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# Bhopal Gas Tragedy: An Analysis Beyond Crime

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## ABSTRACT

*This article analyses Bhopal Gas Tragedy and examines the factors that contributed to the gas leak in 1984, attributing it to corporate negligence. It must be duly noted that this article does not scrutinize the Supreme Court's orders in this case and also does not seek to examine the conceptual understanding of green criminology. The primary goal of this article is to give much-needed attention to the zemiology or social harm approach to comprehend whether or not the discipline has a practical standing. While examining that, the article takes into account the criticisms and argues how zemiology brings a fresh perspective to the table.*

**Keywords:** *Zemiology, Bhopal Gas Tragedy, Social Harm.*

## I. INTRODUCTION

Charles Wellford, an American Criminologist rightly pointed out, “justice is a ‘forgotten theme’ in the field of criminology”.<sup>2</sup> Wellford examined the traditional nature of criminology by outlining the failures of mainstream theories of the discipline and further, he encouraged to shift one’s focus and adequate attention to identify inequalities and to employ a mechanism that would improve social justice. It was argued by Muncie that “criminology confines itself to the question of causes of crime and remedy for the same, instead of studying the process of criminalization: how certain harmful acts/events come to be defined and recognized as ‘crime’ whilst others do not.”<sup>3</sup>

Zemiology tries to tackle the challenges posed by criminology and the criminal justice system. As a contemporary discipline, it strives to address social harms and evaluates multifaceted issues that are not entirely dealt by the straightforward rules laid down under criminal law. The question about the emergence of zemiology was rightly answered by Hopkins Burke, when he said: “*The redefining of crime as harm opens up the possibility of dealing with pain, suffering and injury as conflicts and troubles deserving negotiation, mediation and arbitration rather*

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<sup>2</sup> Natalie J Sokoloff and Amanda Burgess, “Remembering Criminology’s ‘Forgotten Theme’: Seeking Justice in US Crime Policy Using an Intersectional Approach”, Oxford University Press, (2011)

<sup>3</sup> Muncie J, Tarling R, and Mair G, “Decriminalising Criminology, British Society of Criminology”, United Kingdom, 2, (2002)

than as criminal events deserving guilt and punishment”.<sup>4</sup> Zemiology acts as a catalyst when it analyses the concept of crime and facilitates to move beyond the conventional theory.

## II. BHOPAL GAS TRAGEDY: A STATE-CORPORATE CRIME<sup>5</sup>

The Bhopal gas tragedy is an endless daunting nightmare for all the victims and their families fighting for compensation. On a dreadful winter night in 1984, the worst industrial accident occurred that not only killed thousands and affected lakhs of people but also the lingering effects of methyl isocyanate (MIC) continues to haunt the next generation.<sup>6</sup> After a gap of 19 years, the government filed a curative petition seeking additional funds of over Rupees 7400 crore from Union Carbide India Limited (UCIL).<sup>7</sup> The government has now approached the court to re-look at the 1989<sup>8</sup> and 1991<sup>9</sup> orders of the Supreme Court.

In Bhopal disaster, crime was observed under Section 304-A<sup>10</sup>, 304<sup>11</sup>, 336<sup>12</sup>, 337<sup>13</sup>, and 338<sup>14</sup> of the India Penal Code. At the Bhopal plant, industrial cost-cutting witnessed hazardous long-lasting results.<sup>15</sup> Substandard operating and safety procedures<sup>16</sup> at the understaffed<sup>17</sup> Bhopal

<sup>4</sup> Burke R H, “An Introduction to the Criminological Theory”, Deer Park Publication 181, (2005)

<sup>5</sup> Bhopal Gas Tragedy is considered as state-corporate crime because of the role of the government and state authorities in the disaster; refer to Hasnain M. Khwaja, *Bhopal Gas tragedy: A State/Corporate Crime and the Role of Civil Society*, Vol I Issue II, Indian Journal of Integrated Research in Law, (2021), 1-13.

<sup>6</sup> Sreekant Khandekar and Suman Dubey, From the India Today archives (1984), Bhopal gas tragedy: Will the wounds ever heal?, India Today, (2022),

<https://www.indiatoday.in/india-today-insight/story/from-the-india-today-archives-1984-bhopal-gas-tragedy-will-the-wounds-ever-heal-2306048-2022-12-06> ; Sameer Khan, Noxious Memories: Bhopal Gas Tragedy - A Timeline, Press Trust of India, (2022),

<https://www.siasat.com/noxious-memories-bhopal-gas-tragedy-a-timeline-2470664/> ; Bhopal Gas Tragedy: 36 years on, survivors still await justice, Zee Media Bureau, (2020),

<https://zeenews.india.com/photos/india/bhopal-gas-tragedy-36-years-on-survivors-still-await-justice-in-pics-2328024>

<sup>7</sup> Krishnadas Rajagopal, Government tells SC ‘very keen’ to pursue curative plea in Bhopal gas tragedy case, (2022), The Hindu,

<https://www.thehindu.com/news/national/government-tells-sc-very-keen-to-pursue-curative-plea-in-bhopal-gas-tragedy-case/article65996486.ece>

<sup>8</sup> Union Carbide Corporation v Union of India, 1989 SCC (2) 540

<sup>9</sup> Union Carbide Corporation Etc. v Union of India Etc., 1991 SCR Supl. (1) 251

<sup>10</sup> Section 304-A of the Indian Penal Code, 1860, Causing death by negligence

<sup>11</sup> Section 304 of the Indian Penal Code, 1860, Punishment for culpable homicide not amounting to murder

<sup>12</sup> Section 336 of the Indian Penal Code, 1860, Act endangering life or personal safety of others

<sup>13</sup> Section 337 of the Indian Penal Code, 1860, Causing hurt by act endangering life or personal safety of others

<sup>14</sup> Section 338 of the Indian Penal Code, 1860, Causing grievous hurt by act endangering life or personal safety of others

<sup>15</sup> Rajesh Chhabara, *Bhopal Gas disaster: Corporate negligence with deadly consequences*, Reuters Events Sustainable Business, (2010),

<https://www.reutersevents.com/sustainability/supply-chains/bhopal-gas-disaster-corporate-negligence-deadly-consequences>

<sup>16</sup> Ibid.; Plagues by losses, Union Carbide decided to sell the parts of the plant except for the MIC unit. Activists claim that the company increased the volume ceiling of MIC storage from 60% to a dangerous level of 80% by amending the Safety Manual in April 1984.

<sup>17</sup> Ibid.; On November 26, 1984, Union Carbide company eliminated the position of maintenance supervisor on the second and third shifts. Later, on December 2, operators noticed a small leak from the MIC plant and reported it to the supervisors. Apparently, no action was taken and the tank exploded the next night releasing the deadly gas

plant were documented to be the root causes that primarily contributed to the accidental leakage of 40 tonnes of methyl isocyanate (MIC).<sup>18</sup> A similar plant<sup>19</sup> in West Virginia in the United States was compared to the one in Bhopal; it was noted that the safety measures and environmental standards were severely neglected in Bhopal.<sup>20</sup> This included the lack of installation of a computerized warning and monitoring system to detect gas leaks in Bhopal plant.<sup>21</sup> The parent plant in the U.S. was equipped with better storage tanks, gas scrubbers, and flare towers.<sup>22</sup>

It was during the discovery process in the US courts, several documents that were procured indicated disturbing facts that the UCC technicians conducted an operations survey for the UCIL in 1982 and several lapses in safety regulations were noted.<sup>23</sup> Later, a survey in September 1984, raised various concerns that pointed towards a possible runaway reaction. Furthermore, six accidents were recorded at the Bhopal plant before 1984; however, this inspection was not followed up with stricter action.<sup>24</sup> This unravels a fact that this state-corporate crime was preventable because the surveys had pictured a potential problem that could have been rectified.<sup>25</sup>

### III. BEYOND CRIME: ZEMIOLOGY OR SOCIAL HARM APPROACH

Globalization has raised new trajectories in terms of criminality and harm. Looking at globalization and its effects on capitalism through the lens of zemiology raises issues of harm that are implicated because of its fixation on profit-making. The disaster at Bhopal reflects on such issues that seek to push the traditional and conventional boundaries laid down by criminology and consequently seek criminology to push its boundaries.<sup>26</sup> With an intention to

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into the air.

<sup>18</sup> Satinath Sarangi, *Bhopal Disaster: Judiciary's Failure*, *Economic and Political Weekly*, Vol 30, No. 46, 2907, 2907-2090, (1995)

<sup>19</sup> Union Carbide Corporation (UCC), an American company and it has a major shareholding in an Indian public company, Union Carbide India Ltd. (UCIL).

<sup>20</sup> G.S. Bajpai and Bir Pal Singh, *The Bhopal Gas Disaster and Corporate Criminal Negligence*, *International Crime and Justice*, Edited by Mangai Natarajan, Cambridge University Press, (2014),

<https://www.cambridge.org/core/books/abs/international-crime-and-justice/bhopal-gas-disaster-and-corporate-criminal-negligence/94BB44AB0F79C34C15E075A135374C40>

<sup>21</sup> Ibid.

<sup>22</sup> G.S. Bajpai and Bir Pal Singh, *The Bhopal Gas Disaster and Corporate Criminal Negligence*, *International Crime and Justice*, Edited by Mangai Natarajan, Cambridge University Press, (2014),

<https://www.cambridge.org/core/books/abs/international-crime-and-justice/bhopal-gas-disaster-and-corporate-criminal-negligence/94BB44AB0F79C34C15E075A135374C40>

<sup>23</sup> Sharon Hartles, *Bhopal State-Corporate Crime continues to unfold, (1984-Present), 35 years and counting*, *The BSC Blog*, (2019), <https://thebscblog.wordpress.com/2019/12/03/bhopal-state-corporate-crime/>

<sup>24</sup> Mahesh Rangarajan, *Environmental Issues in India: A Reader*, Pearson Longman, 530-531, (2006)

<sup>25</sup> Mahesh Rangarajan, *Environmental Issues in India: A Reader*, Pearson Longman, 530-531, (2006), "UCC was aware of the possibility of potential runaway reaction that triggered the MIC leak in Bhopal and had far lower safety standards in place in Bhopal that it did in the USA."

<sup>26</sup> M Raymond Izarali, *Globalization and the Bhopal Disaster: A Crimiogenic Inquiry*, *International Journal of*

move beyond the conventional idea of crime, zemiology has rightly been considered to be a “significant and fast-expanding contemporary variant of critical criminology.”<sup>27</sup> Zemiology attempts to prioritize social justice and it compliments the working of critical criminology, “in the sense of being able to more fully grasp the nature and significance of current world transformations and their effects on various contemporary social meanings.”<sup>28</sup> In simple words, zemiology refers to an approach that focuses on harm rather than crime.

Box (1983) has rightly pointed out that corporate crime creates widespread social harm.<sup>29</sup> Since the attention is given more towards the events that are defined as a crime, the focus is deflected from the harms that are caused as a consequence of such events. The aftermath of the Bhopal disaster has had long-lasting effects. It has been observed that groundwater continues to remain contaminated and the long-term effects of gas leak still affect the health of the population.<sup>30</sup> Furthermore, victims are permanently placed in a socially structured position of disadvantage.<sup>31</sup> Analyzing this through the lens of criminology, the said corporate crime falls within the ambit of criminal negligence; however, crime excludes the far-reaching ripple effect that this disaster has created, which includes health issues amongst the living and the environmental impact that the coming generation continues to experience.

The social harm approach is certainly theoretically coherent and progressive because it covers physical harm, financial/economic harm, emotional/psychological harm, sexual harm and cultural safety.<sup>32</sup> Proponents of this approach highlight the harm rather than the acts, which could either be legal or illegal. Relying on this, the harm inflicted by the subpar safety regulations implemented by UCIL is recognized. Further, this approach also seeks to draw attention to such policies and events that are not confined to individual countries. Clearly, UCC being the major shareholder and a parent company<sup>33</sup> of UCIL; its’ policies affecting UCIL’s

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Social Inquiry, Vol 6(1), 95, 91-112, (2013), <https://dergipark.org.tr/tr/download/article-file/164094>

<sup>27</sup> Lynne Copson, *Beyond ‘Criminology v Zemiology’: Reconciling crime with social harm*, Open Research Online, The Open Research University, 3, 1-25, (2018), <https://oro.open.ac.uk/50939/1/50939.pdf>

<sup>28</sup> Avi Boukli and Justin Kotzé, *Zemiology: Reconnecting Crime and Social Harm*, Palgrave Macmillan, (2018), 4

<sup>29</sup> Paddy Hillyard and Steve Tombs, *Beyond Criminology?*, In *Criminal obsessions: Why harm matters more than crime*, 2ed., Centre for Crime and Justice Studies, 9, 1-100,

[https://www.dannydorling.org/wp-content/files/dannydorling\\_publication\\_id1047.pdf](https://www.dannydorling.org/wp-content/files/dannydorling_publication_id1047.pdf); S. Box, *Power, Crime and Mystification*, London: Tavistock, (1983)

<sup>30</sup> Sravani Sarkar, *Local studies, international research evidence to long-term health impact of Bhopal gas tragedy*, The Week, (2020),

<https://www.theweek.in/news/india/2020/12/02/local-studies-international-research-evidence-to-long-term-health-impact-bhopal-gas-tragedy.html>

<sup>31</sup> Paul Shrivastava, *5 Long-term recovery from the Bhopal crisis*, United National University Website, <https://archive.unu.edu/unupress/unupbooks/uu211e/uu211e0c.htm>

<sup>32</sup> Paddy Hillyard and Steve Tombs, *Beyond Criminology?*, In *Criminal obsessions: Why harm matters more than crime*, 2ed., Centre for Crime and Justice Studies, 14-15, 1-100,

[https://www.dannydorling.org/wp-content/files/dannydorling\\_publication\\_id1047.pdf](https://www.dannydorling.org/wp-content/files/dannydorling_publication_id1047.pdf)

<sup>33</sup> Later in 2001, UCC merged with Dow Chemical Company and Dow, as a parent company held all of UCC’s

surveys depict that harm done to the environment<sup>34</sup> because of the leakage transcends border and the accidental leak was preventable.<sup>35</sup> Therefore, zemiology demands for a structure and policies that are globally oriented and while doing so, they must prioritize social justice for all. The social harm approach focuses on mass harm and the underlying intention is to help investigate the crime by looking into all the factors of injustice and harm. As discussed previously, the Bhopal disaster was a result of stark cost-cutting, faulty ethical compliance, cut-back in personnel, and lack of an on-site emergency plan by the company.<sup>36</sup> Zemiology can categorically investigate these factors and analyze the harm, while laying the emphasis more on the aspects that could potentially avoid accidents like these, while doing so the discipline is known to take into account the state power and control.<sup>37</sup>

#### IV. IS ZEMIOLOGY JUST A NEW NAME WITH NO PRACTICAL STANDING?

From a criminological standpoint, zemiology is criticized because it “denies the role of the criminal justice system (and, by extension, criminology) in effecting meaningful social change” and further, “it fails to articulate a clear alternative basis for its own theorizing of and response to, social problems.”<sup>38</sup> While focusing on social harm, zemiology has been criticized for disregarding the criminal justice system. Although, the said discipline draws attention to the harm than the crime; however, critics are of opinion that it fails to theorize a response to bring in a systematic change in the structure and policies.

Critics have pointed out that zemiology’s “claim to offer an alternative to crime essentially amounts to a repackaging of pre-existing criminological theorizing under a new name...”<sup>39</sup> Conversely, Simon Pemberton, while developing social harm as an ‘oppositional discourse’ to that of crime, observed: “*if the social harm debate remained within the confines of criminology, it would be stuck within a conceptual cul-de-sac*<sup>40</sup>, whereby the individualizing tendencies of

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common stock. As a result of which, in 2002, Greenpeace states that Dow should absorb all the liability to clean up Bhopal; read Statement of The Dow Chemical Company Regarding the Bhopal Tragedy, Dow 125, <https://corporate.dow.com/en-us/about/legal/issues/bhopal>

<sup>34</sup> This paper does not deal with green criminology and a comparison has not been draw, as opposed to zemiology. Necessary, refer to Paul B. Stretesky, Michael A. Long, and Michael J. Lynch, *The Treadmill of Crime: Political Economy and Green Criminology*, Abingdon, Oxfordshire: Routledge, (2014).

<sup>35</sup> Paddy Hillyard and Steve Tombs, *Beyond Criminology?*, In *Criminal obsessions: Why harm matters more than crime*, 2ed., Centre for Crime and Justice Studies, 19-21, 1-100, [https://www.dannydorling.org/wp-content/files/dannydorling\\_publication\\_id1047.pdf](https://www.dannydorling.org/wp-content/files/dannydorling_publication_id1047.pdf)

<sup>36</sup> M Raymond Izarali, *Globalization and the Bhopal Disaster: A Crimiogenic Inquiry*, International Journal of Social Inquiry, Vol 6(1), 96, 91-112, (2013), <https://dergipark.org.tr/tr/download/article-file/164094>

<sup>37</sup> Lynne Copson, *Beyond ‘Criminology vs. Zemiology’: Reconciling crime with social harm*, The Open University’s repository of research publications, 6, 1-25, In: Avi Boukli and Justin Kotze eds, *Zemionology: Reconnecting crime and social harm*, Palgrave Macmillan, 33-56.

<sup>38</sup> Ibid. at 4-5

<sup>39</sup> Ibid. at 5

<sup>40</sup> It means dead end.

the criminal law would constrain the possibility of producing systematic and holistic analyses of harm.”<sup>41</sup> I certainly agree with Pemberton’s viewpoint. In the Bhopal disaster, holistic analysis of harm was not taken into consideration because the compensation orders did not foresee the harm that it continues to inflict. Taking this into consideration, it can be stated that zemiology does not overshadow rather it complements the theories laid down by criminology and caters to the elements that fall short under the process of criminalization and not just the crime. Zemiology emphasizes identifying the root cause of the harm and eliminating such harm altogether, whereas criminology deals with the committal and punishment of the crime based on the law.

Proponents have clarified the practical approach by stating that zemiology aims “to decouple the study of crime and criminal justice from the operations of state power and control.”<sup>42</sup> Zemiology addresses harm by categorially recognizing the criminal behavior and harmful actions of states and corporations, human rights violations, environmental and ecological harm, poverty, and homelessness.<sup>43</sup> To illustrate this through the Bhopal case, addressing the features mentioned earlier provides an effective means because it demands a tailor-made approach to each of those issues. Therefore, analyzing the Bhopal disaster through zemiological lens is certainly worthwhile, because it strives to bring a new perspective to the table that is based on justice and accountability. Zemiology does not turn a blind eye to what is happening and it throws light on the continuing trauma that people in Bhopal are enduring; furthermore, attempts to prevent such harm.

## V. CONCLUSION

In summary, contemporary discipline like zemiology plays a significant role in focusing on such harms and transgressions that take place behind the veil of organizational and corporate routines. Furthermore, in cases like these when environmental harm could have been avoided, zemiological does provide a tool to challenge such corporate crimes with the motive to achieve social justice. Henceforth, one can say that zemiology does bring a progressive outlook to the study of global crime and practical implementation of this approach could potentially act as a

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<sup>41</sup> Simon Pemberton, *Harmful Societies*, Bristol: Policy Press; Lynne Copson, *Beyond ‘Criminology vs. Zemiology’: Reconciling crime with social harm*, The Open University’s repository of research publications, 5-6, 1-25, In: Avi Boukli and Justin Kotze eds, *Zemionology: Reconnecting crime and social harm*, Palgrave Macmillan, 33-56.

<sup>42</sup> Lynne Copson, *Beyond ‘Criminology vs. Zemiology’: Reconciling crime with social harm*, The Open University’s repository of research publications, 4-5, 1-25, In: Avi Boukli and Justin Kotze eds, *Zemionology: Reconnecting crime and social harm*, Palgrave Macmillan, 33-56.

<sup>43</sup> *Ibid.* at 6; Schwendinger, H. & Schwendinger, J., *Defenders of Order or Guardians of Human Rights*, (1975) in Taylor, I., Walton, P. and Young, J. (eds) *Critical Criminology*, London: Routledge & Kegan Paul.

pivotal step toward achieving social justice.

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