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Not quite the beginning: early days in 1970s Oxford

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In the early 1970s there were only a handful of protein crystallography groups in the world, and less than a dozen structures had been solved. Although we were missing many of the methods and facilities that we now take for granted, we did solve structures, albeit rather slowly, and we did get some things right. We worried about errors. We worried about how to collect the best intensity data, and how to reduce radiation damage, at that time by cooling to near 0°. We appreciated the value of anomalous scattering in phasing, and tried to make the best use of it in the refinement of heavy atom parameters, allowing for the estimated errors. Simon French introduced us to the ideas of Bayesian statistics in dealing with noisy data. We saw the beginnings of molecular replacement as a method for structure solution. And we learnt how to collaborate on software development, which led to the start of the CCP4 project at the end of the decade.

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