- *2nd Seminar of the UsinoVerT Chair*
- "Planning Green Infrastructures for Industrial Cities"
- *ESALQ-Piracicaba, Brazil & UniLaSalle-Rouen, France*
- November 27 - 28, 2025

Environmental Justice as a Baseline for Planning and Design of Post-Industrial Spaces

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Environmental justice

- at the core of any meaningful interpretation of urban sustainability

- centres equity through many urban realms:

- differential exposure to toxins

- distribution of environmental stressors

- uneven participation in civic processes

- systemic racism and discrimination across urban landscapes

- uneven access to environmental "goods" (clean air, water, soil, etc.)

- social determinants of health

Environmental justice, continued

Effects of environmental injustice may include:

- imperilled health

- insufficient infrastructure

- inferior access to and less enjoyment of common and open spaces

- barriers to accessing healthy and culturally-relevant resources

- substandard housing with problems like flooding and exposure to extreme temperatures

... and experiencing these effects can heighten the barriers to participation in decision-making processes, compounding marginalization

Environmental justice, continued

In most instances in the Global North, proximity to industrial operations coincides with patterns of settlement by people who are

- working class or economically disadvantaged

- people of colour

- newcomers leaving unsafe or impoverished homelands

- people who have experienced intergenerational marginalization

Christopher Schell et al. (18 Sep 2020) "The ecological and evolutionary consequences of systemic racism in urban environments" *Science*

"In today's world, humans often shape the ecological conditions that drive patterns of species distribution and evolution. Distinctive urban landscape features—including reduced habitat patch size, novel plant communities, and increased distance among similar patches—affect key ecological processes such as population dynamics, species interactions, and food web structure. Recent research emphasizes that socioeconomic and demographic factors predict within-city variation in diverse environmental conditions. Humans directly control urban plant, animal, and microbe communities. Further, decisions about urban resource management are often dictated by a subset of individuals and institutions with social or economic capital. These decisions can bias the distribution of societal benefits derived from nature. Dominant social groups also enact and enforce policies and societal norms that exacerbate social and environmental inequities. Wealthier and predominantly white neighborhoods generally have more green space, more trees, and greater plant diversity than less affluent neighborhoods. In addition, synergies among pollution (e.g., light, noise, chemical), resource distribution, subsidized predators, and non-native species present novel challenges to organisms, which must respond by moving elsewhere, acclimatizing, adapting, or facing local extirpation. These stressors are often stratified according to racial and/or ethnic backgrounds and wealth. Further, intraspecific variation in phenotypic and genotypic traits of urban species may reflect human-induced disturbances. These relationships highlight the potential for both adaptive and neutral evolutionary processes in urban subpopulations to vary across neighborhoods within cities."

Planning and design for environmental justice

Embracing anti-colonial and de-colonial perspectives on cities, ecology, urban planning and design. For instance:

- Liboiron (2020) *Pollution is Colonialism*

- McKittrick (2021) *Dear Science and Other Stories*

- Sandercock (2023) *Mapping Possibility: Finding Purpose and Hope in Community Planning*

- Amorim-Maia et al (2024) "Governing intersectional climate justice: Tactics and lessons from Barcelona"

- Sax et al. (2022) "Improvement, not displacement: A framework for urban green gentrification research and practice"

Planning and design for environmental justice, continued

Guidelines for sustainable planning and design in post-industrial urban spaces:

- Participatory, inclusive and engaged planning and design processes ("everyone is a designer")

- Adaptive spaces guided by principles of aesthetic justice

- Enhancing ecological literacy through civic engagement

- Embracing industrial scars as artifacts and chronicles of harm and recovery ("historical fidelity")

- Grounding decisions in social determinants of health

- Safeguarding against green gentrification

- Accessible and inviting open spaces, available for unknown and indeterminate uses

- Creating jobs and livelihoods based on living wages

- Planning and designing for community-based, long-term adaptive management

- Challenging conventional Western expectations of beauty

Menomonee Valley, Milwaukee USA

Once "machine shop of the world"

Now: coexistence of industrial and ecological spaces
partnerships: municipal, state and federal, business associations, local health care clinic

restoring jobs while removing environmental hazards

Milwaukee, continued

Sustainable Design Guidelines combined with financial incentives

2002 design competition

24.3 ha new industrial dev + 24.3 ha acres wetlands and naturalization

Thank you very much !

GREENSPACE PLANNING IN POST-INDUSTRIAL CITIES

ECOLOGY, AESTHETICS AND JUSTICE

JENNIFER FOSTER