The Nazi programme of human experiments was geared to population engineering on a colossal scale. Germanisation involved a vast programme of population resettlement, selection of defective and inferior populations, and manipulation of reproductive biology; on the negative side there was forced adoption, forced abortion, sterilisation and systematic murder, for which the new term of genocide was coined. These measures were accompanied by a large-scale programme of coerced and experimental research. Long dismissed as pseudo-science, these measures involved biologically trained experts, extensive academic networks, and a range of scientific institutions. While the role of human geneticists is by now well established, the extent of the experiments and the selection of victims has until today not been fully reconstructed. The paper will take a “total population” approach to the involved victims and perpetrators. This allows both a structural analysis in terms of population cohorts, and the delineation of biological rationales of selection. While the overall extent of the experiments can be seen as linked to the radicalisation of racial policy in the context of total war, clear research agendas can be identified.