THE INTERNATIONAL WORKSHOP & SUMMER SCHOOL ON THE POLITICAL ECONOMY OF GREEN-DIGITAL TRANSITION

SPEAKERS ABSTRACTS

Green-digital transition through commons-based decentralized planning

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The green-digital transition advocated by governmental bodies relies on markets following the well-known neoliberal policies of deregulation, favoring the already established (very large) information technology and energy corporations. We analyze some official EU documents (Communication Towards a Green, digital and Resilient Economy: Our European Growth Model; Factsheet Towards a Green, digital and Resilient Economy: Our European Growth Model; The European Green Deal, and the Europe's Digital Decade) to argue that this approach will very likely fail to accomplish its social goal of, for example, reduce poverty, inequality, and carbon and other harmful emissions. We claim that these are unavoidable results of both the political economy and the social ecology of capital.

In this article, in dialogue with recent literature on tech-oriented economic planning, we propose an alternative based on commons-based governance and peer production that are organized as federated entities through decentralized planning without monetary mediation. The core idea is to produce a series of cyber-physical systems capable of organizing the different layers of social processes and shared infrastructures to ensure that supply matches demand, while virtually managing their specific logistics. In this case, the green transition is associated with a more effective production process in terms of energy efficiency and total demand, which is probably more localized. The digital transition is associated with the multi-tier cyber-physical direct mediation of supply and demand, necessary for planning in a decentralized manner while including the explicit requests and offers. Although a full-fledged constitution of this type of society cannot take place now, we present a transition path considering breakout interventions in core infrastructures like telecommunication, electricity and transportation networks, food production, health and education that will point to this future society based on commons.

Ecological planning and the problem of knowledge in the Anthropocene

Cedric Durand, Associate Professor, University of Geneva, Switzerland

In the XXth century, debates about economic planning were largely shaped by arguments concerning knowledge and information. While Friedrich Hayek considered that an absolute "problem of knowledge" (Hayek, 1945, p. 529) made central planning impossible, Charles Bettelheim considered that planning policies were constrained by the historical "advances in the sphere of information techniques" (Bettelheim, 1975, p. 81).

Facing the ecological crisis, the return of industrial policies (Criscuolo et al., 2022) goes along with a renewal of interest in planning issues (Durand et al., 2023; Durand & Keucheyan, 2019). Following

Bettelheim's insight, this contribution proposes to discuss the problem of knowledge in relation to both the environmental challenges and the potentialities and limits of algorithmic devices for planning.

More specifically, its aim is twofold. First, it proposes to critically assess some features of current "green" industrial and monetary policies deployed in the US, Europe, and China. This will allow to stress that preliminary recognition of the need for "inventory macroeconomics" (Pisani-Ferry & Mahfouz, 2023) is not yet matched by the use of input-output modeling (Jacques et al., 2023; Magacho et al., 2023) nor by comprehensive ecological accounting (Feger et al., 2022) in policymaking. This is so in spite of the fact that the experience of the operational deployment of ICT-driven corporate planning devices (Bensussan et al., 2023) could dramatically extend their reach and foster their effectiveness in stabilizing the ecological control crisis. Second, it engages affirmatively with the epistemic stakes of ecological planning to delineate the institutional space in which a democratic socialization of ecological investment and dismantling could take place.

The dual footprint of artificial intelligence: human and environmental costs in the Global South

Paola Tubaro, Research Professor, CREST, CNRS-ENSAE, France

Labour and natural resources play a major, albeit misrecognized role in the production of artificial intelligence (AI). Low-paid human workers support the software side of AI by preparing the data that feed machine learning algorithms, for example, by moderating text content for language models; in turn, critical mineral and metal resources like lithium and nickel are extracted to produce hardware. These resources are increasingly procured from the Global South, although cutting-edge AI development mostly occurs in the North. Using mixed-method data on the case of Latin America, I show that initial hopes of jobs and prosperity have failed to materialize in lower- and middle-income Southern countries, and that predominant outsourcing arrangements reinforce informality without preventing environmental damage. The cross-country supply chains that link data work and mines to core AI production sites maintain legacy economic dependencies and generate inequalities that compound with those inherited from the past.

Big Tech, the US and Chinese states in the making of artificial intelligence

Cecilia Rikap, Associate Professor, IIPP, University College London, UK

Big Tech planning of portions of the world is in conflict with the same states that nurtured and even until today protect while also rely on them. Clashes of power emerge concerning the partial overlapping of their planning spheres and, ultimately, concern who plans whom.

Simultaneously, Big Tech companies have become key advisors of their states in matters related to digital technologies and provide technologies essential for states' everyday activities, from the modernisation of national statistics to surveillance technologies. They are also ambassadors of their respective core states' geopolitical hegemony. The case of Huawei phones and TikTok social network becoming favoured products in the US illustrate the complexities of the interplay between all these actors. Those are Chinese Big Tech's most serious attempts to challenge the business of US Big Tech in their home countries, while simultaneously representing a strategic chess-move by the Chinese State against the US state.

Big Tech companies do not depend on their home states' funding as they did in their early beginnings. Nonetheless, they keep profiting from public research organizations and publicly-funded university research from their home (and other) countries, rely on their home states for limiting regulations that constraint their businesses in the rest of the world and, in the case of the US, US Big Tech also rely on their home state's capacity to keep Chinese rivals at bay, as much as Chinese Big Tech relied on their home state shelter, and still partly do.

Overall, the turf war for planning (thus ruling) portions of the world results in a redefinition of the roles of core states and leading corporations. They constitute and shape each other and affect the rest of the world. This contribution focuses on the development of artificial intelligence as an illustrative example of the complexity and multi-dimensionality of the interplay and mutual reconstitution of the world's most powerful actors.

Simulation and Green-Digital Infrastructure Capital

James Steinhoff, Assistant Professor, University College Dublin

This paper examines a particular technology/technique of green-digital transition: simulation. In the context of large capital-intensive projects (e.g. infrastructure), which are often a key part of green-digital transitions, digital simulation is deployed to virtually build the project in advance of its real construction. The use of simulation attempts to smooth out the potential frictions of construction and operation, reducing contingency, costs, and making infrastructure a more feasible investment for private capital. Historically, infrastructure provision has been a public undertaking as it tends not to generate enough short-term profit for private enterprise. Since the 1990s the public-private partnership model has meant that the public has shouldered most of the risk of infrastructural investment, while private companies reap the benefits of public incentives. We demonstrate how simulation functions as an emerging tool for "infrastructural capital" (i.e. the private production and control of infrastructure) to funnel accumulation through digital systems, as tech companies extend their infrastructural portfolios from digital (e.g. cloud) to conventional physical infrastructure (e.g. energy grids) via green-digital transition projects. We demonstrate this via two case studies: a) NVIDIA's simulation of a power plant for greenhouse gas minimization and b) experiments in "smart grids" using simulation data and modelling. Across these two case studies, we theorise multiple potential implications of simulation within the provision and operation of infrastructure amidst the "twinned" green-digital transition.

Platform Dependence: Towards a Marxist Political Economy Approach

Rafael Grohmann, Assistant Professor, University of Toronto, Canada

Platform studies have emphasized the dependency relationships of actors and organizations in relation to digital platforms. However, this notion has not been sufficiently developed in the field to address a political economy of platform dependence. This presentation theorizes the meanings of dependence in platform studies, and how it can be related to other concepts such as autonomy and sovereignty. After all, what does platform dependence mean? Firstly, there is an institutional perspective that focuses on three dimensions: economic dependence, infrastructural dependence, and dependence on the platforms' affordances and language. However, they are insufficient to understand what dependence means in political-economic terms. Thus, the presentation proposes a framework that articulates circulation - of capital and struggles (inspired by Nick Dyer-Witheford's work) - and the Marxist theory of dependence. The latter, for example, based on Ruy Mauro Marini and Vânia Bambirra, positions dependence in relation to the international division of labor, the overexploitation of labor, and the role

of Latin America in the global platform scenario. In order to build alternatives that overcome this dependence towards autonomy and/or sovereignty, there is a need to address possibilities, contradictions and limits of both reappropriation and refusal of platforms.

Global and regional political economic systems and climatic-ecological crises

Markus Kröger, Professor, University of Helsinki, Finland

The talk focuses on showcasing how different political economic systems, such as ranching, mining, or forestry, affect and drive the currently ongoing climatic-ecological crises. Examples from the Amazon and elsewhere are used to highlight how political economies focused on extractivism and causing deforestation for example can become regionally dominant. The global natural resource sector and its key changes in relation to other industries is discussed in the post-2005 setting. Role of resistance and alternatives, social movements, is also discussed, relating the debates around so-called green transition to real-world, on-the-ground politics, including conflicts and diverging views in political economy and ecology on these topics in different parts of the world.

Workers' right to the subject: the social relations of data production

Phoebe V Moore, Professor, University of Essex, UK

The use of data to profile and make decisions about data subjects for citizenship, targeted advertising, job recruitment and other reasons, has been eminently normalised, which is an emerging threat to protected spaces for personal subjectivation and identity formation. The 'right to the subject'; or to agency via personal subject formation outside bilateral profiling; is at stake. This is especially true for workers. Algorithmic management infused with worker control mechanisms occurs in structurally and objectively unequal conditions within subjective, and unequal, social relations. Data harms protections in European privacy and data protection law, despite being heralded as the strongest in the world, are insufficient to protect workers' right to the subject. Indeed, structural features of inequality within the capitalist data political economy mean that workers experience different power relations to consumers and citizens. Analysing the social relations surrounding policy features of 'consent', and 'risk', with focus on the General Data Protection Regulation (GDPR) and the negotiations for the AI Act, it is not difficult to see that these policies do not protect all data subjects' rights to the subject identically. Indeed, workers never have the capacity to truly consent at work; and the risks workers face are different from that of other data subjects such as consumers. Data subjects do not, across categories, have equal access to equality, within, and because of, the social relations of data production. From a cross-disciplinary perspective and with contributions to sociology, critical theory, media and policy studies, I argue that workers' right to the subject is at stake, in datafied social relations. The talk is based on a recent publication in Convergence.

Engaging Citizens in Energy Flexibility: Lessons from Energy Retailers' Response to the 2021-2023 Energy Crises

Salvatore Ruggiero, Associate Professor, LUT University, Finland

Renewable energy sources are a cornerstone of the transition towards a low-carbon energy system. This transition necessitates the adoption of smart energy solutions and dynamic electricity price contracts among energy users, through which intermittent power supply can be better matched with varying patterns of electricity production. The shift towards sustainable energy is facilitated by the simultaneous transition to digital technologies, enabling more efficient management and integration of renewable resources. Despite the mounting expectations towards digitalisation and smart grids in enhancing citizen participation in the energy transition and the vulnerability of the energy systems exposed during the recent energy crises, the share of flexible energy provided by demand response in Europe remains limited. In this paper, we study how energy retailers in Finland promote the participation of energy users in flexibility markets through the adoption of dynamically-priced electricity contracts.

Green and Just Transitions through Dirty and Unjust Digital Markets? The Paradoxes and Promises of Knowledge Infrastructures

Malcolm Campbell-Verduyn, **Senior Lecturer, University of Groningen, The Netherlands**

How does knowledge of the material foundations and impacts of digital markets shape green and 'just transitions' efforts? This paper argues that growing public awareness of digital markets' embeddedness in societies and ecologies paradoxically spurs private transnational efforts to attend to the ecological impacts of digital markets. This argument is grounded in the case of blockchain-based digital asset markets in the half decade between 2018 and 2023. Increased recognition of high levels of (dirty) energy consumptions and rampant inequalities in novel digital markets including but beyond Bitcoin spurred in the beginning of this period catalysed a series of private-led actions at multiple levels of activity. This paper examines private efforts based largely in North America to confront and act on specialized knowledge generated by academics and NGOs like Greenpeace concerning the dirty and unequal underpinnings of blockchain-based markets. The key conclusions point to limits of these private efforts specifically and more generally of the knowledge infrastructures steering just transitions. How knowledge about (dis)connections between the digital and the socio-ecological worlds is (re-)constructed and acted upon is essential for political economy to better understand and contribute to the possibilities and perils of green and just transitions.

A sociology of interdisciplinarity: dynamics of energy research

Antti Silvast, Associate Professor, LUT University, Finland

The talk is based on my open access book written with Chris Foulds (Anglia Ruskin). This Open Access book builds upon Science and Technology Studies (STS) and provides a detailed examination of how large-scale energy research projects have been conceived, and with what consequences for those involved in interdisciplinary research, which has been advocated as the zenith of research practice for many years, quite often in direct response to questions that cannot be answered (or even preliminarily investigated) by disciplines working separately. It produces fresh insights into the lived experiences and actual contents of interdisciplinarity, rather than simply commentating on how it is being explicitly advocated. We present empirical studies on large-scale energy research projects from the United Kingdom, Norway, and Finland. The book presents a new framework, the Sociology of Interdisciplinarity, which unpacks interdisciplinary research in practice. This book will be of interest to

all those interested in well-functioning interdisciplinary research systems and the dynamics of doing interdisciplinarity, including real ground-level experiences and institutional interdependencies.

The political economy of platform content moderation

João C. Magalhães, Assistant Professor, University of Groningen, The Netherlands

In this presentation, João C. Magalhães will discuss the ambiguous political economy of platform content moderation. The decision to moderate users' speech has always presented these companies with conflicting incentives. Objectively, moderation creates frictions in the flow of datafied communication and interaction that platforms depend on to generate revenue through targeted advertisements. At the same time, not moderating risks alienating certain users, regulators, advertisers, and copyright owners. In their attempt to adjudicate these multiple interests against their own goals, platforms have engaged in what appears to be ad hoc, contradictory, and incongruent changes in their speech governance systems. The presentation will use case studies to argue that, in fact, these changes were consistent in how they appeased powerful actors. Informed by social media companies' increasing political savviness and their ability to read and react to an ever-shifting political context, the transformations in content moderation were repurposed as a tool these companies wielded to protect, foster, and even reinvent their business models.

Big-tech, Micro-media and Climate Industries

Beliz Boni, Head of Communications, Alameda Institute

The rise of the big-techs and their shift from service providers to media and advertising systems raises concerns about their impact and influence on our society in crisis. Issues related to the misuse of data, the spread of disinformation, the dissemination of post-truth narratives and the phenomenon of greenwashing take on greater urgency when the virtual monopoly these corporations hold over the digital landscape is grasped, moulding hegemonic discourses with minimal regulatory oversight. The relentless pursuit of advertising revenue by these platforms and the omnipresent presence of micromedia in contemporary online content further consolidate the Internet as a vehicle for unwavering consumerism, allowing industries to mould ideologies within often overlooked digital realms. This presentation will analyse how sectors related to the climate crisis take advantage of digital micro media for communication, exploring its socio-cultural implications and proposing possible strategies to curb its proliferation.

The digital transition of the state and the risk of new inequalities

Paolo Gerbaudo, Paolo Gerbaudo, Senior Researcher in Social Science, Complutense University Madrid

Over the last 20 years, governments around the world have pursued vast programmes of digital transformation of government attempting to overcome the inefficiencies in their relationship with citizens. The idea underpinning this process of transformation is that face-to-face public services will

be progressively substituted by "zero touch", namely digitally mediated forms of "self-service", which do not require a physical contact with the state bureaucracy but can be processed remotely. Digital transformation can have important benefits, by making governments more able to serve their citizens and increasing the transparency and accountability of public institutions (Fountain, 2011; McLoughlin and Wilson, 2013; Engin and Trealeven, 2019). However, the implications of this transformation for the experience of individual citizens and their perception of the state remain understudied. Insufficient attention has been paid to the possible negative consequences of these transformations and the closing down of physical access points, especially for citizens with low levels of digital literacy. More generally, little research has been done on the way the "contactless state" and the "virtualisation" of the state bureaucracy, carries a redefinition of the way citizens conceive of the state and public services and whether this transformation may exacerbate perceptions of distance vis-à-vis state institutions. These are contentious issues that now need to be devoted close attention. This presentation will delineate some of the most pressing dilemmas raised by the digital transition of the state and public services.