Construction industry transformation, social classes and artificial intelligence

The Australian construction industry is materially structured by the capitalist mode of production, whereby labour has historically and measurably been central in the production of value. Yje main hypothesis of this research project is that these relations of production and the consequential class structures, will be increasingly subverted by agentic robotics, artificial intelligence (AGI) and especially artificial super intelligence (ASI). Current AI based technological developments signal a potential transformation of the fundamental structure of entire industries, with scholars diagnosing the emergence of a new techno-feudal order, governed by accumulation of cloud capital and algorithmic control and surveillance.

Why the research project:

- Leading political economists are claiming capitalism is ending. Some have suggested that we are entering a techno-feudalist future driven by rapid advances to AI, new forms of cloud capital and agentic robotics with scope to upend the normal relations of production.

- Despite these profound developments and dire sci-fi-esque warnings, critical philosophical, political and economic analysis remain mostly absent within built environment research.

- Addressing this lacuna of AGI and ASI philosophy is essential for theorising the new structures and modes of production that will transformation industry, labour, class relations and production within the built environment and construction industry.

What we did:

- Research is ongoing. The initial stages involved a comprehensive methodology conducted through Attride-Stirling thematic analysis of existing literature, relevant global body documents, policies, Australian university AI policies and construction related AI policies.

- Political economy analyses through the lens of Varoufakis, Polanyi and Marx are used to interpret the data and argue that AI is more than just a tool for humanity, especially if it breaches AGI or ASI.

What we found:

- Built environment-based industries are sleepwalking into a future in which traditional labour and class structures may be rendered obsolete, not through gradual evolution, but an abrupt technological displacement.

- Labour may no longer be commodified physically but also abstracted into for-profit data and algorithms. Indeed, if current trajectories continue, a new wave of market disembedding may occur whereby human decision-making, creativity, and professional agency are abstracted, datatfied, and commodified, thereby, subordinating human agency to algorithmic governance.

Lead researcher: Christopher Brown

What this means:

- The absence of critical engagement with AGI and ASI in construction education and practice leaves practitioners, researchers and students of construction with insufficient frameworks, paradigms and processes to interpret AGI and ASI relative to their own fields.

- Given current ownership distributions of capital, especially cloud capital, AI models, platforms, and data infrastructures will increasingly concentrate economic and algorithmic power into the hands of a few trannational actors.

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