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# Labour Regimes and the Algorithmic Logic of Digital Capital: Data Work for Machine Learning Systems in Nairobi's "Silicon Savannah"

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## Abstract

The exploitation of human labour lying behind the global production of machine learning systems has gained increased attention from academic scholars in recent years. Using insights from Karl Polanyi, some scholars have focused on the degree to which this labour is (dis)embedded from local geographical, social, and institutional contexts. While these research efforts have deepened our understanding of the ways in which data workers are integrated in various ways into the global production of machine learning systems, relying on Polyanian conceptions of "fictitious commodities" and "the double movement" entails a problematic separation between the economic and the social. This paper therefore takes a different approach, combining labour regime analysis with Marxian value-form theory to argue that data workers are increasingly subsumed under the imperative to accumulate value. This happens not only through an embedding of a logic of accumulation through algorithmic management in the labour process, but also through the dialectical mediation of this abstract logic in the political forms assumed by the institutions of the state in local geographical settings. Utilizing a critical ethnographic approach, the paper examines the ways in which the abstract logic of capital accumulation "hit the ground" and is mediated through various social institutions in the concrete setting of data work in Business Process Outsourcing (BPO) centers and on online platforms in Nairobi, Kenya. This is done by analyzing qualitative empirical evidence in the form of participant observations and semi-structured interviews with data labelers and annotators, data worker organizers and state representatives in Nairobi. Combining this with analyses of existing official government reports, studies from international organizations and institutions, secondary statistics as well as news articles, the paper attempts to outline the various institutional levels of the labour regimes within which data workers in Nairobi are embedded. It does so to shed light on how these labour regimes extend and intensify work in the labour processes of data workers as well as the various ways in which workers are mobilized to perform this type of work. On this basis, the paper aims to identify the many constraints and obstacles to worker resistance in this specific historical and geographical context, and, importantly, to point towards possibilities for pushing back against the expansive logic of capital accumulation.

**Keywords:** Labour regimes, data work for machine learning systems, the law of value, algorithmic logic, labour control, labour mobilization, institutional context, social reproduction, worker resistance

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