This collection of essays is intended as an appraisal of the current state of digital editing, considering from a number of perspectives its benefits and drawbacks in the development of complex editions. It draws upon presentations given at several seminars on textual editing and the new possibilities offered by digital technologies held by the ICT Methods Network at King’s College during 2006. Contributors to the seminars, leading practitioners in the fields of text management, textual studies and editing, discussed a range of issues from diverse, and not always concordant, perspectives. This diversity and range of opinion marks the essays presented here.

There has been much debate in recent years about the use and value of the computer in the preparation and presentation of scholarly editions of literary works. Traditional critical editing, defined by the paper and print limitations of the codex format, is now considered by many to be inadequate for the expression and interpretation of complex, multi-layered or multi-text works of the human imagination. So much so, that many exponents of the benefits of new information technologies suggest that in future all editions should be produced in digital and/or online form: that digital tools give scholars, critics, teachers and non-professional readers better representations of and access to the literary works which inform our cultures. Others point to the sophistication of print, after more than five hundred years of development, not only in storing and presenting knowledge and information in complex and accessible ways, but also in setting the agenda for how we continue to think about text, even in its non-print forms.

Several of the contributors to this volume consider whether and how existing paradigms for developing and using critical editions, many of them resting on theories and practices shaped under the shadow of the codex and of print, are changing to reflect the increasing commitment to and assumed significance of digital tools and methodologies. Our ideas of what constitutes a literary work are under revision: what factors determine its boundaries and shape, what we mean by ‘text’ and what features define it. Conversely, and in the face of the new technological hype, it is also timely to reconsider with renewed critical discrimination the older technologies: the status of the book or codex as a valuable and durable witness to our textual traditions and its relationship to the more fluid but impermanent digital record; and the book’s witness to expertly selected or digested argument over the quantification and machine-analysis of data.

If digital scholarship in the literary field is significantly challenging the way in which theories of text editing are formulated and editions are researched,
compiled and disseminated, the scholarly support models within the academy have yet to be modified to reflect the shift in approach and working practices this enjoins. Text editors have more experience than most of the invisibility and collaborative nature of their work. The prior, factual nature of texts was for a long time a confident assumption of a scholarly and a reading community, with the interventional and critical work of the editor largely disregarded. Only in the last few decades have we submitted the practicalities of editorial procedure to more vigorous reassessment and recovered, for the wider community, a better understanding of the subjective and interpretative functions of editing. This has had the ambivalent effect of raising the status of editing as critical activity at the same time as it has called the authoritative status of editions into question. Again, digital scholarship seems to open up timely avenues for development: the storage or facilitation of multiple critical perspectives on text or even of ‘raw’ text, and the promotion of new models for collaboration.

The essays in this collection address these issues from a range of disciplinary perspectives and commitments to old and new media. These are some of the questions we set ourselves in our conversations during the seminars:

- How seriously in the current mixed environment do we envisage the falling away of print in respect of the electronic edition?
- What do we envisage the cultural status of the electronic edition to be? Do we see it serving the needs of general readers as well as expert users?
- What new kinds of edition are made possible through the electronic medium?
- What constitutes an edition in the electronic medium? How is this related to the notion of an electronic archive?
- Is the role of the editor changing in the electronic environment?
- What new kinds of editing partnerships are emerging?

Part I: In Theory

In her opening chapter, ‘Being Critical: Paper-based Editing and the Digital Environment’, Kathryn Sutherland calls for a historically grounded scepticism and points to a long-standing paradox in literary studies. She stresses the basic fact of the centrality of the critical edition to literary criticism and the contradictory truth that although literary judgements are inevitably based on texts, the assumptions underpinning those texts remain remarkably invisible to or unexplored by users and readers. Even editors themselves fail to engage with theoretical issues, or with the textual criticism that underpins literary criticism. Moreover, the fluidity or evanescence that characterizes literary criticism contrasts sharply with the expectation that editions will endure. Sutherland cites the example of R.W. Chapman’s 1923 edition of the novels of Jane Austen, which continues to serve as the textual ground for literary judgements without any accompanying interrogation.
of the editorial principles and assumptions underlying it – as if Chapman’s text were somehow neutral, a benign or pure representation of the author’s intentions. She gives a summary of the development of ‘New Bibliography’ which attempted to stabilize a text against the adventitious processes of its transmission through time, producing an ideal or ‘clean’ text purged of corruption and made up of various textual states according to the editor’s judgement about the intentions of the author. Subsequently, she notes, an increasing interest in cultural studies led to an acceptance of the equal validity of different textual versions according to their production at a particular moment in time. Simultaneously, technological developments made it possible to archive such states electronically, with no single version being hierarchically privileged over another. However, such developments were not accompanied by adequate attention to the question of how texts exist, how they mean and the modes of engagement they produce or facilitate. Sutherland suggests that electronic materiality may actually hinder the kinds of engagement prompted by print versions, and that we have not yet thought hard enough about the purposes electronic editions might serve, nor what assumptions about texts underlie their production. We urgently need an electronic equivalent of textual theory that will take into account the essential difference between print texts and digital texts. Some texts lose an essential aspect – their ‘bookishness’ – by translation into an electronic variant; in some cases the reading experience seems inseparably related to the physicality of the book as an object; and assumptions about the advantages of electronic editions have left such issues unexamined.

The nature of a scholarly edition, as of any bibliographical tool, is determined by the historical, technical, social and rhetorical dimensions of the genre. This situatedness puts constraints on the validity of scholarly editions: what they can and what they cannot do. Claims have been made for the potent reproductive force of scholarly editions, as well as for the making of massive digital facsimile and transcription archives that can be used as platforms for producing new critical editions. Mats Dahlström in his chapter, ‘The Compleat Edition’, questions the legitimacy of such assumptions when combined with idealist notions of documents, texts and editions. That the nature of editions is rhetorical rather than neutral, social rather than individualistic, and one of complex translation rather than simple transmission, for instance, suggests that the versatility and reproducibility of the edited material itself will be limited by significant factors. Recognizing this makes us better equipped at subjecting digital editions, libraries and archives, along with the claims some of their surrounding discourses make, to critical inquiry.

While one of Sutherland’s underlying arguments is that users have more resistance to electronic editions than their producers care to believe, it is precisely this resistance and an attempt to find a solution that forms the topic of Dino Buzzetti’s contribution. Buzzetti begins ‘Digital Editions and Text Processing’ by stating that his goal is to develop a semiotics of digital text rather than a sociology of text. He argues that it is necessary to transfer to the machine part of the reader’s ‘competence’, and that attempts to do this using, for example, XML semantics have not been entirely successful because the role of markup
itself has been understood in only limited and fairly mechanical ways. Current practices tend to be conventional, with the assumption that markup is no more than a limitedly iterative technical tool. On the contrary, the relationship between markup and a string of characters can more profitably be understood as dynamic rather than passive. Assumptions need to change; humanities’ scholars specifically need to engage with the challenge of developing tools that allow for the multi-dimensionality of markup to be exploited to its fullest scope. Thus Buzzetti, like Sutherland but from a quite different perspective, argues that users (in this context, humanities’ scholars) must imaginatively engage with the question of the purposes served by electronic editions in order to ensure that they do serve their real needs and, therefore, gain wider acceptance.

Paul Eggert opens his chapter, ‘The Book, the E-text and the “Work Site”’, with a timely reminder of the scholarly satisfaction that derives from completeness in the production of a paper-based edition. In the ‘finished’ print edition, ‘every part of the volume [is] enlightened by every other part, all of it seamlessly interdependent and unobjectionably cross-referenced, nothing said twice, all of it as near perfectly balanced as you could ever make it’. By comparison, there is no deadline for an electronic edition, and further editorial intrusions can be made at any time. Does this mean, he questions, that the scholarly rigour brought to bear in the print world will be relaxed? And what of the interactive and multi-author possibilities engendered by electronic editions? Can we engage in these new ways of doing things without compromising traditional standards of accuracy and rigorous reasoning?

Eggert argues that there must be some clear way of authenticating electronic editions and preserving their integrity, just as in the print world the fixed and stable nature of the book preserves the integrity of the work. He proposes the use of what has come to be known as ‘just-in-time-markup’ (JITM) to ensure the accuracy and authenticity of the electronic text. This system runs counter to common practice in markup, where tagsets are inserted into the text and travel along with it when it is transmitted or transformed. JITM keeps markup and texts separate, and any corruptions or changes in the text are detected instantly using algorithmic methods (checksums) to keep track of even the slightest difference. JITM also has the advantage that various interpretative ‘perspectives’ in the text can be generated at will, leaving the underlying text unchanged.

In 2006 a group of scholars within the Digital Classicist community began to meet, first electronically and then physically, to discuss a range of issues and strategies that they dubbed ‘Open Source Critical Editions’. Gabriel Bodard and Juan Garcés, in ‘Open Source Critical Editions: A Rationale’, consider the interests of this active community and focus on three core matters: (1) the sense and implications of the Open Source model; (2) the connotations of ‘critical’ in this context; (3) the question of what kinds of edition should be included in such a project – defined by them as literary, eclectic or individual manuscript editions – and what this means for the technologies and protocols adopted.

The use of the term ‘Open Source’ in their discussion is deliberately provocative: the authors argue that the principles of the Open Source movement are basically
those of scholarly publication, which conventionally requires full documentation of sources, references and arguments, and allows – nay requires – the reuse of these sources from and reference to previous editions in any future publications on the same topic. If a project were to publish digital critical editions without making its source data available, therefore, it would arguably be in conflict with those principles of scholarly editing and publication upon which the academy is based. Open Source is not innovative, it is traditional. Presenting the rationale of the Open Source Critical Editions by way of unpacking these three key issues suggests important implications for standards of data sharing and transfer and policies for collaboration in the electronic environment, and it brings the arguments to a wider public, in order to lay the foundation for future projects and discussions.

In the final chapter of Part I, ‘Every Reader his own Bibliographer: An Absurdity?’, Edward Vanhoutte asks the question ‘who buys editions, and why?’ He supports Sutherland’s point that most users or readers are not interested in textual bibliography, and posits that the reasons for consulting a scholarly edition are first for access to a reliable text, and second for the annotations and commentary. For most readers, the more arcane issues of variants and genesis of a text rarely factor in the choice of edition. On the contrary, Vanhoutte argues, scholarly editing as a discipline is in disharmony with the importance of the scholarly edition as a cultural product. He further claims that there is a notable scholarly resistance to the production of what he calls a ‘minimal edition’: academic focus is on the ‘maximal’ edition, and although the two types serve different and equally valid purposes, they are viewed hierarchically. Electronic editions could follow a different model, but so far they have notably failed to do so. They have not freed themselves from the layout economies invented for the printed page nor from the kinds of documentation and presentation of data agreed upon for the print format. Like printed scholarly editions, they are of value academically but not culturally: that is, they do not provide reading editions but, rather, large archives that include multiple documentary witnesses and images. In fact these archives are even less likely than scholarly editions to be used as reading texts because they simultaneously present multiple texts or different states of a given text, which are better suited to computational interrogation than to straightforward reading.

Vanhoutte suggests it is time to propose the use of electronic scholarly editing as a mode for reintegrating (or integrating) the scholarly edition with the reading edition without any compromise of academic value. The example he uses is the electronic edition of the Flemish novella De Trein der Traagheid by Johan Daisne. In this edition, the collaborative product of three scholars, Ron Van den Branden, Xavier Roelens and Vanhoutte, the user is able to manipulate multiple variables in order to produce exactly the reading edition she requires; the site maintains a record of the user’s interventions so that precisely the same edition can be reproduced (thus circumventing the problem of there being no agreed text on which to base interpretation or discussion among multiple users); and, for stability and durability of reference, an edited reading text is provided by the editors as an anchor for scholarly debate.
Part II: In Practice

Espen Ore’s chapter, ‘… they hid their books underground’, begins with the extreme examples of the management policies of two ancient book deposits, those at Scepsis and Alexandria, adduced in order to address the issue of electronic editing from a library or storage perspective. Ore compares the closed edition book project that ends with the finished product and is typically very costly (for example, the centenary edition of the works of Heinrik Ibsen) with the electronic product that is also intended as a basis for future work – the text archive that can be taken further and modified as new information becomes available. The benefits are not all in one direction, however. Books have the advantage of being (relatively) inert; the electronic edition or archive can be plagued by the problem of the longevity (or lack of it) of proprietary software. Electronic products must be stored in such a way that their future use-value does not diminish and they do not risk obsolescence. Libraries are the ideal resource for preservation; they can maintain and update or provide user support. Ore identifies other storage issues, including the harvesting of web pages which have no physical manifestation but will be lost as cultural products unless some attempt is made at preserving them in usable form, and he discusses a wide range of editing and digitization projects recently completed or currently under way in Norway.

By contrast, Linda Bree and James McLaverty argue a more cautious use of electronic data storage and make the case for the continued importance of the print edition within a hybrid textual environment. The future of the scholarly edition, they maintain, lies in the creation of complementary print and electronic text versions. Basing its discussion on the Cambridge Edition of the Works of Jonathan Swift, which will appear in 15 print volumes, with an electronic archive of variant texts, their chapter argues the desirability of unifying the authority of the traditional print edition with the searchable multiple texts made possible by electronic publication. The scholarly print edition continues to serve the vital role of defining a canon and summarizing the state of scholarship in a form accessible to a wide range of readers. Its design and economies of production (both intellectual and financial) lead to production decisions that engage both publishing and academic expertise, and its production costs are covered by sales on a tried and tested model. While it generates no maintenance costs, the limitation of the print edition is space. This is where the electronic model comes in: an electronic archive giving detailed assistance to its users through an apparatus of introductions and menus can make a diversity of texts available for consultation and collation. Such a hybrid edition (where the elements complement one another but can stand alone) will undoubtedly serve the scholarly community well at a point of transition, before the modes of publication of electronic texts (evaluative, financial and technical) become satisfactorily established. Uniting as it does the resources of academics and publishers, properly funded, the hybrid edition points to a future in which large scholarly projects remain viable, with the capacity to meet both new and continuing needs.
The final three chapters in the collection are each concerned with varieties of text that in some important sense defy printing or reprinting in conventional paper form or whose enhanced functionality, outside the book, is clearly demonstrated. In ‘Editions and Archives: Textual Editing and the Nineteenth-Century Serials Edition (ncse)’, Jim Mussell and Suzanne Paylor examine some of the particular characteristics of non-book print publications (in their case, historical periodical or journal publications) which make their editing and continued accessibility problematic in non-digital domains. These printed objects ask different questions of editors from those posed by books, and they demand different treatment from other kinds of published print products, which means that new models are needed for republishing periodicals in the digital world. Mussell and Paylor consider whether what should be provided are archives and gateways, rather than actual editions in the more conventional understanding of the concept.

The Nineteenth Century Serials Edition project is producing an edition of around 100,000 printed pages from six periodical titles, impossible to publish on paper for many reasons: the different objects which make up the periodicals have complex relationships with each other, and the content is associated with certain ‘moments’. The relationships within the titles are structured around dynamic hierarchical, generic and thematic indices; meaning is also constructed through layout and typography. Further, the authority embodied in the periodical is constituted from highly complex prosopographical relationships between people: printers, publishers, editors, contributors, illustrators, engravers and paper merchants. The challenges of representing this diversity are huge in any format. Some titles, for instance, approach the codex model while others are more like newspapers. Some titles do not have a linear sequence of numbers distributed according to familiar temporal units (daily or weekly issues) and publish up to nine different editions of a single number (nine editions in one day). The creative visual material in these publications – fancy typographies and rich illustrations – also forces new approaches to computational analysis and demands imaginative editorial solutions.

Existing structures for the digitization of historical newspapers and periodicals tend to be on the archive model, with diverse content held in a database and delivered to users in a manner that often masks or suppresses some of the formal and other complexities integrally associated with this genre. In their chapter Mussell and Paylor explain how their experience of the form and genre of the periodical is encouraging them to move beyond the old digital model for mere content preservation, and instead to use the electronic medium to produce editions of serials that respond sensitively to what is distinctive in the old medium of print.

Charlotte Roueché’s ‘Digitizing Inscribed Texts’ is a practical review of her own discovery of the potential of digital presentation to serve as a vital tool for recording, preserving and rendering accessible images and transcriptions of Greek and Latin inscriptions on stone. Roueché contends that it could be argued that epigraphers ‘invented’ markup and established the conventions by which texts are presented electronically. Epigraphers, she avers, know that everything they do is a compromise because they have to ‘squeeze stones onto paper’. As witnesses
to objects whose survival is fragile, they necessarily and constantly engage with questions of human decisions about what to record and preserve. In their case, the move to e-publication was made because its flexibility and capaciousness allow for the presentation of *all* material, including images, which is simply impossible in print because of the prohibitive cost. Roueché notes an interesting but unintended result of digitization, which is that while in the past Classical Studies had tended to regard inscribed texts as not literary in the same way as material preserved on paper, electronic publication has worked to change this, with overall benefit for scholarship. She argues that any electronic project must grow out of an identified need and a full assessment of the purposes and audience such a project would serve. She also raises the thorny issue of scholarly acceptance of such projects; for her own site, she has secured an ISBN to facilitate library cataloguing.

Elena Pierazzo brings the volume to a close with a consideration of the encoding of time in authors’ working or draft manuscripts. The distinction between manuscripts as text carriers and their printed, book copies is a distinction between the physical singularity that characterizes any holograph manuscript and reproducibility, which is the essence of print. Working manuscripts contain vital clues to how authors worked and writings evolved – clues that the production processes of print regularly erase. In reading manuscripts we get closer to certain aspects or signs of creativity. While such interest in working or genetic processes is not new, it is something that digital surrogacy can promote; and not just by making copies of unique manuscript pages more available to more readers. There is a kind of allegiance, against print, between the digital environment and working manuscripts, both of which favour looser or hybrid expressive forms and resist the stability that print prefers. Representation in print tends to confer a solidity or finality on working materials that is not intrinsic: careful consideration of how to present manuscripts in electronic form should enable the preservation of their dynamic and axiological qualities. Pierazzo turns her attention to one specific and difficult issue: how to represent and encode time, or manuscript layers (of change, revision or development), in electronic manuscript transcription.

Like Mussell and Paylor, and Roueché, Pierazzo begins from an identified need or problem: in this case, the challenge of capturing the discontinuous nature of writers’ working documents. Several other chapters in the volume return, either by means of theory or practice, to the connection between the intellectual formulation of knowledge within an edition and the medium that conveys or manifests this, with the suggestion that the two – medium and content – are mutually informing. By this way of thinking, an edition in paper would imply a set of assumptions distinct from those that pertain in the digital environment. Sometimes this is so; but it is worth pointing out that not all electronic editions are either flexible or innovative, and many paper editions, some dating back to the earliest days of print, are hypertextual and remain startlingly fresh. As Mats Dahlström (p. 29) reminds us, when we think about the ‘complet edition’, whether we are drawn to think by preference either of print or digital forms, we must be careful not to assume that the medium is always the message:
To even talk about *digital* editions as one particular type of edition is debatable. Current discussions on digital editions tend to talk about the genre as based on media form and publishing technology, whereas traditional discussions in editorial theory rather identify the genre as based on its epistemological foundation and theoretically based strategy. Discussions therefore end up mixing apples and pears: digital editions versus, say, eclectic editions. This presupposes one predefined function and theoretical base for the digital editions to counter the ones identified in printed editions, when in fact many kinds of editorial approaches – both traditional and innovative – are being tried out and simulated in the realm of new media.