was-ted-bundy-caught-arrested-story-netflix

Brodzinsky, D. M. (1990). The psychology of adoption. In D. M. Brodzinsky and M. D. Schechter's (Eds.) *The Psychology of Adoption* (pp. 3-24). Oxford University Press.

Burgess, A.N., Burgess, A.W., Douglas, J., et al. (Eds.). (1992). *Crime Classification Manual*. Lexington Books, New York, NY.

Burgess, A.W., and Ressler, R.K. (1985). *Sexual Homicides: Crime Scene and Pattern of Criminal Behavior.* National Institute of Justice Grant 82-IJ-CX-0065.

Canter, D. (2004). Offender profiling and investigative psychology. Journal of Investigative Psychology and Offender Profiling, 1(1), 1-15.

Carlson, A. (2022, December 18). 'Girl Who Got Away': The True Story of Ted Bundy Survivor Carol DaRonch and Her Life Now. *People Magazine.* https://people.com/crime/true-story-carol-daronch-now-ted-bundy-movie/

Estep, R. (2021). The charming psychopath: Ted Bundy. In R. Estep, *Serial Killers: The Minds, Methods, and Mayhem of History's Notorious Murderers* (1st ed.). Visible Ink Press.

Ewing, C. P. (2008). *Insanity: Murder, Madness, and the Law*. Oxford University Press. https://doi.org/10.1093/acprof:oso/9780195326130.001.0001

Hurlburt, R.T., and Knapp, T.J. (2006). Münsterberg in 1898, Not Allport in 1937, Introduced the Terms "Idiographic" and "Nomothetic" to American Psychology. *Theory and Psychology*, 16 (2), 287–293.

Iowa State University. (2023). The Dark Figure of Crime. *Iowa State University News Service.* https://www.news.iastate.edu/news/2023/03/20/ted-bundy

Jean, T. (2021, August 29a). The First Arrest, 1975. *Killer in the Archives.* https://killerinthearchives.blog/the-first-arrest-1975/

Jean, T. (2021, August 29b). The First Escape, 1977. *Killer in the Archives.* https://killerinthearchives.blog/the-cbi-escape-investigation-1977/

Jean, T. (2021, August 29c). Photos: The things he left behind, 1977. *Killer in the Archives.*

https://killerinthearchives.blog/photos-the-things-bundy-left-behind/

Kettler, S. (2020, July 14). Inside Ted Bundy's troubled and disturbing childhood. *Biography.*

https://www.biography.com/crime/ted-bundy-childhood

Kocsis, R. N. (2006). *Criminal profiling: Principles and practice*. Humana Press.

Kuroski, J. (2023). The Story of David Berkowitz and the 'Son of Sam' Killing. *All That's*

Interesting. https://allthatsinteresting.com/son-of-sam-david-berkowitz

Larosa, P. (2017, August 11). Daughter of man terrorized by "Son of "Sam" now visits him in

prison. *CBS News.* https://www.cbsnews.com/news/son-of-sam-daughter-of-man-

terrorized-by-serial-killer-david-berkowitz-now-visits-him-in-prison/

Lewis, P. (2014, November 25). Little girl's disappearance in 1961 may have been at hands of

infamous serial killer. *Fox13Seattle.* https://www.fox13seattle.com/news/little-girls-

disappearance-in-1961-may-have-been-at-hands-of-infamous-serial-killer

Lubin, M. (1982). *Good Guys, Bad Guys, From Bellevuew to Berkowitz.* McGraw Hill.

Petherick, W. (2005). The fallacy of accuracy in criminal profiling. In W. Petherick and W. A.

Petherick (Eds.), *Serial crime: Theoretical and practical issues in behavioral profiling*

(pages 53-65). Elsevier Science & Technology. https://doi.org/10.1016/B978-0-12-

374998-7.00003-4

Petherick, W. A., & Turvey, B. E. (2008). Nomothetic methods of criminal profiling. In B. E. Turvey (Ed.), *Criminal profiling: An introduction to behavioral evidence analysis* (3rd ed., pp. 75–111). Elsevier Academic Press.

Petherick, W. A., and Turvey, B. E. (2011). Alternative Methods of Criminal Profiling. In B. E. Turvey (Ed.), *Criminal profiling: An introduction to behavioral evidence analysis* (pages 67-99). Elsevier Science & Technology.

Piccotti, T. (2023a, June 15). Ted Bundy. *Biography*. https://www.biography.com/crime/ted-bundy

Piccotti, T. (2023b, March 22). A Criminologist says Ted Bundy probably murdered dozens more people than we thought. *Biography*. https://www.biography.com/crime/a43377419/ted-bundy-victims-new-book

Pinizzotto, A. J. (1984). Forensic psychology: Criminal personality profiling. *Journal of Police Science and Administration*, *12*(1), 32-40.

Ramsland, K. (2020, February 28). Bundy and the Psychologists. *Psychology Today*. https://www.psychologytoday.com/us/blog/shadow-boxing/202002/bundy-and-the-psychologists

Rossmo, D. K. (2000). *Geographic profiling*. CRC press.

Roger, L., and Bakewell, J. (2011). Berkowitz, David. *Chambers Biographical Dictionary (*9th ed.). Chambers Harrap. https://search-credoreference-com.ezproxy1.apus.edu/content/entry/chambbd/berkowitz_david/0

Rothman, L. (2015, August 10). How the Son of Sam serial killer was finally caught. *Time.*

> https://time.com/3979004/son-of-sam-caught/

Salfati, C. G., & Canter, D. V. (1999). Differentiating stranger murders: Profiling offender

> characteristics from behavioral styles. Behavioral Sciences & the Law, 17(3), 391-406.

Sherman, W., Edmonds, R., and Federici, W. (1977, August 12). Of All Clues, 1 Was Just the

> Ticket. *New York Daily News.* https://www.nydailynews.com/new-york/nyc-crime/clues-
> 1-ticket-catch-son-sam-article-1.3370198

Smith, B. H. (2018). How Many People Did Ted Bundy Kill? A Timeline of the Serial Killer's

> Gruesome Murder Spree. *Oxygen True Crime*. https://www.oxygen.com/snapped/crime-
> time/timeline-serial-killer-ted-bundy-gruesome-murder-
> spree#:~:text=Before%20his%20execution%2C%20Bundy%20admitted%20to%20rapin
> g%20and,of%20Holladay%2C%20a%20suburb%20of%20Salt%20Lake%20City

Snook, B., Cullen, R. M., Bennell, C., Taylor, P. J., & Gendreau, P. (2008). The criminal

> profiling illusion: What's behind the smoke and mirrors? Criminal Justice and Behavior,
> 35(10), 1257-1276.

Sounokonoko, M. (2019, February 4). Why serial killer Ted Bundy broke grisly pattern to slay

> three pre-teen girls. *NineNews.* https://www.9news.com.au/world/ted-bundy-us-serial-
> killer-three-pre-teen-victims-netflix-series/f2226fa8-eed1-4ebd-ae45-f9fe4085dbad

Taudte, J., Gowen, G., and Francis, E. (2019, February 13). Chi Omega survivor of Ted Bundy

    murders: 'I was asleep' when evil opened door 'and attacked me.' *ABC News.*

    https://abcnews.go.com/US/chi-omega-survivor-ted-bundy-murders-asleep-

    evil/story?id=60894306

The Charley Project. (2020). *Susan Curtis.* https://charleyproject.org/case/susan-curtis

Thomas, R. (1976, July 30). Bronx woman is shot to death as shooting outbreak spreads. *The*

    New York Times. https://www.nytimes.com/1976/07/30/archives/bronx-woman-is-shot-

    to-death-as-shooting-outbreak-spreads-vacation.html

Thornton, J.I. (1997). The General Assumptions and Rationale of Forensic Identification. In

    Faigman, D., Kaye, D., Saks, M., et al. (Eds.), *Modern Scientific Evidence: The Law and*

    Science of Expert Testimony, Vol. 2. West, St. Paul, MN.

Turvey, B. E. (2011). *Criminal profiling: An introduction to behavioral evidence analysis.*

    Academic press.

Weber, F. F. (2022). *Psychological profile of the Son of Sam killer.*

    https://frankweberauthor.com/blog/psychological-profile-of-the-son-of-sam-killer

Yaksic, E. (2016). Addressing the challenges and limitations of utilizing data to study serial

    homicide. *Crime Psychology Review*, 1(1), 108-134.

Yang, A., Gowen, G., Taudte, J., Deutsch, G., & Lopez, E. (2019, February 15). Timeline of

    many of Ted Bundy's brutal crimes. *ABC News.* https://abcn.ws/2T04ri5

Pamela Pitman Brown, Ph.D. is the Director of the Center for Faculty Excellence and

Associate Professor of Sociology at Albany State University.

Jason Armstrong, Ph.D. is an Associate Professor in the Department of Criminal Justice at

Albany State University.

From Darkness to Light: A Qualitative Analysis of the Efficacy of Bluestar® on Ceramic Tiles

A Historical Examination of Ted Bundy and David Berkowitz Through the Lens of Criminal Profiling

Cara J. Giordiano
University of North Georgia

Madison Harner
University of North Georgia

Jon Hager
University of North Georgia

John Stuart Batchelder
University of North Georgia

Abstract

This qualitative study examines the efficacy of Bluestar® Forensic to detect aged bloodstains on ceramic tiles after being cleaned by three different agents: 1) hydrogen peroxide, 2) vinegar with warm water, and 3) baking soda with warm water and a vinegar rinse. While several studies have investigated the efficacy of commercial cleaners (such as bleach, Dawn dish soap, and hospital grade disinfectants) to completely remove all trace evidence of blood, the current study expands the research-design by using non-commercial cleaning products, incorporating a non-porous surface, and using dried calf-liver blood that was aged over varying time frames. The results showed that as the blood

aged it became more reactive with the Bluestar® Forensic. There was no reaction after 2-days with either the vinegar mixed with water, or the baking soda mixed with water and vinegar rinse. It's possible that the reaction on 2-day old blood with the hydrogen peroxide was a false positive because the hydrogen peroxide contains bleach.

Introduction

A review of the forensic research shows a gap in research investigating natural cleaners used to disguise or mask blood evidence. Specifically, findings are lacking in studies designed to measure the differences in blood-cleaning efficacy between hydrogen peroxide, baking soda or vinegar. These natural cleaners are frequently used for the purpose of hiding, disguising, or cleaning away blood evidence that is detectable by using Bluestar® Forensic, which contains luminol. (Gabriel et al. 2020, Bluestar® Forensic, 2021). Natural cleaning methods do not have the strength to clean blood, but sodium hypochlorite (bleach) does. Bleach is a common commercial cleaner for hospitals, crime scene clean-up companies, schools, and crime labs. Common knowledge and understanding exists about the strength of bleach for cleaning bloodstains. Bleach is used more frequently for this purpose thus more research is conducted using bleach as a cleaning agent. And, due to the ease with which bleach is accessible, in addition to its ability to destroy DNA evidence, natural cleaning agents are largely ignored in the research.

In those instances when bleach is not employed, a natural cleaning agent is used to clean up a bloodstain. The study of Bluestar® Forensic's reaction to latent bloodstains cleaned with natural cleaning agents provides new knowledge of the ability for the natural cleaning agents to remove latent bloodstains and avoid detection. This study used non-porous ceramic tiles with a bloody shoe impression, which produced a unique finding related to chemiluminescence: there were instances where it was not visible to the naked eye until photographically documented.

There are ample studies that have investigated the efficacy of using commercial cleaners in an effort to completely remove all trace-evidence of blood, including bleach, Dawn dish soap, and hospital grade disinfectants, (Cavanaugh, 2021; Meunier et al., 2022; Creamer et al., 2005,

Adams et al., 2019). Those study designs incorporated varying surface types (porous and nonporous) and seem to demonstrate that stains on non-porous surfaces are less detectable (Oldfield et al., 2018; Creamer et al., 2005; Cavanaugh, 2021).

Bluestar® Forensic blood reagent is a luminol-based formula that allows for blood detection, even when diluted. The blood reagent facilitates evidence investigation in cases where blood was cleaned up, wiped up, or that has been washed away and can no longer be seen by the naked eye, for example in a violent crime-scene, where blood evidence is encountered by forensic investigators. Bloodstains at a crime-scene contain valuable DNA evidence that helps the investigation move forward, and Bluestar® Forensic is particularly beneficial because it does not alter or damage the DNA evidence. This product is based on chemiluminescence, where light is created through a chemical reaction between hemoglobin and luminol (3-aminophtalhydrazide). The primary components of luminol consist of carbon, oxygen, hydrogen, and nitrogen. The luminol is then mixed with a liquid containing hydrogen peroxide. Luminol and hydrogen peroxide are the primary components of the chemical reaction when contacting hemoglobin resulting in a chemiluminescent. The reaction mechanism for Bluestar® Forensic is with the iron in hemoglobin causing a glow.

Bluestar® Forensic formula has improved the shortcomings of regular luminol. The chemiluminescence is more intense, the intensity lasts longer, and total darkness is not required to visualize during application. Lastly, the shelf-life is longer than standard luminol. Though limited, Bluestar® Forensic may produce false positives. To produce a false positive, there must be a substance acting as a catalyst. Some metals (manganese, iron, and copper), products containing bleach, and some plant peroxidases may produce a false positive. Hydrogen peroxide,

one of the natural cleaning agents used for this study, does contain bleach, thus a false positive was a plausible explanation for chemiluminescence (Bluestar® Forensic, 2008).

This study was designed to compare the efficacy of natural cleaners to the efficacy of commercial cleaners, on nonporous ceramic tile surfaces, chosen for this research because it is a non-absorbing surface. Additionally, our findings are based on bloodstains that were varying in age. Bluestar® Forensic is a chemiluminescent chemical that reacts with the hemoglobin in blood and creates a glowing effect. Using these creative factors, our aim is to expand the research on blood-detectors in crime scene analysis and further inform the literature on crime-scene investigation. We expected to find variable reactions on differently aged latent bloodstains, and a visible chemiluminescence with Bluestar® Forensic and the latent bloodstains.

Review of the Literature

Blood Detection

Luminol was originally synthesized in 1853 and was first observed to have a chemiluminescent reaction with oxidized blood in 1928 (Bluestar® Forensics, 2021; Gabriel et al., 2020). The first experiment with luminol was conducted in 1937, and since then, multiple surfaces, different aging timeframes, and different weather conditions have all been researched to improve the forensic utility of this technique.

Meunier et al. (2021) examined three different cleaning techniques frequently used to clean and sanitize bloodstained surfaces in operating theaters. The first method was a standard procedure using disinfectant alone to clean bloodstained surfaces. Secondly, they used bleach disinfection, and thirdly, steam cleaning. After each technique, luminol was used to detect any blood residue not visible to the naked eye. The study found the first technique, the standard

disinfectant cleaning procedure, left traces of blood in the corners of the room, and appeared to spread the blood around rather than completely remove it (Meunier et al., 2021). The second cleaning method using bleach showed some chemiluminescence, but the authors suspected that use of bleach could have caused the luminol to react, producing a "false positive." The third technique, steam cleaning, showed the best results where no chemiluminescence was detected. The authors noted that the presence of chemiluminescence after cleaning demonstrates the necessity for sterilization in the operating room to prevent the spread of blood-borne diseases and other micro-organisms from patient to patient (Meunier et al., 2021).

Cavanaugh (2021) used Bluestar® Forensic and luminol to detect dried pig blood using various household cleaners: Clorox bleach, Dawn soap and hot water, a Mr. Clean Magic Eraser, and Mrs. Myers Multi-Purpose concentrate. The four surfaces on which these cleaners were tested included ceramic tiles, used as a control, concrete, laminated wood flooring, and drywall (Cavanaugh, 2021). Both the drywall and concrete tested positive for every cleaner used on retained blood due to the porous nature of the surfaces. The ceramic tiles and laminated wood surfaces were shown to be easier to clean, with the best cleaning results coming from bleach and Mrs. Meyers Multi-Purpose concentrate, which were mostly nonreactive (except for one trial) (Cavanaugh, 2021).

Gabriel et al. (2020) conducted a lengthy investigation into the effectiveness of using common cleaning products to remove traces of blood at the Boston University School of Medicine. This was designed to determine if the cleaning agents fully removed blood, or if they just altered the reaction between blood and luminol, and additionally discussed the history, chemical structure, specificity, sensitivity, and interferents of luminol. This detailed investigation provided valuable information on luminol, and the cleaning products that interfered

with the reaction to the greatest extent. The conclusion was that bleach and other chemicals with similar makeups caused false positives when other factors were not taken into consideration. When there were high concentrations of hydrogen peroxide and sodium percarbonate, the reaction between luminol and hemoglobin was disrupted (Gabriel et al., 2020).

Adams et al. (2019) studied the effects of Arm & Hammer®, Lysol®, and OxiClean® on bloodstains cleaned from a ceramic tile using Bluestar® Forensic. The cleaners were used for a one-minute interval in an effort to fully remove detectable blood from the non-porous ceramic tile. The results showed that that none of the cleaners were successful in preventing detection from the Bluestar® Forensic. However, the findings showed that Lysol® was able to clean up more of the blood than OxiClean® and Arm & Hammer®, which help inspire the study-design revisions used in the present study.

Lupica (2017) performed an experiment with the South Bend Police Department in Indiana to determine if Bluestar® Forensic or two alternate light sources (ALS) were better at detecting blood that had been manipulated. The study examined bloodstains as handprints and transfer stains on walls, and bloody footprints were deposited onto a carpeted floor. The walls were then painted over, and the carpet was cleaned using an industrial carpet cleaner after which the areas were examined with both Bluestar® Forensic and ALS. The bloodstains on the wall that were covered by a fresh coat of paint were detected by Bluestar® Forensic and the two ALS, but the bloodstains on the carpet were only visible with Bluestar® Forensic, concluding that Bluestar® Forensic was superior compared to the ALS. Wykoff (2020) studied the ability of luminal to detect small amounts of blood on surfaces after they have been cleaned with bleach, painted over, or both on common household floorings. The study found that blood that was both bleach-cleaned and paint-concealed tested negative for luminescence through all percentages of

bleach dilution and multiple of paint layers. He also found that luminol was inconclusive at determining the presence of blood surfaces that were either bleach-cleaned or paint-concealed. This finding also inspired the methodological revisions in the present study to introduce different dilutions of cleaner to test luminescence.

Creamer et al. (2005) performed a quantitative study where bleach, a known disruptor, was used to interfere with the hemoglobin and luminol reaction. Bleach was used to clean the tiles upon which both wet and dry blood were dropped. Bleach, as well as water were used to repeatedly clean the tiles to see when the blood would no longer be able to be detected. Creamer et al. (2005) found that the intensity of the chemiluminescence decreased with the number of times a stain was cleaned with water, to the point where it was no longer detectable. Though with the use of bleach as a cleaning agent, the chemiluminescence intensity dropped with the initial cleaning and then was followed by a chemiluminescence visibly indistinguishable from blood. The authors determined that bleach drying time interference became negligible after eight hours. The exploration of the strength and reliability of the luminol test when bleach is used as a disruptor tied these findings to the efforts of the present study.

Methodology

Surface

The products investigated in this experiment are both commercial and natural cleaning agents that have been used in the oxidization and clean-up of blood. A ceramic tile containing a partial bloody shoe impression was cleaned, and then Bluestar® Forensic was used for detection. This experiment used ceramic tiles that were previously cleaned with warm water and sprayed with luminol before tests were performed to ensure no reaction occurred prior to applying the

blood. The tiles were labeled with date of blood application and the date of their cleaning. They were sectioned off with tape into four quadrants and three quadrants on each tile were labeled for each cleaning material: vinegar and warm water (VW), baking soda and warm water with a vinegar rinse (BS), and hydrogen peroxide (HP).

Blood

Room temperature Skylark brand of sliced, skinned, and deveined calf liver was used to create the blood marks. A size 10.5 men's Nike Zoom Fly 3 right shoe was used as a stamp for the blood. The liver and blood were placed in a clean bowl, in which the toe of the shoe was then pressed. The shoe was rolled over a section of the quadrant once before being dipped in again for the remaining sections. All blood marks were created on the same day and laid flat on the floor to dry.

Cleaners

The vinegar and warm water mixture was made with Smart Way brand distilled white vinegar with 4% acidity. It was made with two fluid ounces of vinegar and one-ounce of warm tap water mixed in a plastic beaker before being poured into an 8-ounce spray bottle. Before the mixture was applied to the blood sample, all the spray bottles were tested to ensure they distributed the mixtures efficiently and evenly in a mist. The bottles were shaken to ensure the mixture was fully combined and homogeneous. When the vinegar-water was applied to the stains, the sprayer was pumped five times, meaning five sprays were used on each stain to maintain consistency.

The baking soda and warm water mixture was made with 29 grams of Arm and Hammer Fridge and Freezer baking soda and 0.75 fluid ounces of warm tap water and mixed into a paste.

Distilled white vinegar was poured into an 8-ounce spray bottle. The baking soda mixture was applied to the bloodstain with clean hands in an even layer and allowed to sit for five minutes. After five minutes, the vinegar was sprayed five times on the baking soda before wiping away the cleaners with paper towels. The baking soda was poured into a plastic beaker on a scale and tared after it was placed and set to grams.

The hydrogen peroxide mixture was made with two fluid ounces of Kroger brand hydrogen peroxide and one fluid ounce of warm tap water. The mixture was poured into an 8-ounce spray bottle and sprayed five times onto the bloodstain. The cleaner and stain were removed with paper towels. All measurements of fluids were made using a plastic beaker with fluid-ounce markings on the side.

Cleaning Procedures

All cleaning procedures were completed with clean Brawny p300 Professional paper towels. The bloodstain was cleaned until there was no visible blood. When spraying all cleaning products, a paper barrier was used to keep the other sections from being contaminated with other cleaning products. All spray bottles used were sprayed before being sprayed on the tile to ensure the spray was an even mist. The Bluestar® Forensic mixture was made as recommended by Bluestar® Forensic with two tablets mixed with four fluid ounces of water into a spray bottle. The mixture was stored at room temperature unexposed to light, and was made within a week of all the tests to ensure the product did not expire. When spraying the Bluestar® Forensic, the mixture was sprayed until the area was fully saturated. The Bluestar® Forensic testing was completed in a darkened room to be able to see the bioluminescent reaction. Photos of all

procedures and results were taken with an iPhone 14, and iPhone 15 ProMax, and a Samsung Galaxy S22+.

Results

Results can be seen in the table below (Fig. 1). The two-day-old blood sample only showed a positive reaction, with the bloodstain that was cleaned with hydrogen peroxide owing to the high probability of a false positive resulting from the reaction between the bleach in hydrogen peroxide and Bluestar® Forensic. The bloodstains that were cleaned with vinegar and warm water and the baking soda mixture with the vinegar rinse did not give a positive reaction. The four-day-old blood sample showed all positive reactions to the Bluestar® Forensic. The six-day-old blood sample also showed all positive results.

	2-day old blood	4-day old blood	6-day old blood
Vinegar with warm water	-	+	+
Baking soda with warm water and vinegar rinse	-	+	+
Hydrogen peroxide	+	+	+

Figure 1

Figure 2

Figure 2 illustrates the chemiluminescent reaction between the 2-day old calf liver bloodstain, on nonporous ceramic tile cleaned with hydrogen peroxide and warm water, and Bluestar® Forensic. This image was unique in that it revealed substantial chemiluminescence, which was not visible to the naked eye, but became apparent in photographic documentation as a result of the photo-flash produced by the iPhone 15 Pro Max. This information may inform future crime scene investigators and forensic scientists by considering the use of an alternative light source to assist visualizing the reaction when there appears to be no apparent chemiluminescence.

Discussion and Conclusion

The purpose of this study was to determine if blood detection was effective after using different natural cleaning agents intended to disrupt the reaction in Bluestar® Forensic. The current research provides insight into three different areas that appear as weaknesses in literature. First, the current study investigated the efficacy of natural cleaning agents (baking soda, vinegar, and hydrogen peroxide), whereas the products used in the previous literature were mostly bleach or other commercial cleaning agents (Adams et al., 2019; Cavanaugh, 2021; Creamer et al., 2005; Gabriel et al., 2020; Meunier et al., 2021; Wykoff, 2020).

A second unique contribution to the literature was the substrate used for this study: a non-porous ceramic tile. This substrate allows for a more thorough cleaning, and therefore a more rigorous testing of Bluestar® Forensic to detect latent bloodstains. While other studies reviewed in the literature vary between the use of porous, absorbent, and non-porous surfaces.

Lastly, the current study applied natural cleaning agents to a non-porous surface using a bloody shoe impression while allowing the blood to age from 2-days to 6-days. Our findings

show that the two-day old blood tested negative in the reaction for the vinegar and warm water with Bluestar® Forensic, as well as the baking soda and warm water vinegar rinse. The reactions in total were barely visible to the naked eye, but more visible as a result of illumination during photographic documentation.

In conclusion, the experiments presented in this article set out to expand the current knowledge-base using variations in commonly used forensic study-designs. Our findings contribute to the forensic literature by incorporating natural cleaning agents, an under-researched area of the field. We have bridged the gap in content by using natural and non-commercial cleaning agents on bloody shoe impressions using blood that was aged over varying timespans, which caused different reactions to occur with the Bluestar® Forensic photographically. Lastly, and possibly the most important result, reveals the weakness of assumptions made regarding the absence of blood because the chemiluminescence was not seen with the naked eye. Our findings suggest that despite no initial visualization of a reaction, the chemiluminescence of the blood evidence in our experiment was revealed in a photograph of the bloodstained surface after application of the Bluestar® Forensic.

This study has explored new methodological techniques and has demonstrated several advantages to include seeing chemiluminescence of blood-evidence during photographic documentation. However, the authors encourage further exploration on cleaning agents and variable surface-textures, as well as additional creative factors that will inform and assist detectives and crime scene investigators who are testing for blood evidence.

References

Adams, J. L., Rancourt, E. D., & Christensen, A. M. (2019). The effect of household oxidizing cleaners on chemiluminescence of blood using Bluestar®. *Journal of Forensic Sciences*, *64*(3), 869–872. MEDLINE with Full Text. https://doi.org/10.1111/1556-4029.13914

Bluestar® Forensic. (2021). *The chemistry of Bluestar® Forensic*. https://www.bluestar-forensic.com/the-chemistry-of-bluestar-forensic/

Bluestar® Forensic. (2008). *Bluestar false positives: Study report*. https://www.bluestar-forensic.com/?s=false+positives

Cavanaugh, G. (2021). How to get away with murder: The effectiveness of blood detectors on surfaces cleaned of blood. *Undergraduate Theses and Capstone Projects*. https://digitalshowcase.lynchburg.edu/utcp/196

Creamer, J. I., Quickenden, T. I., Crichton, L. B., Robertson, P., & Ruhayel, R. A. (2005). Attempted cleaning of bloodstains and its effect on the forensic luminol test. *Luminescence : The Journal of Biological and Chemical Luminescence*, *20*(6), 411–413. MEDLINE with Full Text. https://doi.org/10.1002/bio.865

Gabriel, J., & Marquez, G. (2021). Effectiveness of various cleaning agents at removing detectable traces of blood. *Boston University Libraries OpenBU*. https://open.bu.edu/handle/2144/42150?show=full

Lupica, R. (2017). Comparing two alternate light sources with Bluestar Forensic: Locating blood in a manipulated crime scene. *Journal of Forensic Identification*, *67*(2), 190–204. Complementary Index.

Meunier, O., Fersing, T., Burger, S., & Santasouk, J. (2022). Biocleaning in operating theatres: Validation of cleaning techniques by revealing residual traces of blood. *Journal of Hospital Infection*, *121*, 32–38. CINAHL Complete. https://doi.org/10.1016/j.jhin.2021.11.023

Oldfield, C., Morgan, R.M., Miles, H.F., French, J.C. (2018). The efficacy of luminol in detecting bloodstains that have been washed with sodium percarbonate and exposed to environmental conditions. *Australian Journal of Forensic Sciences*, *50*(50), 345-354.

Wykoff, A. (2020). Qualitative analysis of luminol efficacy on bleach-cleaned and paint-concealed blood. *Themis: Research Journal of Justice Studies and Forensic Science*, *8*(1). https://doi.org/10.31979/THEMIS.2020.0801

Cara J. Giordiano is an undergraduate student majoring in Criminal Justice at the University of North Georgia.

Madison Harner is an undergraduate student majoring in Criminal Justice at the University of North Georgia.

Jon Hager, Ph.D. is an Associate Professor in the Department of Criminal Justice at the University of North Georgia.

John Stuart Batchelder. Ph .D. is a Professor in the Department of Criminal Justice at the University of North Georgia.

The Pursuit

The Journal of the Criminal Justice Association of Georgia