

Parallel session 3C-2.1

Re-orienting sustainability

Tuesday 12 November, 11.30 – 13.00

Malet Place 1.03

Chair: **Dr Ellie Cosgrave**, Lecturer in Urban Innovation and Policy, UCL

The Commodification of Waste: From Threat to Frontier

Dr Mohammed Rafi Arefin, Assistant Professor/Faculty Fellow, NYU Gallatin

While the political economy of waste occupies an important place in urban studies, few studies trace the historical and geographically contingent commodification of garbage and sewage. In this paper, I use archival documents, oral histories and interviews to construct an account of how Cairo's garbage and sewage were transformed from a threat to the city in the early twentieth century into a fiercely sought-after frontier for surplus accumulation in the present. Beginning at the turn of the twentieth century, I document how garbage and sewage posed a danger to public health and served as material limits to the expansion of the city. I then demonstrate how colonial engineers, and later the postcolonial state and international development agencies, sought to manage and extract value from Cairo's waste.

Through this hundred-year investigation of waste's transformation from a threat into an object of value, I urge for greater attention to what I call the political economy of abjection. To properly analyse the privatisation and enclosure of sanitation systems, especially in cities of the Global South, I suggest that a situated conceptual and empirical account of how waste is commodified is required. But due to waste's abject nature, its commodification cannot be analysed through the lens of political economy alone. Emotive, affective and unconscious forces intimately shape how waste is commodified. I therefore conclude by arguing for greater attention to both the historical economic and extra-economic logics at work in the commodification of waste to better account for contemporary projects of privatisation.

Toxicity, Vitality, and Value: urban 'regeneration' and slow violence on Lebanon's coast

Dr Hanna Baumann, Research Associate, UCL Institute for Global Prosperity

In the southern Lebanese city of Saida, a mountain of rubbish, including medical waste, human and animal body parts, often on fire, piled up on the beach for decades. In 2016, the rubbish mountain was cleansed, ordered and turned into a green space, transforming abject, toxic matter into a site of vitality. Similar plans have been on the table for other waste dump sites along the Lebanese coast, including for the Metn-Nord landfill just outside Beirut. Here, waste is dumped into the sea for 'land reclamation' purposes – with the newly-

gained landmass planned to contain a park, as well as lucrative sea-front real estate.

Taking as its starting point a range of artistic engagements with Lebanon's environmental crisis, the paper argues that toxification is not an aberration but, in fact, creates 'value' for some and sustains the status quo. These artistic responses reflect how toxicity reverberates across socio-spatial scales, from the intimate to the geopolitical (cf. Pain and Staeheli 2014, Baumann 2018), as well as across timescales: the waste crisis and its negative health effects have been described as a cause of slow death (HRW 2017, Morsi et al 2017). At the same time, Beirut's and Saida's coastlines are littered with rubble from the Lebanese civil war and the ensuing urban reconstruction. The amalgamation of these two types of waste – rubble and rubbish – reveals how littoral land reclamation, regeneration and revitalisation reverberates with 'slow violence' (Nixon 2011), not only that of environmental destruction, but also of state foundation.

Ultimately, by asking what makes spaces vital and valued, the paper suggests that thinking toxicity and 'revitalisation' as part of the urban order allows us to understand the creative destruction of object spaces in new ways.

The Internet of Things: Enabling Cities to Strive Towards a Circular Economy

Fynn Havinga, Graduate Student, Wageningen University and Research

This paper will examine the Internet of Things (IoT) as an essential component and enabler of achieving greater circular economy models within cities that allow expanding prosperity without degrading natural resources and capital. The role and benefit of the circular economy within cities will first be discussed, with a brief overview of the requirement of systems thinking when dealing with urban networks. The rest of the paper will subsequently analyse the role of IoT and AI within urban networks to promote systems thinking and circular economy models, providing an insight into the specific components of a city in which IoT can play a key role in creating a smarter urban fabric.

Circular economy is beginning to be recognised as an essential strategy to meet the Paris Agreement goals and, more pressingly, the goals laid out by the Inter-governmental Panel on Climate Change (IPCC) report noting the urgency to prevent a 1.5°C global temperature increase. Circular economy is rethinking the perception of value creation for products, materials and services, and is starting to be embraced and promoted by business consultants, business associations and governmental policymakers. Tracking service and material supply chains, urban flows and product diagnostics requires the creation and analysis of big data sets produced from large numbers of information networks. This poses the challenge of how feasible the circular economy is to implement on a large city scale. The Internet of Things has emerged as one of the solutions to fill this statistical data analytics gap. With the collections of large data sets key for improving efficiency, the placement of IoT throughout an urban landscape, empowered with artificial intelligence, embedding intelligence in objects and products across a city, will enable more resilient, responsive and sustainable urban systems.

Transdisciplinarity vs. Transdisciplinarity: a radical approach to Sustainability or a method to co-produce solutions?

Carolina Neto Henriques, DINÂMIA'CET – IUL, Centre for Socioeconomic and Territorial Studies, Lisbon

In recent years, Transdisciplinarity (TD) has grown in popularity in Urban Studies (US) programmes worldwide. Facing the risk of becoming a buzzword devoid of any real meaning, it is imperative that researchers become aware of the fundamental differences between two approaches to TD that may lead to radically different understandings of Sustainability, namely the Nicolescuian and Zuriquian approaches. The first takes on quantum physics and spirituality as the foundations for new, non-western centric ontologies that consider the complexity of Sustainability. The second approach sees TD as a methodological framework to solve problems together, tending to focus more on the Sustainable Development Goals (SDG). The two share the same basic claim: Cartesian, disciplinary thought is no longer suited if we are to overcome 21st century's biggest challenges. However, the consequences of this claim might have unforeseen consequences, such as the questioning of the Research University model or the value of disciplinary knowledge. The time to reflect upon these consequences is now. We claim that these differences might weigh on our chances to think better futures together. This presentation is part of a PhD research that is looking into how these approaches are being channelled by researchers and practitioners who are adhering to TD discourses and praxis in Portugal. The ultimate goal is to find out more about the implications of changing how we conduct urban science given the advent of a potential paradigmatic turn.