

Plastics, Cultural-Environmental Toxicity, and Air

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Introduction

Toxicity is a pervasive and multifaceted issue deeply embedded in cultural and social frameworks that extends beyond chemical and ecological dimensions. Among other things, toxicity emerges from cultural and institutional practices that perpetuate harm and violence, including **systemic inequalities, toxic ideologies, and profit-driven policies** that neglect environmental and social well-being. This research is guided by a reimagination of **air's materiality**, viewing air as not merely an inert and neutral space but as a **dynamic and vulnerable ecosystem**. Beyond such pollutants as atmospheric compounds, emissions, and industrial contaminants, air carries the invisible burden of **micro- and nanoplastics**—remnants of the material culture that have infiltrated the air we breathe.

Aims

- Reframe air as a medium through which **violence and toxicity** are silently perpetrated via inhaling plastic toxicants.
- Examine the material and harmful qualities of **airborne plastics**.
- Explore the suffocating violence and toxicity embedded in the **shared atmospheric experience**.

Methodology

This research draws on perspectives from **the environmental humanities, human ecology, and post-humanist theories** to analyze airborne plastics as **active agents of violence**. Adopting **holistic approaches** that consider complex systems and interdependencies, this research foregrounds air as a dynamic and vulnerable ecosystem, thereby rendering **air's materiality** more palpable.

Breathing Toxicity

A landfill overflowing with **plastic waste**, each piece releasing harmful chemicals into the **air** we breathe. This image is not just a snapshot of plastic pollution; it embodies the pervasive **toxicity** embedded in **modern lifestyles**.



The scene prompts reflection on the debris, fumes, and particles that ascend into the air, making **breathing** increasingly difficult. Air becomes a contested space in which the benefits of modern progress are weighed against its hidden environmental impacts and its inherent violence and toxicity.

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Results: Recognizing Materiality of Air

Violence

- Violence extends beyond immediate physical harm to encompass broader **social and environmental injustices** shaped by **colonial legacies and societal norms** (Whitehead 2007).
- Johan Galtung (1969) divides violence into **personal, cultural, and structural forms**, each affecting individuals and societies differently.
- “**Slow violence**” describes gradual harm from toxic contaminants over time that disproportionately impacts vulnerable populations. This challenges conventional views of violence as immediate and highlighting systemic inequalities (Nixon 2011).

Toxicity

- Toxicity is a quality or state of being **poisonous**, yet its implications reach far beyond this definition (Cambridge Dictionary English Business n.d.).
- Toxins are naturally occurring poisons produced by living organisms (e.g., snake venom, plant alkaloids) (Liboiron 2017).
- Synthetic chemicals known as **toxicants** are manufactured at industrial scales and widely distributed, embedding themselves in daily life and environments (Liboiron 2017).
- Max Liboiron’s (2021) work highlights how toxicity is shaped, restricted, and sometimes erased by broader **systems of power** that manifest themselves in cultural practices and social structures.

Breath & Breathing

- Neglecting **respiration** overlooks its continuous metabolic role, where the physical aspects of the human body and broader ecosystems harmonize and influence each other (Allen 2020).
- Breathing connects humans with the physical substance of **air**, whether clean or polluted, highlighting air’s material presence and significance.
- Breathing serves as a vital process for aerobic organisms, enabling the intake of life-sustaining oxygen; yet it also exposes individuals to hazardous aerosols and suspended toxicants in polluted environments (Konrad et al. 2023).

(Airborne) Plastics

- Plastics are synthetic polymers that can be molded and hardened to create durable objects and products.
- Plastics are released into the atmosphere through tire abrasion, city dust, waste incineration, landfill accumulation, dispersal from household items, and synthetic clothing, among other sources (Amato-Lourenço et al. 2020; Xumiao et al. 2021; Liu et al. 2019; Dris et al. 2018).
- “Plastics as such do nothing without **human agency**” (Konrad 2023).
- Plastics symbolize **disposability**, often discarded without regard for long-term consequences.

Conclusion

- Airborne plastics illustrate the pervasive **toxicity** of modern lifestyles, infiltrating the **atmosphere** and posing **invisible risks** to human health and ecological balance.
- Redefining air as an active ecosystem affected by plastic pollutants, this study underscores the role of **interdisciplinary research** in reshaping understandings of **environmental health and justice**.