

# The necessity of air pollution reduction for an ethically conscious society

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“One day, he opens the cage and releases the bird. Rejoiced, Nightingale whooshes out and up, breathing in every bit of fresh air and clear sky.”

—In “Dream”; *Wild Wise Weird* ([2024](#))

## [SCIENCE NEWS]

Air pollution is a pressing global issue, demanding swift and practical solutions across nations. Polluted air is not only harmful to physical health but also to mental well-being. Research has consistently shown that air pollution is linked to respiratory and cardiovascular problems, both in the short and long term. Short-term effects include coughing, asthma, and difficulty breathing, while long-term exposure can lead to chronic asthma, impaired lung function, cardiovascular diseases, and even death. Beyond physical health, air pollution can also negatively impact mental well-being, contributing to depression, anxiety, and even suicide.

A recent study by a group of researchers led by Tomoaki Nakaishi, a researcher at Kyushu University, has gone further, examining how air pollution affects moral perception and unethical behavior [1]. Unethical behavior refers to actions that are either illegal or deemed morally wrong by society [2]. This study focuses on five types of unethical behavior: fatal

actions (e.g., murder, terrorism, and suicide), assault (e.g., prostitution, rape, child abuse, and domestic violence), discrimination (e.g., gender and racial discrimination), financial misconduct (e.g., fraud and bribery/corruption), and organized misconduct.



**Illustration** by Designer Microsoft

The researchers analyzed the relationship between air pollution—specifically, monthly average nitrogen dioxide (NO<sub>2</sub>) levels—and individual perceptions of unethical behavior and criminal activity across 30 countries. The air quality data came from the Global Ozone Monitoring Experiment (GOME-2) satellite, while perceptions regarding the unethical behavior of more than 80,000 people across 30 countries were gathered through an international survey by Nikkei Research, Inc.

The study found positive correlations between higher monthly NO<sub>2</sub> concentrations and the perception of unethical behaviors, even after accounting for factors such as weather and socioeconomic conditions. This suggests that polluted air may influence how people judge moral actions. Interestingly, the strength of this effect varied across countries, indicating that cultural, social, and environmental factors might also shape moral judgment at the individual level.

Through these findings, some significant implications for policymakers can be drawn. Beyond health benefits, cleaner air could foster a more ethically conscious and socially cohesive society. Therefore, reducing air pollution by enforcing stricter emission regulations, promoting green transportation, and increasing awareness of air quality issues

is crucial for sustainable development. For urban planners, the study highlights the importance of developing green spaces and improving public transportation infrastructure to reduce reliance on private vehicles.

Future research could delve deeper into the mechanisms linking air pollution and unethical behavior. A promising approach would be to apply the Bayesian Mindsponge Framework (BMF) [3]. This method is particularly well-suited for exploring social and psychological phenomena that are connected with environmental factors, such as air pollution [4].

## References

[1] Nakaishi T, et al. (2024). Impact of air pollution on human morality: A multinational perspective. *Humanities and Social Sciences Communications*, **11**, 991. <https://www.nature.com/articles/s41599-024-03186-z>

[2] Lu JG, et al. (2018) Polluted morality: air pollution predicts criminal activity and unethical behavior. *Psychological Science*, **29**(3), 340–355. <https://doi.org/10.1177/0956797617735807>

[3] Vuong QH, Nguyen MH, La VP. (2022). *The mindsponge and BMF analytics for innovative thinking in social sciences and humanities*. Walter de Gruyter GmbH. <https://www.amazon.com/dp/BOC4ZK3M74/>

[4] Vuong QH, Nguyen MH. (2024). Further on informational quanta, interactions, and entropy under the granular view of value formation. <https://dx.doi.org/10.2139/ssrn.4922461>

[5] Vuong QH. (2024). *Wild Wise Weird*. <https://www.amazon.com/dp/BOBG2NNHY6>

