Chapter 15
Conclusion

In this book we have argued in favour of two basic claims:

Part I: a unifying framework for probabilistic logic can be constructed around what we have called the *Fundamental Question of Probabilistic Logic*, or simply Schema (1.1);

Part II: probabilistic networks can provide a calculus for probabilistic logic—in particular they can be used to provide answers to the fundamental question.

These two claims constitute what we call the *progicnet* programme, and offer a means of unifying various approaches to combining probability and logic in a way that seems promising for practical applications.

Because of this twin focus and the programmatic nature of this book, we have neither been able to address all concerns about probabilistic logics nor address concerns about the various semantics discussed here. Many of these concerns (too many to list here!) are discussed in the supporting references. There are of course possible semantics for the fundamental question other than those considered here; we hope that this book will encourage research into how well these fit into the progicnet programme.

One locus for future research is the question of how answers to the fundamental question might influence decision making. Indeed the wider question of the relationship between probabilistic logic and decision theory has received scant attention in the literature. However this is clearly a crucial question both from a computational and from a philosophical point of view. If resources are bounded then certain queries in probabilistic logic will be most prudent as a basis for decision—but which? If these queries are to be used as a basis for decision then certain semantics may be more viable than others—but which?