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Жинаққа студенттердің, магистранттардың, докторанттардың және жас ғалымдардың жаратылыстану-техникалық және гуманитарлық ғылымдардың өзекті мәселелері бойынша баяндамалары енгізілген.

The proceedings are the papers of students, undergraduates, doctoral students and young researchers on topical issues of natural and technical sciences and humanities.

В сборник вошли доклады студентов, магистрантов, докторантов имолодых ученых по актуальным вопросам естественно-технических и гуманитарных наук.

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MAPPING THE NOTORIOUS: EXPLORING SERIAL KILLERS' GEOGRAPHICALLY-INSPIRED NICKNAMES

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The public has always been intrigued by killers, fascinated by their crimes and sinister nicknames that often become legendary tales. One interesting aspect of these criminals is the connection, between their nicknames and the locations where they committed their atrocities. Whether its the "Green River Killer" or the "Boston Strangler " these monikers not reference the places of their crimes. Also offer valuable insights into the spatial dynamics of criminal behavior.

It is crucial to understand the elements embedded in killers nicknames to conduct a comprehensive analysis of crime scenes. By studying the patterns of killer activities, law enforcement agencies and researchers can gain valuable knowledge about what influences where these criminals operate and how they choose their victims. This understanding can guide approaches pinpoint potential crime hotspots and contribute significantly to efforts aimed at preventing and combating murders.

This article delves into the realm of killers geographically inspired aliases exploring how they are linked to geography and what they reveal about criminal conduct. By emphasizing the significance of comprehending trends, in behavior our goal is to illuminate this complex and captivating phenomenon.

1.Serial murderers don't randomly choose who to target or where to commit their crimes; instead their actions show spatial trends. Grasping the aspect of killer behavior is crucial, for untangling the intricacies of criminal conduct and creating successful approaches, for stopping and intervening.

The spatial distribution is an essential procedure in geography since it helps to identify features and patterns and reveal spatial connections.

Serial killer research found that some regions have more clustering incidents than others, compared to others. These spatial imprints are shaped both by the combination of urbanization, population density and land- surface features. Identifying these patterns and delving deeper into them could give researchers helpful details about the driving factors that are behind serial killer's conduct.

Influence of Geographical Factors

Urbanization: Cities, as places with usually high population density and very many social groups, are the places where the number of serial killers is increasing. The anonymity of the crowds along city streets, as well as the transience of the urban population, make it easier for serial killers to remain undetected and to mix in with the population. Furthermore, there is the particularly large number of potential victims that exist in urban areas which make it easy for attackers to pick their victim.

Population Density: Serial killers usually go for places with a high population density because these are where they can donate their supply, evasive and move freely. Cities, suburbs, and intermittent communities where people constantly move around are some of the places where serial killers easily blend in to avoid being discovered or to get many victims as much as possible.

Environmental Characteristics: A serial killer's emotional, social, and psychological landscapes are just as important to their profile as the physical landscape around them. Those characteristics near major transportation routes, proximity to secluded areas and natural landmarks' presence may determine where serial killers select to be active. In the past, remote wildernesses, desolate highways, and abandoned buildings had often been recognizable scenes from the modus operandi of the serial killers, which served as the perfect opportunity to commit the crime undiscovered by anyone.

2.Through recognizing the correlation of geographical elements to serial killer actions, law enforcement services and researchers would be able to design focused procedures for identification and capture of offenders, and also put in place measures to ensure security of at-risk communities. The next part of the article focuses on spacial analysis of serial killers' activity, revealing clustering and dispersion patterns as well as on hotspots which allow us to go a bit deeper in understanding spatial behavior of criminals.

To understand how geography influences serial killer behavior, researchers study specific cases of infamous offenders and the geographic nicknames associated with them. Analyzing these cases reveals patterns in serial killer actions and the geographic context of their crimes. For example, the "Green River Killer" targeted the Pacific Northwest region of the US from the 1980s to 1990s. Operating near the Green River, where victims were discovered, he primarily targeted vulnerable women, such as sex workers and runaways in Seattle and its surrounding areas. Examining the locations of victims' remains reveals insights into the spatial dynamics of his crimes.

The case of "Boston Strangler" also stands out where a person murdered 13 women in Boston between 1962 and 1964. This particular serial killer who later was identified as Albert DeSalvo, specifically selected women in their dwellings, strangulated them with ligatures and mostly left detectable markers in the crime scenes. Performance of spatial analysis of spatial configuration of the murder places enabled researchers to reveal clusters of homicides in certain districts and adjacent localities. This kind of casework helped law enforcement officers to create a profile for the offender and provided them with the necessary leads to put up surveillance and investigations in order to catch him.

Along with these case studies, spatial analysis tools such as geographic profiling can provide useful information about how the space is used by serial killers. Spatial mapping of crime scenes and victim residence locations can help researchers establish spatial patterns of clustering and dispersing as well as potential crime concentration points. These revelations can be directed to the law enforcement agencies and be used to make arrests and prosecute the serial perpetrators.

Case studies along with spatial analysis play a primary role in studying the geographical elements of a serial killer. Through the process of exploring individual cases and mapping crime patterns, researchers can obtain unique knowledge regarding the nature of serial killings as well as develop better strategies for impeding and investigating serial killings.

3. Geographical profiling is an advance technique that has been proven to be helpful to criminal investigations. By its features, it tells about the spatial behavior of offenders and assists law enforcers in identification of suspects and narrowing down investigation areas. Such as GIS, spatial analysis, and behavioral psychology theory of discipline location of crimes and the spatial patterns of criminal behavior is used.

The main purpose of geographical profiling is to pinpoint an area that is the most likely where the offender lives or commits the crime by examining the locations of the crime scene. Thusness is obtained by using spatial patterns examination, such as the distance between the crime scenes, the direction of movements, and the distribution of victims' residences. They do that by identifying these spatial relationships and in turn, provide a geographical profile which highlights the locations of interest for extensive investigations by law enforcement.

Another effective application of geographical profiling is the targeted use of investigative resources to examine areas most likely to be inhabited by the offender or serve as his or her workplace. Through the targeting of particular locale of interest, law enforcement agencies can strategically channel their resources that will enable them to operate more efficiently and effectively, making it highly possible for them to trace down the suspect and apprehend them.

The primary advantage of geographical profiling is its capacity to combine different kind of geographic data, which includes crime scene locations, victim characteristics and environmental characteristics. This integration of different data sources by geographical profilers enables a twofold result: they can develop a holistic view of the spatial patterns of criminal behavior and enrich law enforcement agencies with knowledge that can be used for arresting and deterring crime.

Furthermore, geographical profiling techniques offer higher-level interventions such as overall crime prevention strategies and resource allocation choices. Through establishing links between crime patterns at the local level (either neighborhood or city) and inducing targeted interventions to address the root causes such as social and environmental factors, the law enforcement agencies can be able to tackle the crime.

4. Environmental criminology through the examination of offender to victim interaction as well as spatial behavior offers a meaningful insight into the behavior of serial killers through the study of places, spaces and crime. With this approach, the goal is to explain how certain elements of the environment like land use, transportation networks, and geographic features might cause a criminal to behave in a specific manner and targeted specific locations.

One key theory within environmental criminology is routine activity theory, which posits that crime occurs when three elements converge: a willing offender, an accessible target, and the incompetence in protective functions. Thus the applied serial killer theory becomes evident that some specific environmental issues can make up a scenario probable, where the offenders meet the potential victims.

Such an area can be represented through densely populated inner-city areas with 'high transience' and 'not much surveillance'. This can provide serial killers with opportunities that would allow to commit murders without unnecessary attention. Also, spot with a thickening of unprotected individuals, those include homeless or minority communities, may be facing a serial offenders' attention who are searching for an easy victim.

One of the environmental criminology theories that pose significant impact is the crime pattern theory which is concerned with the distribution of the crime activity in terms of space and time. Moreover, the environmental selection theory argues that serial killers hunt according to their environment's characteristics, so they can differentiate their targets from the apparent psycho profiles.

5. The cultural and social implications of the geographical nicknames of serial killers are palpable and grounded in the ways they make the public perceive crime, the laws and law enforcement, and how media representation is permeated by this. Through a deeper analysis of these impacts, the derivation of the role played by the location in the creating a psychology of the serial murder exposure and its wider social implications will be clear.

Media Representation: Serial killers representation in the media usually stays close to the already existing factors of concern of society. Appellations by geography such as "Green river killer"

or "Son of sam" in addition to becoming short forms for the locality of their operations, simultaneously become key contributors to the sensationalization of those cases. The media tends to zoom all its lens into the gruesome details of the crimes and the psychology that perhaps ails the offender and forget about the social and the environmental factors which maybe the reasons for behaving in a certain manner by an offender.

Public Perception: A location's geographical positioning might resonate with the public and find members being overlooked and feared in places linked to infamous serial killers. Communities that harbor serial killers will find themselves stuck with the effects that may include immense fear when being with strangers and neighbors. In addition to that, the concentrating of serial killer activities into particular areas can contribute a distorting to the way that certain neighborhoods or regions are viewed as dangerous or not altogether safe, aggravating social differences and anti-discrimination attitudes.

Law Enforcement Strategies: Geological authenticity of serial killers also affects the law enforcement methods and resource management. In places with prior cases of serial killing, noticeably increased policing and monitoring may result, provoking a discord within the law enforcement agencies and the local communities. On top of that, the geographic expansion of serial killer activity may pose a logistical challenge for investigators, which is potentially leading to jurisdiction and agency coordination complications.

Cultural Narratives: Localized nicknames of serial killing cases, often become part of cultural stories that influence development of creative arts such as literature, movies and pop culture. Due to the immense popularity of the true crime documentaries and books that usually concentrate on notorious serial killers, their celebrity and stickiness grow exponentially. Moreover, movies and television shows with fictional serial killers are often inspired by true events, thereby making it increasingly obscure to differentiate between reality and fiction.

In a sum, the effects of geographical nicknames on criminal culture and society are complex and broad-spectrum imprinting on public mind, media, and crime fighting techniques. Through the critical assessment of the roles geographic factors play in the wider social, cultural, and psychological processes, we can see how these mechanisms are combined in the phenomenon called serial killer's syndrome.

6. The serial killer's place study presents also pathways for upcoming investigation and examination. With the rapid development of technology and our discoveries on criminal behavior, newer pathways of investigation and collaboration between disciplines form.

Another possible study the future of geographic profiling through the inclusion of comprehensive data analytics approaches. As the data-sized world and machine algorithms development keeps increasing, the precision and effectiveness of geographic profiling models can be improved. The ability of predictive analytics and spatial data mining to make original patterns and insights in the life of serial killers obvious has made the latter method of serial killer investigations now more effective and targeted.

Moreover geographic profiling is also associated with disciplines like psychology, sociology, and criminology that lead to an interdisciplinary learning with these subjects. Through combination of views from different disciplines researchers can come to a more meaningful and socio-psychological level of understanding of serial killers' conduct. By this more comprehensive model, the behavioral dimension and the spatial dimension can be incorporated into a holistic approach. It leads to more nuanced and comprehensive models of offender profiling.

Another scientific path for future research is the discovery of geographic profiling techniques in some of the frontiers of crime analysis that among them are cybercrime and terrorism. As a result of rapidly expanding digital environment for criminal activities, which are no longer limited by physical borders and have gone digital, novel approaches to geographic analysis, that can respond to these constantly developing challenges, are required. When geographic profiling techniques are being employed on cybercrime statistics, researchers can distill spatial patterns and trends in criminal activity in cyberspace, which will be useful in taking countermeasures against existing online threats as well as protection of vulnerable groups.

Conclusion:

To sum up, through geographic profiling, we will have learned a lot about the behavior of serial killer whose spatial patterns play a key role in the dynamics of crime. The researchers can make use of analyzing the patterns of offender behavior and the spatial distributions of crime scenes to unveil and reveal hidden facts which are vital to the investigations of crime and security.We have found out the geographical factors might influence attackers' pondering and target decision thus, giving law enforcement the necessary tools to identify and capture serial killers.

Moreover, the repercussions of geographic research are not limited to one case but are also at the core of the criminal justice and public policy questions. Through this cognitive process, policymakers can design more successful plans of crime prevention and community policing, the point of high chances being determined and the resources allocated there.

In the near future, the exploration of geographic profiling research and the study of serial assaults will give valuable data that can be used to better criminal investigation and prevention. Through integrating emerging technologies, promoting interdisciplinary collaboration and applying them in various fields, researchers can be able to develop farther the field that may mean significant benefits to mankind.

In summation, geographic profiling is a lense through which one sees the complex weave of geography, psychology and crime behaviors. The use of the geographical data can enable us to work towards a safer and more fair society not just for everyone.

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SURFACE WATER QUALITY AND ECOLOGICAL CONDITION OF RIVER BASINS IN THE SOUTH OF KAZAKHSTAN

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Surface waters of the Republic of Kazakhstan represent an integral resource that plays a key role in providing water supply, agriculture and biodiversity in this region. Both economic and environmental aspects are closely linked to their strategic distribution and quality, giving these water resources a high importance for the sustainable development of the country. Complicating the situation, the main sources of water in Kazakhstan are transboundary rivers, which further complicates water management in these regions.

Hydroeconomic basins of the southern region of Kazakhstan:
1) Balkhash-Alakol basin;
2) Shu-Talas basin;
3) Aral-Syrdarya basin