Chapter 7

Conclusions

*And from the white egg hatches the Phoenix itself, when its time is come, But what hatches from the black egg, no one knows.*

— Neil Gaiman, Ramadan

We have investigated the link between radio-loud active galactic nuclei and the galaxies in which they form. Extensive Hubble Space Telescope imaging of BL Lac objects has enabled us to probe this link across the full range of intrinsic AGN power, and as a function of redshift, independent of the typical redshift biases. The results of this investigation are summarised here:

7.1 The Link between Host Galaxy Properties and Intrinsic Power in Radio Sources

In Chapter 3 we compared HST-imaged samples of radio-loud quasars with beaming-corrected BL Lac objects in the range $0.15 < z < 0.5$, and found that the tendency for radio-loud AGN to reside in luminous elliptical galaxies is independent of the intrinsic power of these sources.

The host galaxies of both of these classes are consistent with being normal ellipticals, albeit weighted towards high luminosities. They occupy, and are statistically consistent with, the low surface-brightness tail of the Kormendy relation for normal elliptical galaxies.