

## **GETTING THE GOLD OUT OF THE GROUND: SOCIAL CONSTRAINTS AND FINANCIAL LIMITATIONS ON TECHNICAL CAPACITY IN SOUTH AFRICAN DEEP-LEVEL MINING**

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Max Weber liked to point out the "substantive irrationality" of "formal rationality." His favorite examples of formal rationality were money accounting and technical expertise. I am reminded of an interview with a mine manager who insisted that his job was "to get the gold out of the ground." The problem is that, while technology is geared to the achievement of purposive goals, such goals invariably incorporate wider values.

Technical capacity is subordinated at least to financial accountability but it is also inevitably (and unevenly) imbricated in social relations in the production process as well as confronting physical, environmental limits.

In this paper I examine the limits and pressures imposed on South African deep-level mining technology (the most developed in the world) by changing "socio-political" and financial constraints that have frustrated mining engineers and modified their practices in "getting gold out of the ground." At the same time, I try to raise empirical questions about the means-ends conception of social action that underlies Weber's distinction between formal and substantive rationality.