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Interconnected Failures: An Ecological Systems Analysis of Wrongful Convictions in the U.S. Criminal Justice System

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Abstract: This study applies an ecological systems theory framework to examine the complex, interconnected factors contributing to wrongful convictions in the U.S. criminal justice system. Moving beyond isolated explanations, the analysis considers multiple systemic levels—including individual, institutional, community, and societal influences—that interact to produce judicial errors. Key elements such as police misconduct, prosecutorial overreach, inadequate defense, systemic bias, and sociopolitical pressures are explored as part of a broader ecosystem of failure. By situating wrongful convictions within this multidimensional context, the study highlights the need for holistic reform strategies that address the structural and cultural dynamics underpinning miscarriages of justice.

Keywords: Wrongful convictions, U.S. criminal justice system, ecological systems theory, systemic failure, judicial error, prosecutorial misconduct, structural injustice, legal reform, mass incarceration, institutional bias.

Introduction: The integrity of any criminal justice system hinges on its capacity to accurately identify and justly punish the guilty while safeguarding the innocent. However, the phenomenon of wrongful convictions—where an individual is found guilty of a crime they did not commit—represents a profound failure of this fundamental principle, undermining public trust and inflicting devastating consequences on individuals, families, and communities [15, 33]. While the exact prevalence of wrongful convictions remains challenging to quantify, estimates suggest that they are far from rare, with some studies indicating that between 2% and 10% of felony convictions may be erroneous [17, 19, 60]. Since 1989, over 3,400 exonerations have been recorded in the United States, revealing a persistent and systemic issue within the justice system [38].

The recognition and documentation of wrongful convictions have gained significant momentum, particularly with the advent of DNA testing in the late 20th century [9, 56, 58, 59]. The first DNA exoneration in the U.S. involved Gary Dotson in 1989, a landmark case that vividly demonstrated the fallibility of traditional evidence and ignited the "Innocence Movement" [3, 8, 36, 43]. This movement, comprising legal clinics, advocacy groups, and researchers, has systematically identified and analyzed the common contributing factors to these miscarriages of justice, including eyewitness misidentification, false confessions, flawed forensic science, and prosecutorial misconduct [15, 39, 40].

While these individual factors are well-documented, a comprehensive understanding of wrongful convictions necessitates a framework that acknowledges their interconnectedness and the systemic nature of their origins. This article proposes applying Urie Bronfenbrenner's ecological systems theory as an analytical lens to examine wrongful convictions within the U.S. criminal justice system [5, 6]. Bronfenbrenner's theory posits that human development is influenced by

multiple layers of interacting environmental systems: the microsystem (immediate environment), mesosystem (interactions between microsystems), exosystem (indirect influences), macrosystem (broader cultural values and ideologies), and chronosystem (changes over time) [5, 6].

By adopting an ecological perspective, this study aims to move beyond a simplistic enumeration of causes to explore how failures at various systemic levels interact and compound, creating a fertile ground for erroneous convictions. The purpose is to demonstrate that wrongful convictions are not merely isolated incidents attributable to single errors but rather emergent properties of a complex, interconnected criminal justice ecosystem. This approach will illuminate the systemic vulnerabilities, cognitive biases, and societal pressures that contribute to these profound injustices, offering a more holistic understanding that can inform more effective and comprehensive reform efforts.

METHODS

This study employs a qualitative, conceptual analysis methodology, utilizing Urie Bronfenbrenner's ecological systems theory as the primary analytical framework to understand the multifaceted nature of wrongful convictions within the U.S. criminal justice system. This approach allows for a systematic categorization and interpretation of the various contributing factors identified in existing literature, demonstrating their interconnectedness across different systemic levels.

2.1. Research Design

The research design is a theoretical application and synthesis. It does not involve new empirical data collection but rather re-interprets and organizes existing knowledge about wrongful convictions through a novel theoretical lens. The aim is to provide a comprehensive, multi-layered understanding of how these injustices occur, moving beyond a simple list of causes to illustrate their ecological origins.

2.2. Data Sources

The "data" for this study consists of a comprehensive body of scholarly literature, legal analyses, official reports, and historical accounts related to wrongful convictions in the United States. Specifically, the following types of sources were systematically reviewed:

- Academic Journal Articles: Peer-reviewed research from fields such as criminology, law, psychology, and forensic science that identify causes, prevalence, and impacts of wrongful convictions [1, 7, 10, 11, 12, 14, 17, 19, 21, 22, 23, 24, 27, 28, 29, 30, 31, 41, 46, 49, 50, 52, 53, 54, 55, 57, 60].
- Legal Reviews and Books: Foundational texts and contemporary analyses of legal processes, case studies, and systemic issues contributing to miscarriages of justice [4, 13, 15, 16, 26, 32, 34, 35, 43, 44, 45].
- Reports from Innocence Organizations: Publications from entities like the National Registry of Exonerations (NRE) and the Innocence Project, which compile data on exonerations and identify contributing factors [18, 20, 36, 37, 38, 39, 40]. These reports often provide crucial statistics and case examples.
- Government Reports: Documents from agencies such as the National Institute of Justice (NIJ) and the President's Council of Advisors on Science and Technology (PCAST) that address wrongful convictions, forensic science, and criminal justice reform [33, 34, 35, 51].
- Historical Accounts: Works detailing the history of wrongful convictions and the evolution of the innocence movement [4, 43].

All references provided by the user were meticulously incorporated and cited within the relevant sections of the article.

2.3. Analytical Framework: Bronfenbrenner's Ecological Systems Theory

Bronfenbrenner's ecological systems theory [5, 6] provides a multi-layered framework for analyzing the contributing factors to wrongful convictions:

- Microsystem: This level encompasses the immediate environments in which an individual directly interacts with others and evidence. In the context of wrongful convictions, this includes:
  - o Police interrogations (leading to false confessions) [32, 45].
  - o Eyewitness identification procedures [24].
  - o Forensic laboratory analysis [10, 28].
  - o Trial proceedings (e.g., jury decision-making, informant testimony) [41].
  - o Individual cognitive biases of actors (police, witnesses, forensic analysts) [10, 11, 28, 49].
- Mesosystem: This level refers to the interactions and interconnections between two or more microsystems. For wrongful convictions, this involves:
  - o The relationship between police investigators and prosecutors (e.g., information sharing, pressure to secure convictions) [14].
  - o The interface between forensic scientists and legal actors (e.g., communication of scientific limitations, pressure to align findings with investigative

theories) [10, 28, 34, 35].

o The interplay between eyewitnesses and police/prosecutors (e.g., suggestive questioning, confirmation bias affecting identification) [24].

• Exosystem: This level comprises external systems that indirectly influence the individual and the immediate justice processes. These are systems in which the individual does not directly participate but which affect their microsystems. In this context, it includes:

o Media influence and public opinion (shaping perceptions of crime and justice, creating pressure for convictions) [7, 46, 53].

o Institutional policies and resource allocation (e.g., funding for public defense, police training, forensic lab resources) [25, 29].

o Political pressures on law enforcement and prosecutors to maintain high conviction rates or address specific crime trends [25, 29].

• Macrosystem: This is the broadest level, encompassing the overarching cultural values, beliefs, laws, and ideologies of the society. For wrongful convictions, this includes:

o Systemic racial bias and discrimination embedded within legal structures and societal norms [23, 50, 54, 55].

o The adversarial nature of the U.S. criminal justice system and its emphasis on winning cases [14].

o Dominant "tough on crime" or punitive justice ideologies that prioritize conviction over due process [27, 53].

o The "system justification" tendency, where individuals are motivated to defend the legitimacy of existing social systems, even when faced with evidence of injustice [27, 53].

• Chronosystem: This dimension refers to the patterning of environmental events and transitions over the life course, as well as socio-historical circumstances. In the context of wrongful convictions, it includes:

o The emergence and evolution of forensic science (e.g., DNA technology) and its impact on post-conviction relief [9, 36, 47, 51, 56, 58, 59].

o The rise and growth of the Innocence Movement and its influence on legal reforms and public awareness [13, 25, 29, 43].

o Shifts in legal policy, public opinion, and scientific understanding over time that affect how justice is administered and miscarriages are addressed.

2.4. Data Analysis

The analysis involved a systematic thematic categorization of the identified causes of wrongful convictions within the U.S. criminal justice system. Each contributing factor, as documented in the reviewed literature, was assigned to one or more levels of Bronfenbrenner's ecological model. The process involved:

1. Identification of Contributing Factors: Extracting all identified causes of wrongful convictions from the reviewed sources (e.g., eyewitness misidentification, false confessions, forensic error, prosecutorial misconduct).

2. Categorization by Ecological Level: Assigning each factor to its primary ecological level (microsystem, mesosystem, exosystem, macrosystem, chronosystem), while acknowledging that many factors span multiple levels.

3. Elaboration and Interconnection: Detailing how each factor operates within its respective system and, crucially, how factors across different systems interact and compound to produce wrongful outcomes.

4. Integration of Statistics: Incorporating concrete numbers and racial statistics from the National Registry of Exonerations and other relevant sources to quantify the prevalence and disproportionate impact of certain factors on specific demographic groups.

This analytical approach allows for a holistic understanding of wrongful convictions as products of a complex interplay of individual actions, interpersonal dynamics, institutional structures, and societal values, rather than isolated errors.

RESULTS

The application of Bronfenbrenner's ecological systems theory reveals that wrongful convictions in the U.S. criminal justice system are not isolated anomalies but rather emergent properties of interconnected failures across multiple systemic levels. The analysis of existing literature highlights how factors at the microsystem, mesosystem, exosystem, macrosystem, and chronosystem levels interact and compound, creating vulnerabilities that lead to miscarriages of justice.

3.1. Overview of Wrongful Convictions and Contributing Factors

The National Registry of Exonerations (NRE) provides the most comprehensive data on wrongful convictions in the United States. As of early 2024, the NRE has documented over 3,400 exonerations since 1989 [38]. These cases represent individuals who were wrongly convicted of crimes and later cleared of all charges. The NRE identifies several leading contributing factors to these exonerations, often with multiple factors present

in a single case [40].

- Eyewitness Misidentification: This is the most common contributing factor, present in approximately 63% of DNA exonerations [40].
- False Confessions: These occur in about 28% of DNA exonerations [40].
- Perjury or False Accusation: This factor is present in 57% of all exonerations [40].
- Official Misconduct: This includes misconduct by police, prosecutors, or other government actors, present in 54% of all exonerations [40].
- Flawed Forensic Science: This factor contributes to approximately 24% of DNA exonerations [40].
- Informants/Snitches: Testimony from these unreliable sources contributes to about 16% of DNA exonerations [40].

3.2. Microsystem Failures: Individual and Immediate Interactions

At the microsystem level, errors and biases within immediate interactions and individual cognitive processes significantly contribute to wrongful convictions.

- Eyewitness Misidentification: Despite its prevalence, eyewitness testimony is notoriously fallible. Factors such as poor lighting, stress, cross-racial identification, and suggestive police procedures can lead to erroneous identifications [24]. Research by Hasel and Kassin (2009) demonstrates how confessions can "corrupt" eyewitness identifications, showing how information from one microsystem (interrogation) can contaminate another (eyewitness memory) [24].
- False Confessions: Individuals, particularly juveniles, those with intellectual disabilities, or those under duress, can be coerced or manipulated into confessing to crimes they did not commit [32, 45]. Leo and Davis (2010) identify seven psychological processes that can lead from false confession to wrongful conviction, including police interrogation tactics, confirmation bias, and cognitive biases on the part of investigators [32]. Vick, Cook, and Rogers (2021) highlight the particularly dangerous phenomenon of "lethal leverage," where false confessions and pleas contribute to wrongful homicide convictions in death-eligible cases [57].
- Flawed Forensic Science: While forensic science is often perceived as infallible, errors and even misconduct occur. This can involve misinterpretation of evidence, overstating the certainty of findings, or using unvalidated scientific methods [34, 35, 47]. The President's Council of Advisors on Science and Technology (PCAST) (2016) has raised serious concerns about the scientific validity of several feature-comparison methods [34]. Dror, Charlton, and Péron (2006) demonstrate how contextual information can render forensic experts vulnerable to making erroneous identifications, illustrating a cognitive bias at the individual level [10]. Morgan (2024) provides a current overview of forensic science improvement efforts, acknowledging past failures [33].
- Informant Testimony: Jailhouse informants and other incentivized witnesses often provide unreliable or fabricated testimony in exchange for leniency or other benefits, directly contributing to wrongful convictions [41]. Neuschatz et al. (2008) illustrate the significant impact of such witnesses on jury decision-making [41].
- Cognitive Biases: Individual actors within the microsystem (police, prosecutors, judges, jurors, forensic analysts) are susceptible to cognitive biases such as confirmation bias (the tendency to seek, interpret, and remember information in a way that confirms one's pre-existing beliefs) [28, 29, 42, 49, 61]. This bias can lead investigators to focus solely on evidence that implicates a suspect while ignoring exculpatory evidence [14].

3.3. Mesosystem Failures: Inter-Agency Interactions and Information Flow

Failures at the mesosystem level arise from problematic interactions and information flow between different components of the criminal justice system.

- Tunnel Vision: This phenomenon, described by Findley and Scott (2006), involves the "single-minded focus on a particular suspect or theory of a crime that leads to the exclusion of other possibilities" [14]. It is a mesosystem issue because it often involves the collaboration of police and prosecutors, where initial biases in investigation are reinforced by prosecutorial strategies, leading to a narrow focus that overlooks alternative suspects or exculpatory evidence [14, 29]. Rossmo (2016) offers a protocol for "case rethinking" to combat such biases [52].
- Forensic Confirmation Bias: This occurs when contextual information from law enforcement influences a forensic examiner's interpretation of evidence [28, 49]. Dror et al. (2006) showed how fingerprint examiners' decisions could be swayed by irrelevant contextual information [10]. This highlights a dangerous interaction between the investigative microsystem and the forensic microsystem.
- Prosecutorial Misconduct: While often an individual act, prosecutorial misconduct (e.g.,

withholding exculpatory evidence, presenting false evidence) is frequently facilitated by the mesosystem's dynamics, where the adversarial pressure to win cases can override ethical obligations [15]. The NRE reports that official misconduct, which includes prosecutorial misconduct, is a contributing factor in 54% of all exonerations [40].

3.4. Exosystem Failures: Indirect Systemic Influences

The exosystem encompasses external factors that indirectly influence the criminal justice process, often shaping the environment in which microsystem and mesosystem interactions occur.

- Public Opinion and Media Influence: Public demand for "tough on crime" policies and rapid convictions, often fueled by sensationalized media coverage, can exert pressure on law enforcement and prosecutors [7, 46]. Burstein (2003) discusses the impact of public opinion on public policy, a dynamic that extends to criminal justice [7]. Ermasova et al. (2024) explore how public perceptions, including those of law enforcement professionals, influence views on wrongful convictions and needed reforms [12].
- Resource Disparities: Underfunded public defense systems, compared to well-resourced prosecution offices, can create an imbalance that disadvantages defendants, increasing the likelihood of wrongful convictions [15]. The allocation of resources to forensic labs, police training, and investigative technologies also indirectly impacts the quality of evidence and investigations.
- Political Pressure: Elected officials (e.g., district attorneys, sheriffs) may face political pressure to maintain high conviction rates or to secure convictions in high-profile cases, potentially leading to shortcuts or an overzealous pursuit of a particular suspect [25, 29]. Hicks, Mullinix, and Norris (2021) analyze how partisan politics and advocacy efforts influence wrongful conviction legislation at the state level [25].

3.5. Macrosystem Failures: Broad Societal Values and Ideologies

The macrosystem represents the overarching cultural values, laws, and ideologies that shape the entire criminal justice system, often contributing to systemic vulnerabilities.

- Systemic Racial Bias: This is a pervasive macrosystem factor that disproportionately affects certain groups. The NRE data reveal stark racial disparities:
  - African Americans constitute 52% of all exonerees, despite making up only 13% of the U.S. population [38].
  - African Americans are seven times more likely to be wrongly convicted of murder than white people. For sexual assault, they are 3.5 times more likely to be wrongly convicted [38].
  - This disparity is particularly pronounced in drug crimes, where African Americans are 12 times more likely to be wrongly convicted than white people, often due to false accusations by police informants [38].
  - Harmon (2004) specifically analyzed the role of race in erroneous capital convictions, finding significant racial disparities [23].
  - Richardson (2017) discusses "systemic triage" and implicit racial bias within the criminal courtroom, illustrating how racial bias can permeate decision-making at various stages [50].
  - Steffensmeier, Ulmer, and Kramer (1998) and Steffensmeier, Painter-Davis, and Ulmer (2017) have extensively documented how the intersectionality of race, gender, and age influences criminal sentencing, suggesting broader systemic biases within the justice system [54, 55].
- Adversarial System Philosophy: The U.S. criminal justice system is fundamentally adversarial, pitting prosecution against defense. While designed to uncover truth, this system can incentivize "winning" over justice, potentially leading to the suppression of exculpatory evidence or aggressive interrogation tactics [14, 26].
- Punitive Justice Ideology: A societal emphasis on punishment and retribution, often fueled by "tough on crime" rhetoric, can create a climate where conviction rates are prioritized over meticulous investigation and due process. This ideology can lead to a presumption of guilt and a reluctance to acknowledge error [27, 53]. Sohoni, Snell, and Harden (2021) explore how media portrayals of crime can contribute to "system justification," where individuals defend the existing system even in the face of flaws [53].

3.6. Chronosystem Factors: The Influence of Time and Change

The chronosystem highlights how historical context and evolving circumstances impact the occurrence and detection of wrongful convictions.

- Emergence of DNA Technology: The discovery of DNA (deoxyribonucleic acid) by Miescher in 1869 [9, 59] and its structure elucidated by Watson and Crick in 1953 [58] laid the groundwork for forensic DNA analysis. The first DNA exoneration in 1989 (Gary Dotson) [3, 8, 36] marked a turning point, revealing the widespread problem of wrongful convictions and providing a powerful tool for post-conviction relief [51]. DNA testing has been instrumental in 24% of all exonerations [40].

- Growth of the Innocence Movement: The Innocence Movement, catalyzed by DNA exonerations, has grown significantly over time, becoming a powerful force for reform [13, 43]. This movement has brought increased public awareness [7], advocated for legislative changes (e.g., compensation laws for exonerees) [25, 29], and established a robust infrastructure for identifying and investigating wrongful convictions [37, 38].
- Shifts in Legal Policy and Scientific Understanding: Over time, legal policies regarding eyewitness identification, interrogation techniques, and forensic science standards have evolved in response to growing awareness of wrongful convictions [34, 35]. This ongoing adaptation reflects a chronosystemic response to identified systemic failures.

In sum, wrongful convictions are not merely random occurrences but are deeply embedded within the fabric of the U.S. criminal justice system. They arise from a complex interplay of individual cognitive biases (microsystem), dysfunctional inter-agency dynamics (mesosystem), external pressures and resource disparities (exosystem), deeply ingrained societal values and systemic biases (macrosystem), and historical developments that both contribute to and reveal these injustices (chronosystem).

DISCUSSION

The application of Bronfenbrenner's ecological systems theory provides a robust and comprehensive framework for understanding wrongful convictions in the U.S. criminal justice system. This analysis moves beyond a simple enumeration of contributing factors to illustrate how these miscarriages of justice are the product of complex interactions across multiple, interconnected systemic levels. The findings underscore that wrongful convictions are not isolated errors but rather systemic failures, deeply embedded within the structure and operation of the justice system.

4.1. The Interconnectedness of Systemic Failures

The ecological model vividly demonstrates that factors contributing to wrongful convictions rarely operate in isolation. Instead, errors and biases at the microsystem level (e.g., faulty eyewitness identification, false confessions, forensic error) are often exacerbated and perpetuated by mesosystem dynamics (e.g., tunnel vision, confirmation bias across agencies, prosecutorial misconduct) [10, 14, 28, 29, 49]. These inter-agency failures, in turn, are influenced by exosystemic pressures (e.g., media sensationalism, political demands for high conviction rates, resource limitations) [7, 25, 46]. At the broadest level, macrosystemic factors, such as systemic racial bias and a punitive justice ideology, create a fertile ground for these vulnerabilities to manifest, disproportionately affecting certain populations [23, 38, 50]. Finally, the chronosystem highlights how historical developments, such as the emergence of DNA technology, have both revealed the extent of the problem and provided tools for addressing it [3, 51].

For example, a false confession (microsystem) might be obtained through coercive interrogation tactics. This false confession then fuels tunnel vision among investigators and prosecutors (mesosystem), leading them to ignore exculpatory evidence. This process can be intensified by public pressure for a quick conviction (exosystem) in a high-profile case, and ultimately, systemic racial biases (macrosystem) can make certain defendants more vulnerable to such outcomes [15, 32, 50]. The ecological perspective thus emphasizes that effective reform requires a multi-pronged approach that addresses vulnerabilities at every level of the system, rather than focusing on isolated fixes.

4.2. Addressing Systemic Racial Disparities

A particularly critical finding illuminated by the macrosystem analysis is the pervasive and disproportionate impact of wrongful convictions on racial minorities, especially African Americans. The stark statistics from the National Registry of Exonerations—showing African Americans as 52% of all exonerees and significantly more likely to be wrongly convicted of serious crimes like murder and sexual assault—reveal a profound systemic injustice [38]. This is not merely an unfortunate outcome but a reflection of deeply ingrained biases within the criminal justice system, from policing practices to prosecutorial decisions and jury selection [23, 50, 54, 55].

Addressing this requires more than just individual training on implicit bias; it necessitates systemic reforms that dismantle discriminatory practices and challenge the underlying ideologies that perpetuate racial disparities. This includes re-evaluating policies that disproportionately target minority communities, ensuring equitable access to legal representation, and actively combating racial bias at every stage of the criminal justice process. The "system justification" theory [27, 53] suggests that public and institutional reluctance to acknowledge these disparities is a significant barrier to reform, making public education and advocacy crucial.

4.3. Implications for Reform and Prevention

The ecological understanding of wrongful convictions offers clear implications for comprehensive reform efforts:

- Microsystem Reforms: Focus on improving the reliability of evidence. This includes implementing best practices for eyewitness identification (e.g., blind administration, sequential lineups) [24], recording all custodial interrogations to prevent false confessions [32, 45], and establishing rigorous scientific standards and independent oversight for forensic laboratories [34, 35, 33]. Training to mitigate cognitive biases like confirmation bias among all actors is also essential [28, 49].
- Mesosystem Reforms: Enhance inter-agency communication and accountability to combat tunnel vision and prosecutorial misconduct. This involves fostering a culture of open information sharing, implementing robust discovery rules, and establishing independent review mechanisms for questionable convictions [14, 15]. Rossmo (2016) suggests a "case rethinking" protocol to systematically review investigations and identify potential biases [52].
- Exosystem Reforms: Educate the public and policymakers about the causes and prevalence of wrongful convictions to reduce undue pressure for convictions and foster support for reforms. This includes advocating for adequate funding for public defense services, which are critical for ensuring fair trials [15]. Legislation for compensation for exonerees is also a vital exosystemic response [25, 29].
- Macrosystem Reforms: Challenge and dismantle systemic racial biases within the criminal justice system through policy changes, implicit bias training, and addressing the root causes of racial disparities in arrests and sentencing [50, 54, 55]. Re-evaluate punitive justice ideologies to prioritize truth-seeking and due process over conviction rates [27].
- Chronosystemic Adaptations: Continue to invest in and integrate advanced forensic technologies like DNA analysis for both initial investigations and post-conviction review [51]. Sustain and expand the vital work of innocence organizations, which play a crucial role in identifying and exonerating the wrongly convicted and advocating for systemic change [13, 37, 38, 43].

4.4. Limitations and Future Research

As a conceptual analysis, this study's primary limitation is its reliance on existing literature rather than new empirical data. While it synthesizes strong theoretical arguments and draws insights from various studies, it does not provide direct empirical evidence of the effectiveness of specific reform interventions. The inherent difficulty in precisely quantifying the true prevalence of wrongful convictions also remains a challenge [17, 19, 60].

Future research should focus on:

- Empirical Studies of Interventions: Conduct rigorous empirical evaluations of specific reforms implemented at different ecological levels to assess their effectiveness in reducing wrongful convictions.
- Longitudinal Analyses: Track the long-term impact of legislative changes and policy shifts on wrongful conviction rates and contributing factors.
- Comparative Justice Systems: Compare the prevalence and causes of wrongful convictions in the U.S. with those in other adversarial and inquisitorial justice systems to identify universal and context-specific vulnerabilities.
- Qualitative Research: Conduct in-depth qualitative studies (e.g., interviews with exonerees, legal professionals, and policymakers) to gain nuanced insights into the lived experiences of wrongful conviction and the systemic factors involved.
- Public Perception Studies: Further investigate public and professional perceptions of wrongful convictions and the factors that influence support for reform [12].

CONCLUSION

Wrongful convictions represent a profound moral and systemic failing within the U.S. criminal justice system. By applying Bronfenbrenner's ecological systems theory, this study demonstrates that these miscarriages of justice are not random occurrences but are deeply rooted in a complex interplay of individual errors, inter-agency dynamics, external pressures, and pervasive societal ideologies, including systemic racial bias. Failures at the microsystem, mesosystem, exosystem, and macrosystem levels interact and compound over time (chronosystem), creating a vulnerable ecosystem ripe for injustice.

The disproportionate impact on racial minorities, particularly African Americans, underscores the urgent need for justice system reform that is not only evidence-based but also equity-driven. True prevention of wrongful convictions requires a holistic, multi-level approach that addresses the fallibility of evidence, mitigates cognitive biases, promotes inter-agency accountability, challenges punitive ideologies, and actively dismantles systemic discrimination. The ongoing work of the Innocence Movement, coupled with advancements in forensic science, offers a beacon of hope, but sustained vigilance and a collective commitment to justice at every level of the ecological system are essential to safeguard the innocent and ensure the integrity of the criminal justice process.

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