

INTERROGATING EQUITY AND INCLUSION IN SPACE SCIENCE IN AFRICA. Siri Lamoureaux¹ and Davide Chinigò², ¹University of Siegen, Sociology, Adolf-Reichwein-Str. 2, 57068 Siegen, Germany, Siri.lamoureaux@uni-siegen.de, ²University for Foreigners of Perugia, Palazzo Gallenga, Piazza Fortebraccio, 4 - 06123, Perugia, Italy, davide.chinigo@unistrapg.it

Introduction: What is the relation between science-for-development and pure science? To what extent can principles of inclusion and equity challenge the procedures and goals of ‘pure science’? In this paper we unpack this seemingly simple question by attending to the case of the Square Kilometre Array (SKA) radio telescope, a globally funded radio astronomy infrastructure located in the African continent. We draw from three case studies where infrastructural elements, requirements and skills are in tension - in terms of IDEA principles - with what appear to be more pressing concerns: land, economic growth, health and environment. We contend that in terms of the knowledge economies of postcolonial contexts such as Africa, what is gained and what is lost, pose serious challenges to space science at multiple scales. The case studies come from empirical examinations of ongoing social science research into the techno-social outcomes of the SKA radio telescope, and reveal that when the resources that scientific discovery requires are unavailable, or are available only at a great cost to ordinary livelihood projects, scientific endeavors may resemble imperial ambitions in the name of progress. The first case study interrogates the scalar trade-offs between national and global priorities around science and technology policy and concerns around inclusive development in the case of the construction of the SKA infrastructure in the semi-arid South African Karoo. The second example comes from a troubled radio telescope conversion process in Ghana, which exposes the challenges of pure science in post-colonial contexts, and the reliance on public-private partnerships. The last case shows how the Big Data sector offers avenues for skills translation between radio astronomy - ‘pure science’ and ‘science for development’ - Earth Observation and health analytics. This is promising for inclusive employment opportunities but infrastructural challenges still question the promises of ‘development for Africa’.