Book Review: Blood Relations: Transfusion and the Making of Human Genetics

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Blood Relations. Transfusion and the Making of Human Genetics

by Jenny Bangham, Chicago and London: Chicago University Press, 2020

The 1952 British film *Emergency Call* tells the tear-jerking story of a five-year old girl suffering life-threatening blood loss after an accident. An intense medical and police search ensues to find donors with her extremely rare blood group (there are three)—and one of them turns out to be black. But blood has no colour other than red, the film's doctor affirms: "White, black, brown, yellow; human blood's the same the world over." And the girl survives.

Jenny Bangham's book *Blood Relations* analyses the post-war scientific and medical themes captured in the film. Bangham expertly traces the connections between the search for new and rare blood groups, the mapping of ostensibly race-neutral genetic differences in populations across the world, and the crucial role of bureaucratic networks with detailed information about donors and blood groups. She thus sheds new light on the 20th century history of genetics.

Her book starts with the 1939 British war effort to secure a reliable blood supply for transfusions. This meant setting up local blood depots and systems for blood typing almost a million donors. British geneticists seized this information and created linkages between their laboratories and the blood depots. Blood circulated through society, via donors to recipients and research institutions. So did paper—protocols, registries, index cards and labels—enabling ground-breaking analyses of blood group inheritance and human diversity.

Bangham then back-tracks to capture the pre-history of these efforts, from Landsteiner's discovery of strange agglutination reactions in 1900, via studies certifying that blood groups are stable across a person's life-time and inherited in a Mendelian pattern, to blood group analysis for criminal and paternity cases in the interwar years. These scientific advances made it possible to trace the distribution of blood groups across populations, a practice with clear racist undertones in many countries. British researchers in the 1930s strove to avoid this bias and change eugenics into human genetics oriented towards finding, for example, the genetic patterns behind diseases. The institutionalized systems set up in Britain during the war provided material for extensive studies. Bangham tells the previously untold story of

these endeavours and their growing national and international importance after World War II. Using a wealth of archival material, she portrays the multifaceted assemblage of human and non-human elements required to study human genetics: bodies, populations, and the precious raw materials of blood cells and anti-sera. Scientific advance, she argues, is not merely theory and laboratory work. It also involves mundane things like mail delivery vans, administration, pipettes, and freezers.

Bangham's narrative stays close to the scientific actors involved and their often impressive capacity to build networks of contacts and financial support. But she also problematizes the decisions involved in some of the research, most interestingly in the post-war British studies to map blood groups across the world in a purportedly non-racist way. It involved a vast scheme of blood collection from local populations overseas and masses of samples and protocols being sent for analysis to the London institute led by Arthur Mourant. However, as Bangham's careful analysis shows, even this endeavour had a hidden racist bias. Mourant used systems of classification based on pre-war stereotypes to sort people into population categories. He relied upon local informers' selection of which individuals to bleed and their hunches of what ethnic groups these individuals belonged to. Therefore, the value of these vast studies has been contested.

By the 1960s, too, genetics had evolved. The tools and materials of human genetics were increasingly decoupled from the collection of therapeutic human blood—the very relationship on which British geneticists had built their war-time and post-war achievements. Present-day genetics, too, as Bangham notes by the end of her original and well-written study, comes with a promise of a neutral way to understand human differences and identities. But population classification avoiding socio-political forces and stereotypes may be as impossible today as it was before.

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