

The NETIZENS' concern in the time of deteriorating AQI: A case study of firecracker ban in India

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Abstract

Indian cities are experiencing severe deterioration in air quality, which worsens during the pollution season due to stubble burning and firecracker use. Although the government implements measures to control pollution, the effectiveness of such policies depends on public compliance, which in turn is shaped by people's primary concerns. Understanding these concerns is therefore essential. Therefore, to understand the concerns of netizens, the study examines their reactions to the firecracker ban on social media. The netizens' concerns are reflected in the elements of arguments. Therefore, the study addresses the question: What standpoints and material starting points are expressed in these posts? Using the pragma-dialectical theory of argumentation, the study identifies and interprets these argumentative elements. Data were collected from X (formerly Twitter) over a 45-day period from October 1 to November 15, 2024, consisting exclusively of Hindi-language posts. The findings show that anti-ban netizens focus largely on issues of economy, employment, culture, tradition, and the intentions of those advocating the ban, rather than on deteriorating air quality. In contrast, pro-ban netizens express concerns aligned with environmental conditions and emphasise separating religious traditions from the practice of burning firecrackers. The study contributes to research on online argumentation and digital environmental humanities, offering insights that may help policymakers enhance public compliance.

Keywords: Firecracker ban, pragma-dialectical, netizen, social-media, argumentation

1. Introduction

The deteriorating air quality in India's urban landscape has created an air quality crisis that has emerged as one of the most pressing environmental challenges of the 21st century. The Air Quality Index (AQI) of Indian metropolitan cities, such as Delhi, Chennai, Kolkata, and Mumbai, is consistently deteriorating and ranks among the world's most hazardous levels. The AQI values in these cities exceed 300-500 during peak pollution seasons (Central Pollution Control Board, 2023). The listing of 22 Indian cities among the 30 world's most polluted cities highlights the severity of the nation's air pollution predicament (World Health Organisation, 2023). The Central Pollution Control Board (CPCB) has reported that 40% of India's population lives in areas where air quality fails to meet national standards. The deteriorating air quality has escalated the environmental concern to a public health emergency (Balakrishnan et al., 2019). Over 1.67 million premature deaths annually in India are linked to air pollution, which highlights the devastating situation that makes air pollution a leading environmental factor for mortality in the country (Ghude et al., 2016). Moreover, air pollution also has significant economic implications, resulting in an annual economic loss of \$95 billion, equivalent to approximately 3% of India's GDP (Maji et al., 2018).

The deterioration of air quality in Indian cities has been caused by both anthropogenic and natural factors. Industrial emissions are among the primary contributors to air pollution. The rapid industrialisation and inadequate pollution control measures result in the emission of particulate matter (PM 2.5 and PM 10), including sulfur dioxide, nitrogen oxides, and other volatile organic compounds, into the atmosphere (Guttikunda & Calori, 2013). The exponential growth with over 295 million registered vehicles as of 2023, contributes approximately 27% of total air pollution due to vehicular emissions in the urban areas (Ministry of Road Transport and Highways, 2023). Agricultural activity, particularly post-harvesting stubble burning in large quantities in Punjab and Haryana, exacerbates air quality issues. It alone contributes to 15-20% of Delhi PM2.5 pollution during the October-November months (Cusworth et al., 2018). Moreover, construction activities and road dust account for nearly 38% of PM10 pollution in major cities (Apte et al., 2015). The use of solid fuels for cooking in urban areas also contributes to the deterioration of air pollution levels.

Seasonal factors, including meteorological conditions and festival seasons, also contribute to air pollution. The meteorological conditions, such as temperature inversions, low wind speeds, and humidity variations, trap air pollutants in the lower atmosphere, creating a 'pollution bowl' during the winter months (Sharma et al., 2016). During the festival seasons, marked by the widespread use of firecrackers during Diwali and other celebrations, an acute pollution spike causes a 30-40% increase in PM2.5 levels within 24-48 hours (Singh et al., 2019).

In the deteriorating air quality of Indian cities, it is essential to understand the public's concern over it. Public concern and awareness regarding air pollution are fundamental drivers of environmental policy and behavioural change in contemporary India (Bhat, 2021). The social dimensions of public concern regarding the environment play crucial roles in shaping collective action and policy advocacy. Studies indicate that perceived health risks associated with air pollution significantly influence individual and community-level responses, including support for stringent environmental regulations and lifestyle modifications (Doherty, 2017). Public concern serves as a critical feedback mechanism for policymakers, influencing them to develop policies and allocate resources for pollution control measures. The growing environmental consciousness has led to increased public interest litigation challenging government inaction and demanding accountability from regulatory authorities (Narain & Sall, 2016). This civic engagement has led to judicial interventions, including the Supreme Court's directives on vehicular emissions, industrial pollution controls, and seasonal firecracker regulations. Therefore, it is essential to understand the public's concerns about air quality deterioration.

While substantial research exists on the physical and health impacts of air pollution, a significant gap remains in understanding public concern regarding specific environmental interventions, such as bans on firecrackers. The primary objective of the study is to understand public concern regarding air quality deterioration in the context of firecracker bans in India by examining online discourse that reflects the public's attitudes and perceptions towards environmental issues. The firecracker ban issue serves as a particularly relevant case study because it represents the convergence of environmental policy, cultural traditions, economic interests, and public health concerns. To achieve the objective, the study aims to address the following two questions.

- 1.1. What is the standpoint of argumentation?
- 1.2. What is the material starting point of argumentation?

The research contributes to multiple areas of study, including digital environmental humanities and online argumentation, and will also provide policymakers and environmental advocates with practical insights to address India's air quality crisis through evidence-based interventions and effective public engagement strategies.

2. Literature Review: The study on people's concerns over air pollution in India

This literature review examines the existing body of research on policy interventions, their effectiveness and limitations, and public concern in the Indian context, with the aim of understanding netizens' concern over deteriorating air quality through online argumentation analysis.

2.1 Policy interventions

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Mohit Raj and Sweta Sinha

The NETIZENS' concern in the time of deteriorating AQI: A case study of firecracker ban in India 174

The policy response to air pollution due to firecrackers on Diwali has evolved significantly over the past decade, with judicial interventions playing a particularly prominent role. The Supreme Court of India issued directives restricting the manufacture, sale, and use of certain categories of firecrackers in the National Capital Region, representing a landmark judicial intervention in environmental regulation (Yadav et al., 2022).

Yadav et al. (2022) assessed the effect of judicial prohibition on firecracker celebration at the Diwali festival on air quality in Delhi. Their findings indicated measurable declines in PM metrics associated with regulation periods, suggesting that the bans, when enforced, can produce tangible benefits for air quality. Similarly, Yadav and Saxena (2020) have examined the impact of the Supreme Court's ban on crackers on air pollution in Delhi. They have found significant reductions in pollution indicators during the ban period.

The COVID-19 pandemic provided an unintended natural experiment for evaluating the effectiveness of firecracker bans. During 2020, several Indian states imposed strict prohibitions on the use of firecrackers as part of broader pandemic-related restrictions. Nagda et al. (2022) conducted a multi-city comparison of air quality across eight metropolitan cities during Diwali 2020 versus 2019. The study found a reduction in concentrations of PM_{2.5}, PM₁₀, NO_x, and SO₂ on Diwali day in 2020, consistent with the reduced firecracker activity during the imposed ban. Singh et al. (2020) examined the impact of the COVID-19-implemented ban on Diwali fireworks in Rajasthan specifically, and they found pollution reductions during the 2020 festival compared to previous years.

2.2 Effectiveness and limitations of policy interventions

While the evidence suggests that bans and restrictions can reduce pollutant concentrations during festival periods, the study also highlights important limitations and contextual factors that affect the effectiveness of these policies. Many studies have noted that observed benefits depend heavily on the strength of enforcement and public compliance, which vary substantially across jurisdictions and years (Yadav et al., 2022; Nagda et al., 2022). However, enforcement details are rarely quantified in the monitoring studies, making it difficult to establish clear relationships between enforcement intensity and pollution outcomes. Chen et al. (2019) have found that while targeted short-term restrictions, such as bans on firecrackers, reduce pollution, comprehensive strategies addressing multiple sectors yield larger health gains at scale. The integrated policy perspective is supported by source apportionment studies, which show that residential biomass burning, vehicular emissions, industrial sources, and regional agricultural burning collectively account for the majority of annual pollution burdens in most Indian cities (Mukherjee et al., 2020; Chen et al., 2019).

2.3 Public concern and attitudes toward environmental policies

In contrast to the extensive technical literature on the impacts of air quality and policy effectiveness, research on public attitudes toward firecracker bans remains remarkably limited. Saha et al. (2024) conducted a primary survey of 741 young residents in Delhi to examine youth responses to the firecracker ban, investigating the socio-economic and normative drivers of firecracker use and the role of policy instruments. The study found that social norms and faith-based considerations played important roles in shaping attitudes toward firecracker use, with respondents who reported stronger social pressure against firecracker use and those exposed to institutional messaging more likely to report reduced or discontinued firecracker bursting. While this study provides valuable insights into the factors influencing youth compliance with firecracker bans, its limitations are substantial, particularly in addressing the primary public concern regarding the intersection of culture, tradition, celebration, health, and pollution, such as the use of firecrackers on Diwali.

2.4 Online discourse analysis: A critical gap

Numerous studies have examined the air quality and health impacts of Diwali firecrackers, as well as the growing effectiveness of policy interventions, including judicial bans and COVID-19-related restrictions. The studies have consistently demonstrated that the use of firecrackers produces measurable pollution spikes with associated health risks, and that bans can reduce these impacts when effectively enforced. However, the literature review has revealed striking gaps in understanding netizen attitudes, perceptions, and concerns regarding firecracker bans, despite noting the growing importance of digital and social media in shaping environmental debates in India (Aarya, 2024; Prabhakar, 2020). None of the studies have presented analyses of social media argumentation to understand netizens' concerns about the ban on firecrackers. The single major survey (Saha et al., 2024) examining youth in Delhi employed a cross-sectional design, which leaves significant gaps in understanding the attitudes of netizens.

Given the central role of digital and social media in contemporary public discourse in India, understanding public concern about firecracker bans requires analysing the online venues where much of this discourse now occurs. The proposed research aims to understand netizens' concerns and attitudes towards one of the environmental issues by analysing online discourse from an argumentative perspective. The study addresses a critical gap and attempts to generate insights with both theoretical and practical significance for environmental policy implementation in India and beyond.

3. Research Methodology

3.1 Research Design: This study employs a qualitative argumentative analysis approach to examine public discourse surrounding the ban on firecrackers in Delhi NCR. The methodology integrates systematic data collection from social media with pragma-dialectical argument

reconstruction to extract the argumentative elements and analyse them to know their concern on pollution control policy.

3.2 Data Collection

3.2.1 Data Source

Data were collected from the social media platform X (formerly Twitter) over a 45-day period from October 1 to November 15, 2024, which is only written in Hindi. This timeframe was strategically selected to capture public discourse surrounding two significant policy interventions related to firecracker regulation in the Delhi NCR region. (1) First Policy Intervention (September 10, 2024): The Delhi government imposed a comprehensive ban on all types of firecrackers, effective until January 1, 2025, as a measure to combat winter air pollution. (2) Second Policy Intervention (October 14, 2024): Fifteen days prior to Diwali (October 31, 2024), the Delhi Pollution Control Committee (DPCC) issued a formal order reinforcing the ban, explicitly covering the production, storage, sale (including online platforms), and bursting of firecrackers within the National Capital Territory of Delhi.

3.2.2 Sampling Criteria and Data Selection:

The study focused exclusively on posts authored by individual citizens to capture authentic public discourse. To ensure data quality and relevance, the following exclusion criteria were applied: Posts from news channels and media organisations, Posts from authoritative figures and public officials, Posts from government handles and institutional accounts, Posts from commercial entities and corporate accounts. After applying these filters, **70 posts** discussing the firecracker ban issue were identified and selected for analysis during the specified period.

3.3 Data Filtration

A content-based filtration process was implemented to filter out non-argumentative posts. The non-argumentative and off-topic posts were systematically excluded. The study has also classified posts as non-argumentative if an individual presents the opinion of someone else, as it is typically expressed in the form of “he said...” Only posts containing identifiable argumentative structures were retained for analysis.

3.4 Analytical Framework

3.4.1 Pragma-Dialectical Approach

The study employs the pragma-dialectical framework (van Eemeren & Grootendorst, 2010) for the reconstruction and analysis of arguments. This framework conceptualises argumentation as a goal-directed critical discussion aimed at resolving differences of opinion on merit through four argumentative stages: Confrontation stage: Identification of the difference of opinion, Opening

stage: Establishment of procedural and material starting points, Argumentation stage: Presentation and examination of arguments, Concluding stage: Determination of the outcome of the discussion

3.4.2 Argument Reconstruction Process

Argument reconstruction was conducted through four systematic analytic operations:

Deletion: Removal of irrelevant content, redundancies, and non-argumentative elements that do not contribute to the argumentative structure.

Addition: Identification and explicit formulation of implicit premises, unexpressed conclusions, and contextual assumptions necessary for complete argument comprehension.

Substitution: Replacement of unclear, ambiguous, or colloquial language with precise analytical terminology to enhance interpretability.

Permutation: Reorganisation of argumentative elements to align with the four stages of a critical discussion:

3.4.3 Analytical Categories

Following argument reconstruction, the study has analysed the post according to two primary dimensions:

1. Standpoint identification: Identification of the arguer's position (pro-ban, anti-ban, or conditional) and concern regarding the firecracker ban policy.
2. Material starting points: Examination of the shared premises, common ground, and assumptions upon which arguments are constructed.

4. The analysis of netizens' reaction to the firecracker ban: the results and findings

4.1 Standpoint: In the pragma-dialectical theory of argumentation, the standpoint is the position or claim that a speaker puts forward and defends through argumentation in a discussion. It is the propositional content expressing what the arguer wants the audience to accept as true, reasonable, or acceptable. A participant in argumentation shows their attitude towards the topic of discussion through externalisation of their opinion or position (van Eemeren and Grootendorst, 2010). Therefore, in this section, the study aims to understand the primary concerns of people through their standpoint on the ban on firecrackers on Diwali. During Diwali, netizens have reacted to the issue of a ban on firecrackers. The study first classifies the posts into two types: Anti-ban and pro-ban, based on the nature of the comments. Then analyse the standpoint, aiming to find their concern.

Netizens have posted their anti-ban views both directly and indirectly. They criticise the ban by directly labelling it as a wrong decision and indirectly by describing other facts related to Diwali and firecrackers. The study has decoded the posts into six broader categories. As given below.

1. Pollution denial, 2. Justification, 3. Personal attack, 4. Ban rejection, 5. Employment, and 6. Communal

4.1.1 Pollution denial:

The study reveals that a significant portion of netizens tend to reject the notion that the burning of firecrackers during Diwali substantially contributes to air quality deterioration. Their discourse primarily centres on emphasising alternative sources of air pollution, arguing that even if firecrackers have an impact, it remains negligible in comparison to other major contributors. The denial of the role of firecrackers in air pollution is constructed around three principal arguments.

First, netizens underscore that the predominant sources of air pollution are industrial emissions, vehicular exhaust, domestic fuel use, and everyday human activities rather than festive practices such as bursting firecrackers. For instance, one respondent asserts, “हमारे प्रतिदिन के व्यवहार से हवा खराब होती है, न कि दिवाली में पटाखे फोड़ने से।” (“It is our everyday behavior that pollutes the air, not the bursting of firecrackers during Diwali.”).

Second, the denial is reinforced through references to ambiguous or inconsistent reports. Participants frequently cite contradictory statements made by political leaders and public authorities to demonstrate the lack of a clear consensus regarding the extent to which firecrackers contribute to air pollution.

Third, a comparative standpoint is presented, wherein individuals juxtapose the use of firecrackers in India with that in various developed nations, implying that India’s practices are negligible in comparison to developed nations. Therefore, the allegation of pollution is exaggerated. For instance “भारत में पटाखों के कारण प्रदूषण या पर्यावरण को गंभीर नुकसान पहुँचाने का आरोप ग़लत और अतिशयोक्तिपूर्ण है। (The allegation that firecrackers cause severe pollution or environmental damage in India is incorrect and exaggerated.)”

Collectively, these arguments illustrate an attempt to minimise or deflect responsibility for the degradation of air quality away from cultural practices associated with Diwali, situating the blame instead within broader structural and everyday sources of pollution.

4.1.2 Justification: Traditional, Celebration, Positive evaluation

Netizens have sought to rationalise the practice of burning firecrackers during Diwali by invoking cultural, celebratory, and positive evaluative justifications. Within the traditional justification, users emphasise that the act of bursting firecrackers is not a modern phenomenon but rather an integral part of an enduring cultural heritage. They support this stance by presenting evidence that situates the custom within historical continuity. For example, one user asserts, “दीवाली में पटाखे

चलाना कोई आधुनिक परंपरा नहीं, बल्कि प्राचीन समय से प्रचलित है।” (“The bursting of firecrackers during Diwali is not a modern practice but one that has been prevalent since ancient times.”).

A second line of justification is rooted in the celebratory dimension of Diwali. Netizens claim that firecrackers symbolise joy, festivity, and communal participation, thereby rendering their use both appropriate and enjoyable during moments of celebration. This standpoint is reflected in statements such as “जब खुशी का अवसर हो, तब पटाखे चलाना उचित और आनंददायक होता है।” (“It is appropriate and enjoyable to burst firecrackers on occasions of happiness.”).

The third form of justification pertains to the positive evaluation of firecracker use, wherein some individuals go so far as to claim potential health benefits associated with the practice. This perspective is encapsulated in post like “दीवाली पर पटाखे चलाना अच्छा और लाभदायक है।” (“Bursting firecrackers during Diwali is good and beneficial.”).

Collectively, these justifications reveal an attempt by netizens to construct a discourse that frames the burning of firecrackers not as an environmentally harmful act but as a culturally rooted and socially meaningful tradition imbued with symbolic, emotional, and even perceived health-related value.

4.1.3 Personal attack: Moral inconsistency, Hypocrisy accusation, Political conspiracy

The study reveals that netizens have adopted a confrontational stance toward critics of firecracker use during Diwali, employing *ad hominem* arguments rather than engaging directly with the substance of the criticism. Instead of refuting the claims made by critics, netizens have sought to undermine their credibility through personal attacks grounded in morality, hypocrisy, and political conspiracy. Their argumentative strategy in standpoint is constructed upon the notion that the critic’s (antagonist’s) own actions contradict the moral or ethical standards they attempt to uphold.

One prominent form of this moral critique involves highlighting the perceived inconsistency between critics’ personal practices and their condemnation of firecracker use. For instance, a standpoint states: “जो व्यक्ति जानवरों को मारकर मांस खाता है, वह पटाखों से जानवरों को होने वाले दर्द का हवाला देकर पटाखा-विरोध नहीं कर सकता; यह नैतिक रूप से असंगत है।” (“A person who kills animals for meat cannot oppose firecrackers on the grounds of animal suffering; this is morally inconsistent.”). This argument portrays critics as lacking moral authority, framing their opposition to firecrackers as ethically flawed.

A second category of *ad hominem* reasoning targets what netizens describe as the “elite narrative.” In this discourse, individuals from the entertainment industry and other influential circles who advocate against the use of firecrackers are accused of hypocrisy and pretension. As exemplified

by the statement, “दीपावली पर पटाखे चलाना सही है और बॉलीवुड का पटाखा-विरोध ढोंगपूर्ण और असंगत है।” (“Bursting firecrackers on Diwali is justified, and Bollywood’s opposition to it is hypocritical and inconsistent.”), Netizens depict such critiques as elitist, detached from cultural sentiment, and fundamentally disingenuous.

The third dimension of the *ad hominem* attack involves political conspiracy. Here, critics are portrayed as politically motivated actors seeking to divide the Hindu community. This strategy reframes the debate over environmental and ethical concerns into one of religious and political identity. For instance, one user claims, “वे हिंदुओं को विभाजित करने का षड्यंत्र कर रहे हैं।” (“He is conspiring to divide Hindus.”). Such assertions reveal an attempt to shift the focus from environmental discourse to issues of communal integrity and political loyalty.

Collectively, these *ad hominem* standpoints illustrate how netizens’ defence of firecracker use transcends environmental reasoning, transforming into a broader socio-political and moral discourse aimed at discrediting opponents rather than engaging with their arguments on empirical or ethical grounds.

4.1.4 Employment:

One of the most frequently articulated standpoints against the ban on firecrackers pertains to the issue of employment. The study reveals that protagonist netizens foreground the economic dimension of firecracker production, emphasising its role as a significant source of livelihood for a wide range of individuals. Their argument highlights that the firecracker industry provides employment opportunities across various social and economic strata, regardless of caste, class, or religion.

Through this lens, netizens construct a narrative in which the use of firecrackers during Diwali is not merely a matter of cultural expression but also one of socio-economic importance. The act of supporting firecracker production and sale is thereby framed as an act of supporting workers’ welfare and community livelihoods. For instance, one standpoint asserts: “पटाखे बनाने के काम से लगभग हर वर्ग के लोगों को रोजगार प्राप्त है।” (“The work of manufacturing firecrackers provides employment to people of almost every social group.”).

In this argument, the primary concern expressed by proponents is the preservation of employment for those dependent on the firecracker industry. Consequently, the justification for permitting the use of firecrackers extends beyond cultural tradition to encompass broader socio-economic implications, positioning the practice as integral to sustaining livelihood and economic stability among diverse communities.

4.1.5 Communal and ban rejection:

The study indicates that protagonist netizens have also adopted a communal standpoint in their opposition to the ban on firecrackers during Diwali. Within this discourse, netizens assert that the restriction on firecrackers is being influenced or obstructed by members of the Muslim community. Such arguments frame the ban not as an environmental or regulatory issue but as an act perceived to threaten Hindu religious freedom. This sentiment is exemplified in the statement: “भारत में हिन्दू त्योहार मनाने की स्वतंत्रता पर मुस्लिम समुदाय द्वारा खतरा पैदा किया जा रहा है।” (“In India, the Muslim community is creating a threat to the freedom of celebrating Hindu festivals.”). Through this standpoint, the protagonists directly attribute the perceived curtailment of Hindu cultural expression to the actions of another religious group, thereby transforming the debate into one centred on religious identity and communal relations.

Additionally, another prevalent standpoint among netizens centres on public defiance and mass rejection of the ban. In this discourse, users emphasise that despite official restrictions, people across various regions continued to burst firecrackers, interpreting this widespread participation as a collective repudiation of the ban’s legitimacy. For instance, one example reads: “पटाखों पर लगाया गया बैन लोगों ने नकार दिया।” (“The people have rejected the ban on firecrackers.”). This argument posits that the act of bursting firecrackers constitutes a form of popular resistance, implying that if the ban had been justified or acceptable, the public would have complied with it.

Together, these two standpoints reflect the dual emphasis of netizens’ concerns on religious identity as a perceived threat and on mass acceptance as a measure of policy legitimacy. By invoking communal sentiment and public behaviour, netizens seek to challenge the authority and relevance of the ban, reframing it as both socially unacceptable and religiously discriminatory.

In pro-ban standpoints, netizens have expressed the thought regarding the firecracker ban employing three types of propositions: Distinctive, Normative, and Descriptive propositions.

4.1.6 Distinctive proposition:

The concept of distinctive propositions refers to statements in which the speaker seeks to establish a clear differentiation between two concepts or phenomena. In the context of this study, such propositions are employed to identify standpoints that deliberately distinguish the environmental implications of firecracker use from those of religious and cultural practices.

The findings suggest that netizens often employ this form of reasoning to argue that the use of firecrackers during Diwali and their potential impact on air quality deterioration should not be conflated with matters of faith, culture, or tradition. Through these arguments, netizens aim to

clarify that environmental criticism directed at firecracker use does not equate to an attack on Hindu religious or cultural identity.

For example, one standpoint explicitly states: “दीपावली पर पटाखे फोड़ने की परंपरा हिन्दू परंपरा नहीं है और उसका विरोध हिन्दू धर्म का विरोध नहीं है।” (“The tradition of bursting firecrackers on Diwali is not a part of Hindu tradition, and opposing it is not equivalent to opposing the Hindu religion.”). This statement encapsulates the essence of the distinctive standpoint, wherein the speaker attempts to separate the environmental dimension of the debate from its religious and cultural associations.

Overall, this form of argumentation highlights an important effort among netizens to distinguish between ritual identity and environmental accountability, thereby reframing the discourse on firecrackers as one of rational distinction rather than cultural defensiveness.

4.1.7 Normative proposition:

A normative proposition refers to a statement that conveys a value judgment or prescriptive stance, indicating how things ought to be or what actions individuals should undertake. Within this framework, the study identifies that netizens employ a normative standpoint in their discourse on the use of firecrackers during Diwali, articulating judgments, suggestions, and behavioural guidelines that reflect ethical and social evaluations.

In these judgmental standpoints, netizens collectively assert three key positions: first, that burning firecrackers during Diwali is environmentally wrong; second, that implementing a ban on firecrackers is necessary; and third, that labelling those who support such a ban as “anti-national” or “Pakistani” is inappropriate.

An illustrative example of this reasoning appears in the statement: “पटाखों के शोर से दिक्कत बताने वालों को देशद्रोही कहना या पाकिस्तान भेजने की बात करना अनुचित है।” (“It is wrong to call those who express discomfort with the noise of firecrackers traitors or to suggest that they should be sent to Pakistan.”).

This normative standpoint highlights a segment of netizens who demonstrate moral and environmental awareness, acknowledging the adverse effects of firecracker use on public health and urban air quality. Their standpoints emphasise responsible citizenship, rational deliberation, and ethical restraint in framing disagreements.

4.1.8 Descriptive proposition:

Descriptive propositions refer to statements that convey observations or descriptions of existing facts, phenomena, or social trends. In the context of this study, netizens have utilised descriptive

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Mohit Raj and Sweta Sinha

The NETIZENS’ concern in the time of deteriorating AQI: A case study of firecracker ban in India 183

standpoints to articulate and reflect upon the evolving public attitudes toward the use of firecrackers during Diwali. These standpoints often provide a commentary on societal behaviour, illustrating perceived shifts in collective practices and values.

The study identifies that such propositions are employed to describe a gradual change in people's attitudes, particularly a movement away from the practice of bursting firecrackers. This is exemplified in the statement: "लोग अब पटाखों से दूर हो रहे हैं, और यह एक सही व स्वाभाविक बदलाव है।" ("People are now moving away from firecrackers, and this is a right and natural change.").

This example not only describes an observable trend but also carries evaluative undertones, implicitly endorsing the change as positive and desirable.

Thus, while descriptive in nature, these standpoints simultaneously exhibit normative characteristics, as they assess and interpret social transformation in a value-laden manner. The underlying concern reflected in this discourse aligns with support for the ban on firecrackers, framing the behavioural shift as an indication of increasing public awareness and environmental responsibility.

4.2 Material starting point:

The material starting point refers to the shared knowledge, belief, assumption, and facts that both the protagonist and antagonist accept as common ground to begin the critical discussion on merit. It is an accepted set of premises (explicit and implicit) that do not need to be defended, serving as the ground of argumentation (van Eemeren, 2010). The study analyses the material starting point of pro-ban and anti-ban posts to understand the concerns of netizens through their argumentative ground.

Netizens have challenged the policy of the firecracker ban implemented during Diwali in India by advancing arguments grounded in seven principal lines of reasoning: 1. Comparison, 2. Economy and Employment, 3. Culture, society and tradition, 4. Hypocrisy 5. Ad populum and effectiveness 6. Identity 7. Divisive conspiracy

4.2.1 Comparison

The study identifies two principal forms of comparative argumentation employed by netizens to contest the ban on firecrackers: (1) comparisons based on the quantity of production and use of firecrackers, and (2) comparisons between air pollution caused by firecrackers and other major sources of pollution. Through these comparative frameworks, netizens seek to minimise the perceived environmental impact of firecracker use and to question the legitimacy of policy measures targeting them.

In the first type of comparison, netizens emphasise the relatively small scale of firecracker production and consumption in India. They argue that since India's contribution to global firecracker usage is minimal, its role in overall air pollution is correspondingly insignificant. The reasoning underlying this argument follows the logic that "a comparatively negligible quantity of pollutants can be disregarded." This standpoint is exemplified in statements such as: "यदि अन्य देश भारत से कहीं अधिक पटाखे फोड़ते हैं और उन्हें दोषी नहीं ठहराया जाता, तो भारत को भी दोषी नहीं ठहराना चाहिए।" ("If other countries burst far more firecrackers than India and are not blamed for it, then India should not be blamed either."), and "अगर भारत केवल 2% पटाखे बनाता है, तो वह वैश्विक प्रदूषण में बड़ा योगदानकर्ता नहीं हो सकता।" ("If India produces only 2% of firecrackers, it cannot be a major contributor to global pollution."). These propositions collectively express an appeal to proportional reasoning, suggesting that actions producing a relatively minor environmental effect should not attract disproportionate condemnation or restriction.

In the second form of comparative argumentation, netizens shift focus toward alternative sources of pollution, particularly industrial emissions and vehicular exhaust, which they argue make far more substantial contributions to air quality deterioration. Within this framework, the pollution caused by firecrackers is framed as negligible in comparison. This standpoint is articulated in statements such as: "अन्य स्रोत अधिक प्रदूषण करते हैं तो केवल पटाखों को दोष देना अनुचित है।" ("If other sources cause more pollution, then it is unfair to blame only firecrackers."). Here, the speaker attempts to relativise the pollution caused by firecrackers, thereby displacing responsibility from cultural practices to structural and industrial causes.

Taken together, these comparative standpoints reveal that the primary concern of netizens is not a consideration of pollution but rather an attempt to contextualise and relativise the role of firecrackers within the broader spectrum of pollution sources. By doing so, they seek to portray India as a marginal actor both in terms of firecracker production and its environmental consequences, thus framing the ban as an exaggerated and misplaced policy response.

4.2.2 Economy and employment

The economic and employment-based grounds of argumentation are founded on the assumption that any activity contributing to national economic growth and providing livelihoods to citizens is inherently positive and socially beneficial. Within this framework, netizens justify the use and production of firecrackers by emphasising their role in stimulating the economy and generating employment across different social groups.

The material starting point of this reasoning is exemplified in the statement: “आर्थिक और सामाजिक योगदान करने वाला उद्योग गलत नहीं होता है।” (“An industry that contributes economically and socially cannot be considered wrong.”). This assertion encapsulates the belief that the firecracker industry, due to its economic and social contributions, holds legitimate value within society.

In this line of argumentation, netizens highlight the economic significance of the firecracker sector, portraying it as a source of income for workers and a contributor to local and national markets. The discussion frames the industry as an integral component of economic sustainability and livelihood security.

However, this economic rationale has overshadowed considerations of air quality by prioritising employment and financial benefit. Consequently, the netizens’ primary concern from this standpoint is oriented toward economic and social welfare, while issues of pollution and ecological impact remain largely marginalised or unaddressed.

4.2.3 Culture, tradition, and its antiquity

The argumentation that invokes culture, tradition, and historical antiquity to justify the use of firecrackers during Diwali and to oppose the ban on firecrackers is grounded in the assumption that any act rooted in a longstanding cultural or religious tradition is inherently legitimate. Netizens develop their reasoning based on this material starting point and proceed to argue that imposing restrictions on cultural or religious festivities through policies or bans is inappropriate.

This line of reasoning is illustrated in the example: “धार्मिक या सांस्कृतिक उत्सवों को सीमित करना संस्कृति-विरोधी है।” (“Restricting religious or cultural celebrations is anti-cultural.”). Here, the appeal is explicitly rooted in the protection of cultural and religious expression.

In another instance, netizens attempt to validate the use of firecrackers by emphasising their historical antiquity. For example: “9वीं शताब्दी की पेंटिंग्स में पटाखों का चित्रण किया गया है।” (“Firecrackers have been depicted in paintings from the 9th century.”). This evidence is used to argue that the use of firecrackers is not a modern practice and, therefore, should not be prohibited solely on the basis of contemporary environmental concerns.

Across this line of argumentation, netizens seek to refute the ban on firecrackers by foregrounding cultural continuity and historical legitimacy. However, the underlying material starting point reveals that their primary concern is the preservation of culture, tradition, and antiquity, rather than addressing the issue of deteriorating air quality.

4.2.4 Hypocrisy

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Mohit Raj and Sweta Sinha

The NETIZENS’ concern in the time of deteriorating AQI: A case study of firecracker ban in India 186

The study reveals that netizens frequently target individuals who advocate for a ban on firecrackers by drawing attention to their environmentally harmful behaviours. According to this line of reasoning, individuals who themselves engage in anti-environmental activities lack the moral authority to advise others about environmental protection. Consequently, netizens reject the guidance or criticism offered by those they perceive as hypocritical.

This form of argumentation is grounded in the assumption that moral arguments are legitimate only when there is consistency between one's conduct and one's statements. The example: “कुछ लोग बकरी का मांस खाते हैं। वही लोग कहते हैं कि बकरी पटाखों से डरती है, इसलिए पटाखे नहीं फोड़ने चाहिए।” (“Some people eat goat meat, yet the same people say that goats fear firecrackers, so they should not be burst.”) illustrates the perceived contradiction between behaviour and moral claims.

By emphasising this inconsistency, netizens employ a hypocrisy-based rebuttal to dismiss the legitimacy of criticism related to firecrackers. In this line of argumentation, their primary concern is not evaluating the environmental impact of firecrackers but rather questioning the credibility of the individuals who support the ban.

4.2.5 Ad populum and effectiveness

The study has found that netizens employ ad populum reasoning to challenge the practicality and legitimacy of the ban on firecrackers. In this form of argumentation, they evaluate the policy based on its reception and acceptance by the general public rather than on environmental or regulatory grounds. Netizens argue that despite the official ban, a large number of people continued to burn firecrackers, indicating that the policy lacks societal acceptance. The example, “बैन के बावजूद लोगों ने पटाखे जलाए” (“People burst firecrackers despite the ban”), is used to demonstrate widespread public disregard for the restriction.

By highlighting such instances, netizens attempt to establish that the ban is ineffective and therefore unjustified. Their argument relies on the assumption that mass rejection reflects policy inadequacy, implying that if a significant portion of the population refuses to comply, the policy itself must be flawed rather than the behaviour of the public.

Furthermore, netizens link effectiveness directly with public compliance, asserting that the ban failed not because of insufficient enforcement but because people continued to use firecrackers. This reasoning is grounded in the assumption that a policy's failure stems from its own inherent weaknesses rather than from resistance or non-compliance.

In both strands of argumentation, the primary concern of netizens aligns with public sentiment rather than environmental considerations, framing the issue in terms of societal acceptance rather than pollution control.

4.2.6 Identity

The study finds that the identity of pro-ban speakers is targeted in netizens' argumentation. Rather than engaging with the substance of the arguments presented, netizens dismiss the suggestions or opinions of such individuals on the basis of their professional or religious identity. By undermining the speaker's credibility, they create a justification for disregarding the argument itself.

This type of reasoning operates on the underlying assumption that valid and sound arguments can only originate from individuals who possess a higher or socially respected professional identity. The example, “ऐसे नचनिया पदनिया की औकात ही क्या है जो वो हमको ज्ञान दे।” (“What status does such a dancer/performer have to give us knowledge?”), illustrates this appeal. Here, the argument shifts attention away from the issue of firecracker use and focuses instead on belittling the speaker's profession.

Such material starting points rely on appeal to authority or, conversely, appeal to lack of authority, wherein the perceived social or professional standing of the speaker is treated as more important than the logical coherence or empirical validity of their reasoning. This suggests that the primary concern of netizens employing this argumentation is the identity of the speaker, rather than the content of the argument or the environmental implications associated with the use of firecrackers.

4.2.7 Divisive conspiracy

The argumentation related to divisive conspiracy is grounded in judgments about the speaker's or policy advocate's intentions. Netizens question the motives of those who support the ban on firecrackers, alleging that their intentions are divisive. They argue that since individuals from all social groups are involved in the production and consumption of firecrackers, imposing a ban would disrupt existing social cohesion.

The example, “हिंदू मुर्गा छाप पटाखे गर्व से खरीदते हैं जबकि यह दलित समुदाय की कंपनी है।” (“Hindus proudly purchase ‘Murga brand’ firecrackers even though it is a Dalit community company”), exemplifies the claim. Here, the emphasis is on the interconnected networks of production and consumption that link people across caste lines. Based on this reasoning, netizens contend that banning firecrackers would undermine social harmony by weakening these integrative economic and cultural exchanges.

The underlying assumption of this argument is that policies perceived as divisive are inherently inappropriate for the country. This material starting point places strong emphasis on social

integration, indicating that the primary concern of netizens employing this line of argumentation is the preservation of intergroup harmony rather than environmental considerations.

The material starting points of pro-ban posts of netizens are based on six issues: 1. Environment and health, 2. Separation, 3. Change, 4. Normative proposition 5. Descriptive

4.2.8 Environment and health:

The study indicates that netizens who support the firecracker ban ground their argumentation in environmental and health-centric material starting points. This line of reasoning rests on the assumption that any activity or practice that harms the environment or public health is inherently undesirable. Netizens employ these assumptions to advance pro-ban arguments.

For example, the statement “पटाखे चलाने से प्रदूषण और स्वास्थ्य समस्याएँ बढ़ती हैं। (Bursting firecrackers increase pollution and health issues)” reflects the position that the use of firecrackers exacerbates pollution and contributes to health-related issues. In such arguments, the primary concern of netizens is to halt practices that negatively affect environmental quality and human well-being.

4.2.9 Separation:

In the pro-ban separation argument, netizens attempt to distinguish the practice of bursting firecrackers on Diwali from Indian religious, cultural and traditional practices. They contend that the use of firecrackers is not historically or intrinsically linked to Indian religious or cultural practices. This form of argumentation is grounded in the assumption that any practice that does not originate within Indian cultural or religious traditions can be legitimately discontinued.

The example, “यदि कोई प्रथा विदेशी मूल की है, तो वह भारतीय धार्मिक परंपरा का हिस्सा नहीं मानी जा सकती। (If a practice is of foreign origin, it cannot be considered part of Indian religious tradition.),” illustrates this reasoning by asserting that practices of foreign origin cannot be considered part of Indian religious tradition. Within this framework, the act of bursting firecrackers on Diwali is positioned as non-essential and therefore abandonable. Overall, the concern of netizens employing this standpoint is oriented toward legitimising the cessation of firecracker use by separating it from traditional religious and cultural identity.

4.2.10 Normative and Descriptive

The analysis shows that several netizens’ posts incorporate both normative and descriptive elements. Within the normative propositions, users prescribe specific measures for reducing pollution and outline how a ban on firecrackers should be implemented effectively. In the

descriptive propositions, netizens describe emerging shifts in public attitudes, suggesting that a gradual reduction in firecracker use is beneficial for society.

Both forms of argumentation are grounded in the shared material starting point that air pollution is harmful to human health and therefore must be mitigated. This underlying assumption suggests that netizens expressing these views are primarily motivated by concerns for environmental quality and public health.

4.2.11 Justification

Netizens have also advanced pro-ban argumentation by employing justification strategies to legitimise the prohibition of firecrackers during Diwali. These justificatory statements clarify the rationale behind implementing the ban. For example, the standpoint “पटाखे हवा खराब करते हैं इसलिए बैन लगाया गया था ताकि प्रदूषण कम हो। (Firecrackers pollute the air, which is why the ban was imposed so that pollution could be reduced.)” explicitly states that the ban was imposed because firecrackers degrade air quality, and therefore the restriction serves the purpose of reducing pollution. This line of reasoning highlights that the primary concern of these netizens is the improvement of air quality and the protection of public health.

5. Conclusion

This study aimed to explore public concerns surrounding the ban on firecrackers and examined the argumentation related to this issue against the backdrop of severe environmental conditions in Indian cities. Prior research indicates that AQI levels in many Indian cities exceed the WHO-recommended limits, with conditions worsening during the winter and festive seasons, when the use of firecrackers increases.

Drawing exclusively on Hindi-language data from X during Diwali 2024, the study analysed the primary concerns of netizens regarding the firecracker ban. Using the pragma-dialectical theory of argumentation, the research identified arguments and their constituent elements. It examined the standpoints and material starting points present in both anti-ban and pro-ban posts. Anti-ban standpoints emphasised justifications for firecracker use on Diwali, personal attacks on pro-ban speakers, employment concerns, claims of public rejection of the ban, and communal interpretations. These arguments indicate that anti-ban discourse largely diverges from environmental concerns. Although pollution is occasionally discussed, anti-ban users often claim that firecrackers neither cause pollution nor contribute to deteriorating air quality. In contrast, pro-ban standpoints focus on refuting anti-ban claims and clarifying that the environmental impact of firecrackers is distinct from the cultural and traditional practices associated with them. Pro-ban arguments also appear in normative and descriptive propositions that centre on social harmony and the environmental effects of firecrackers.

The study finds that the material starting points of anti-ban posts draw on comparative argumentation, economic and employment considerations, cultural and traditional appeals, charges of hypocrisy, ad populum reasoning, identity-based attacks, questions of policy effectiveness, and allegations of divisive intent. Through these lines of reasoning, anti-ban netizens foreground issues of economy, tradition, identity, and mass sentiment rather than environmental conditions. Conversely, pro-ban posts rely on material starting points grounded in environmental and health implications. Normative propositions outline methods for effective implementation of the firecracker ban, reflecting concern for air quality, while descriptive propositions highlight shifting public behaviour and offer justification for regulation. Only one type of material starting point attempts to separate firecracker usage from religious and cultural practices.

Overall, the study concludes that anti-ban posts place minimal emphasis on environmental degradation and the declining air quality in urban centres, prioritising instead economic, cultural, and traditional concerns. In contrast, pro-ban posts demonstrate heightened environmental sensitivity, with netizens expressing clear concern for air quality and pollution.

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