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**NEW TEXTUALITIES**

**Abstract**

*This article introduces EJES, vol. 11, issue 2, New Textualities. It briefly outlines the relation between theoretical and technological changes that has led to a re-examination of textual forms in the digital age. Texts as both social text and technotext are tentatively explored in the context of remediation and proliferation of textual materialities that defines contemporary culture. The six articles contained in this issue deal with specific aspects of this linguistic and literary context, in which texts, metatexts and tools for analysing texts are fostering a new critical awareness of textual phenomena and textual representation.*

**Keywords** remediation; textuality; social text; digital archives; electronic editing; cybertext

Digital technology has opened new reading and writing spaces. It has originated new kinds of literacy, new sets of social practices, and new kinds of text. Since the 1980s, computers have become a ubiquitous tool for creating, editing, archiving, structuring, retrieving and analysing all sorts of texts, verbal and non-verbal. The ongoing shift from codex to computer has had significant effects on many forms of textuality. New media have generated new forms of text, either born-digital or forms that have been moved into the electronic writing space. Digital tools have expanded our understanding of textuality by opening up new methods of data collection, analysis and presentation, as we can see in the expanding fields of corpus linguistics,

computer-assisted translation and web-mounted electronic archives. Digital literacy has also become a central concern of education policies, at all levels of schooling, and the digital divide between developed and developing nations entered the agenda of the United Nations Organization in the 1990s.

At the same time, paradigm shifts within disciplines have worked alongside the new technologies to extend the understanding of textuality within English Studies well beyond the verbal. One significant change was the textualising of cultural forms. As various media forms and genres were textualised, the representational nature of texts as institutional and cultural facts was re-examined. The study of textuality became increasingly concerned with the historicity and the cultural and technical materiality of all sorts of texts. This textual condition is now a central issue across several disciplines that deal with signifying practices, including literary and cultural studies, textual studies, linguistics and book history. In short, 'new textualities' are the product of the combined effects of technological and theoretical shifts. Both developments, technological and theoretical, were intended as possible foci for this issue of EJES.

### **Remediating texts**

The concept of remediation has been developed by Jay David Bolter and Richard Grusin as an attempt to understand relations between different media, and in particular the importing of materials of earlier media into new media (Bolter and Grusin, 2000; Bolter, 2001). According to this theory, hypermedia forms inherit properties of those technologies they aim to replace (print, painting, photography, telephone, cinema, video), while they reframe them according to remediation strategies which are specific to the digital medium (computer games, virtual reality, graphic photorealism, internet, ubiquitous computing). Understanding new media means understanding those processes of mediation and remediation that define cultural forms as media. Bolter and Grusin decompose remediation into three dimensions: first, as mediation of mediation, i.e. as part of a process through which media reproduce and substitute one another; secondly, as the inseparability between mediation and reality, which makes mediation a fundamental element of human culture as mediated reality; thirdly, as a process of re-forming the mediation of reality, that is, as a means of transcending earlier forms and media.

Remediation seems useful for conceptualising the double logic of transparency and hypermediation which structures the representational economy of all media. For Bolter and Grusin, a defining characteristic of postmodern hyper-mediated experience is precisely this centrality of media technologies, through which, paradoxically, the immediacy of experience is an effect of the ubiquity of mediation. Authenticity of experience becomes authenticity of mediation, to an extent that the body itself turns into another medium. In their analysis of the digital self, Bolter and Grusin refer to this process as a remediation and virtualisation of the self, either through network communication practices, or by means of immersion and point-of-view virtual reality and hypermedia games. A dialectics between affirming and denying the body sustains self-perception of the digital self. Some of the social, political and psychological dimensions of cyberculture have been anticipated in cyberfiction, often used as a probe into the ongoing remediation of the self by computer-mediated social interaction. Self-representation and identity in digital environments has also become a central topic for research, for instance in N. Katherine Hayles's work (1999, 2005).

Digital remediation of language interaction is one significant dimension of this textualisation of the self. For a long time, registering, storage and retrievability capabilities have enabled computers to study language. In the fields of machine-translation and corpus linguistics, for instance, computer applications have developed as tools for engaging in new forms of database collection, language analysis and translation resources.<sup>1</sup> More recently, widespread computer-mediated communication has brought about a whole new sphere of material and social textuality whose complexity and far-reaching effects we are just now beginning to grasp. Effects of digitally mediated communication upon social interaction and knowledge production and distribution are already remarkable. Internet genres and situations, such as email, blogging, instant messaging, synchronous and asynchronous chatgroups, virtual worlds and the World Wide Web, are changing the uses of language and of literacy. This revolution has been the main concern of a growing body of research, sometimes referred to as internet linguistics. In *Language and the Internet* (2006), David Crystal outlines some of the ongoing changes brought about by digital mediation of spoken and written language through network communication. Transience of current technological developments means that linguistic and textual situations are constantly evolving.

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<sup>1</sup> See, for instance, IATE – Interactive Terminology for Europe (EU inter-institutional terminology database system), an European Union web-based resource for translators, launched in March 2007, <http://iate.europa.eu/>.

In the various fields of contemporary English Studies the theoretical impact of digital textuality has of course extended beyond media theory and linguistics. Literary studies and textual studies, for example, are two major fields where the digital has been gathering momentum for almost two decades. Collections such as *Electronic Text: Investigations in Method and Theory* (Sutherland, 1997), *Reimagining Textuality: Essays on the Verbal, Visual and Cultural Construction of Texts* (Loizeaux and Fraistat, 2002), *Voice, Text, Hypertext: Emerging Practices in Textual Studies* (Modiano, Searle and Shillingsburg, 2004) and *Electronic Textual Editing* (Burnard, O'Brien and Unsworth, 2006) have charted changes in tools for editing, marking-up and publishing texts and also then potential of digital tools and digital environments for literary analysis and experimentation. The Text Encoding Initiative's *Guidelines for Electronic Text Encoding and Interchange*, first published in April 1994, is now undergoing its third major revision, which will bring the guidelines up-to-date with changes in mark-up language.<sup>2</sup> This need to mark up texts for the digital space raised a number of theoretical and methodological questions about the formal and cultural nature of textuality which have been taken up across disciplines.

### Textualising texts

The representational status of texts as what Leroy F. Searle (2004: 6) has defined as 'highly specific historical transactions' has received renewed attention in recent years. Book history, in particular, has expanded this understanding of the cultural and social dimensions of textuality. In their attempt at unweaving the relations between text as language and book as material object where text is inscribed, studies of the book have improved our textual models by treating texts as cultural objects.<sup>3</sup> Integration of production, transmission and reception depends on our ability to link modes of production to marks of production. Reception studies have also sharpened our sense of the multiple dimensions of signifying practices and of the social nature of textual meaning. A social textualist perspective looks at texts as cultural sites where negotiations take place between authors, publishers, editors and readers. This means historicising and documenting the complexities of writing, printing and reading, as they relate

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<sup>2</sup> The Text Encoding Initiative guidelines comprise formal representation of definitions for hundreds of textual features. These guidelines are known as TEI P3 (1994), TEI P4 (2002) and TEI P5 (forthcoming). A first release of TEI P5 is available at [www.tei-c.org/P5/](http://www.tei-c.org/P5/) (accessed 15 March 2007). See Johanna Drucker's article in this issue for a discussion of the questions involved in formalising textual features.

<sup>3</sup> *Book History*, an annual journal published by The Pennsylvania State University Press, has a running series on 'the state of the discipline', which charts this renewed interest in the history of books as social and material objects (see vols 1–9, 1998–2006).

to issues of intentionality, bibliographic codification and interpretation. The joint contribution of book history and textual studies has led to a critical reexamination of the constellation of problems revolving around textuality.<sup>4</sup>

Textual processes are closely linked with social dynamics and they may be said to be a primary locus of culture. Textualisation of cultural practices is not only the result of theoretical developments in the sociology of texts during the 1970s and 1980s. The intertwined development of networked communication and digital tools has redefined computers as increasingly complex sign machines. This means that human – machine relations will be more ubiquitous in textual production and reception, resulting in a new technotextual condition for human communication and interaction. A heightened awareness of the materialities of texts, and of technotexts in particular, is perhaps one of the defining features of our present cultural and historical moment in Humanities studies, as can be seen from the extraordinary growth of book-related (Finkelstein and McCleery, 2005) and new media-related studies since the early 1990s (Trend, 2002; Manovich, 2002; Wardrip-Fruin and Montfort, 2003).

More than 20 years ago, D.F. McKenzie (1999) called for a bibliography beyond a semiotics of bibliographic marks. He saw bibliographic processes as part of the signifying networks that structure all textual forms. Redefined as a sociology of texts, the aim of bibliography was to integrate production and reception into the knowledge of the specific historicity of signifying acts and marks. In addition, since textualisation is a common phenomenon to different media and materialities – from engraving to photography, theatre, cinema, television, computer and oral cultures – bibliographic principles should be extended to non-print and non-bibliographic materials. McKenzie's exposure of the reductionist approach of both descriptive and analytical bibliography aims at integrating textual criticism and literary criticism. It implies an increased attention to the specific materiality of each edition as a signifier which interacts with its linguistic materiality. Even if he did not call into question the possibility of recovering authorial intention, McKenzie drew attention to the fact that all textual reconstitutions inscribe their own historicity in the re-production and rereading of past textual artefacts. At once typographical notation and an act of reading, each bibliographic codification represents a re-socialisation of the text in a new context.

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<sup>4</sup> *Text*, published annually from 1979 to 2005, was re-launched in 2006 (two issues a year) as *Textual Cultures: Texts, Contexts, Interpretation* (Indiana University Press), which reflects this theoretical representation of material text as cultural text in contemporary textual studies.

This social theory of editing has proved particularly powerful as a rationale for hypertext. Jerome McGann (2004: 383) has been eloquent about present and future prospects for a digital remediation of the social text and about how 'electronic tools raise the level of critical abstraction'. He has stressed the fact that the need to mark literary texts and works of imagination for the digital environment poses complex editorial questions about which features of text should be represented and how we should represent them. Mark-up languages have clear theoretical implications because they force us to face again our knowledge about what constitutes text. Standards for representing text in electronic form often fail to account for significant textual features of imaginative works. McGann (2001) has claimed that bibliographers and archivists, who are aware of the trans- and metalinguistic features of text, should have a prominent role in shaping electronic marking beyond mere informational models of textuality. The possibility of representing codex-based forms in non-codex media means that critical and documentary editions can represent and organise the body of textual materials of any given archive, or body of works, within networks of links and automatic searches, far beyond the power of paper-based resources.

Svenja Adolphs and Ronald Carter's article addresses the problem of collecting and analysing multimodal corpora. It is an instance of new technologies fostering the textualisation of non-verbal aspects of linguistic interaction. The recording, retrieval, and reproduction capabilities of new media, particularly in multimedia and hypermedia forms, make apparent this digital double edge which links tool and text. A successful linguistic analysis of multimodal corpora depends upon the intricacies of analysing conversational gestures. Even if fully automated analysis is not foreseeable in the near future, Adolphs and Carter argue for computer-assisted gesture analysis: 'there is a need to create tools that support the "marking up" or identification of multimodal patterns and the subsequent codification of recognizable patterns' (pp. 133 – 46). Development of multimodal corpora in the study of natural language requires not just an integrated analysis of visual and verbal patterns and coding schemes, but also an understanding of the specific textualisation of talk, bodily actions and gestures achieved by using digital tools. Adolphs and Carter's multimodal approach to corpus linguistics also discusses requirements for better describing communicative interaction as an interplay of text, gesture and prosody.

## Rematerialising texts

Migration of literary texts into the electronic medium poses a number of challenging problems in textual representation and expression, including the need for explicit principles of textual transcription and organisation, and other critical decisions about content, structure, analytical tools, multimedia editing, integration of image-based files and text files, etc. A widespread move from self-contained electronic edition into web-mounted electronic archive reflects this realisation of the combined hypermedia and network potential offered by the electronic medium. Digital archives take full advantage of the medium's ability to link and accommodate vast networks of documents and to simulate their specific materialities. This significant change in the ecology of texts in the electronic domain is now apparent in several scholarly projects in-progress in centres for electronic texts.<sup>5</sup>

Projects of electronic editions and archives have given a new prominence to textual studies in the digital age. By increasingly supplementing the idea of edition with the idea of archive, a significant conceptual move in the representation of textuality has gradually asserted itself. Such recontextualisation of textual objects foregrounds their interconnectivity and cultural materiality. Digital archiving provides a new critical environment for examining both the genetic and the social text. The concept of edition, i.e. a new textual and bibliographical codification, was still the rationale behind early electronic editions, either on CD-ROM, or online, which were mainly concerned with moving print texts into electronic form. The concept of electronic archive (predominantly web-based), on the other hand, has gained a specific semantic and theoretical import. It has come to mean not just a mere repository of works by a given author or set of authors (the 'complete works'), but also a large ensemble of bibliographic and linguistic codifications of certain works (often combining the visual and verbal), including variants and versions of themselves, and even parts of their reception history. Manuscripts, first and later editions, along with documents relating to their reception, foster a heightened awareness of and a practical engagement with the genetic and social dynamics of

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<sup>5</sup> For a sample of significant projects see: *Electronic Beowulf* (British Library, 2 CD-ROM set), <http://www.uky.edu/~kiernan/eBeowulf/guide.htm>; *Piers Plowman Electronic Archive* (SEENET, Society for Early English and Norse Electronic Texts/University of Virginia), <http://jefferson.village.virginia.edu/seenet/piers/>; *The Aberdeen Bestiary* (University of Aberdeen), <http://www.abdn.ac.uk/bestiary/index.htm>; *Roman de la Rose* (Johns Hopkins University), <http://rose.mse.jhu.edu/>; *The Canterbury Tales Project* (University of Birmingham, 7 CD-ROM set), <http://www.canterburytalesproject.org/>; *Women Writers Project* (Brown University), <http://www.wwp.brown.edu/>; *William Blake Archive* (University of Virginia), <http://www.blakearchive.org/>; *Rossetti Archive* (University of Virginia), <http://www.rossettiarchive.org/>; *The Walt Whitman Archive* (University of Virginia), <http://www.whitmanarchive.org/>; *Dickinson Electronic Archives* (University of Maryland), <http://www.emilydickinson.org/>.

texts. Buzzetti and McGann (2006: 69) see in the digital medium a theoretical and analytical horizon for simulating and studying bibliographic objects as social objects, and for 'exposing the autopoietic logic of the textual condition'.

Scholars have been trying to develop a model for electronic editions and archives that is able to anticipate future research needs, within a hypertext framework capable of satisfying many purposes (Hockey, 2004). There have been significant improvements in the descriptive power of mark-up languages for encoding electronic text, namely with the adoption of XML (Extended Markup Language) in place of the earlier SGML. The possibility of relating description of format to description of content is the concern of the ongoing research around the 'semantic web'. Digital imaging databases and systems for indexing, annotating and searching images have also been refined. One of the promises of digital technology in encoding existing materials, particularly those of a bibliographic nature, is the possibility of integrating documentary and critical editions. Hypermedia archives, such as the *Rossetti Archive* and *The William Blake Archive*, in their attempt to combine fruitfully the analytical and the presentational functions, have been testing our theories of textuality and our ability to produce tools which will enable us to engage critically with linguistic and visual texts in digital form. By making it possible to perform certain types of operation on the materials they contain, digital archives become critical environments for the study of textuality. Their critical potential as a technical and conceptual space opens up new possibilities for scholarship and interpretation.<sup>6</sup>

The development of mark-up languages in the 1980s and 1990s was based on a conception of text as a 'nested hierarchy of content objects'. While the need for formalisation of rules for representing and generating text favoured such an abstract and universalist approach, there were types of textual materiality which could not be adequately represented in such terms. One of the common features of the articles in this issue is precisely this awareness of the cultural dimensions of technical issues, such as mark-up, keywording or hyperlinking. On the other hand, the dichotomy of electronic intertextuality and association versus bibliographic linearity and hierarchy, which tended to dominate early theories of new media, has lost most of its critical relevance. Increased awareness of book structure and book forms has shown the extraordinary openness of codex forms, from medieval manuscript textbooks to twentieth-century experiments in artists' books. Computers have provided a second order tool for the

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<sup>6</sup> See, for instance, NINES – A Networked Infrastructure for Nineteenth-Century Electronic Scholarship, <http://www.nines.org/>. In February 2007, NINES launched Collex, 'an open-source collections- and exhibits-builder designed to aid humanities scholars working in digital collections', <http://nines.org/collex>.



study of the book, and the need to represent books in digital form has been a driving force for the engagement of literary and cultural studies with new media. Juxtaposition of print and electronic textuality has produced a new technocultural context for the critical question 'what is text?'

An answer to that question has to take into account the nature of digital textuality and the definition of textuality itself in relation to materiality. Electronic texts have introduced a new typology of iconic and metatextual constructions, which require media-specific analysis. Linguistic analysis of computer-mediated communication has identified emerging communicative conventions of digital textuality. Jukka Tyrkkö's article is concerned with one prominent feature of electronic hypertextuality: the semantics and pragmatics of linking structures. Tyrkkö analyses the coherence implications of hyperlinks, attempting to isolate those features in the creation and interpretation of links which explain how they make sense. Tyrkkö shows how hypertextual links, as cataphoric elements, seem to work between the global and local coherence levels. Thus, as primary organising features of hypertext, links challenge conventional views of coherence. Multilinearity in hypertext implies that 'fragments of text are not assigned an explicitly indicated hierarchical role', and that 'each link has the potential to redirect the topical flow of the text'. This means that 'redirective referentiality' and 'interactive manipulation of the text's sequential organisation' (pp. 147–61) are semantic and structural features of hypertextual links. Tyrkkö proposes the notion of fuzzy coherence to account for the fact that pragmatic and individual factors play a very significant role in coherence-forming strategies, as readers negotiate the fragmentation and multilinearity inherent in hypertextual linking.

Johanna Drucker's work has been mainly concerned with the relations of writing to graphical and visual materiality. In recent years, her research interests have extended to the relation between the material form of input and the material form of output in electronic media. She has proposed the notion of 'configured language' to account for the fact that configuration is part of the textual meaning, and she speculates on the possibility of extending that notion to the information processing that occurs at the level of machine code, i.e. at the level of the metalanguage that encodes information outside of its material form (Drucker, 2002). In 'Performative Metatexts in Metadata, and Mark-Up', Johanna Drucker considers the performativity contained in metadata and mark-up languages, looking at structures of interpretation that may be said to be embedded in file structures. Her analysis looks at file and search design, including image search, and also at issues of interpretation contained in graphic

display and interface design. Because metatexts are modelling digital texts and artifacts, Drucker claims that '[n]o other textual form will have more impact on the way we read, receive, search, access, use, and engage with the primary materials of humanities studies' (pp. 177–91). Multiple hierarchy in digital texts manifests itself in the relations between source code, metadata, database structures, programming protocols, mark-up tags, style sheets and display structures. Despite their specificity, metatexts may be said to model textuality in a way not unlike bibliographic codification in print texts. Her essay is a significant contribution to clarifying a cluster of problems around the issue of 'how to do things with digital texts'. In digital performance, performativity is determined by rules embodied in metatexts, which Drucker describes as textual models of textual fields. Awareness of this textual modelling function of mark-up languages has been tested in her own projects, namely, *Artists' Books Online* and *The Temporal Modelling project*.<sup>7</sup>

Digital texts and images, on the one hand, and digital tools, on the other, are the twin aspects of the augmented material and critical possibilities for Humanities research in the age of electronic reproduction. The textuality of images is an increasingly important object of critical inquiry on which to test our digital tools. As digital archives continue to expand, the problem of indexing, searching and annotating images becomes a primary concern for many projects. In 'Getting the Picture', Julia Thomas looks at the complexities of iconographic descriptions in keywording systems designed for tagging the content of images. She highlights the cultural implications of classificatory systems, showing how keywording is also an act of interpretation. She discusses the keywording methodology developed for the *Database of Mid-Victorian Wood-Engraved Illustration*, which was launched in January 2007.<sup>8</sup> As happens with electronic textual editing, the creation of searchable image databases provides a new opportunity for rethinking the relations between the verbal, the bibliographic and the pictorial. Editorial glosses, annotations and keywording function as second-order modelling of images. In her preliminary assessment of the keywording system developed at the CEIR-Cardiff University, Julia Thomas stresses its flexibility and considers that 'far from closing off the meanings of an image, this system can actually reflect its plurality' (pp. 193–206).

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<sup>7</sup> *The Temporal Modelling Project* (2003), <http://www3.iath.virginia.edu/time/time.html>; *ABO Artists' Books Online* (2006), <http://www.artistsbooksonline.org/>.

<sup>8</sup> *DMVI – Database of Mid-Victorian Wood-Engraved Illustration*, a project developed by Julia Thomas, Tim Killick, Anthony Mandal and David Skilton at The Centre for Editorial and Intertextual Research (CEIR), Cardiff University's School of English, Communication and Philosophy, <http://www.dmvi.cf.ac.uk/>.

### Proliferating texts

The development of digital forms of literature (including forms of hypertextual, hypermedia and kinetic fiction and poetry) originated new textual spaces. Espen J. Aarseth uses 'cybertext' and 'ergodic' to refer to those kinds of literary exchanges (whether paper-based or electronic) in which the reader has to construct the text that she or he reads (1997: 1–2). Ergodic works are physically incomplete structural units that require the reader's participation in the production of signifiers. Hypermedia fiction and poetry have often assumed ergodic forms in which texts become material cybertextual machines, that is, devices capable of generating themselves according to certain types of programmed iterations, sometimes dependent upon (or supplemented by) the reader's interaction in textual construction by means of a combinatorics of signifiers. Ergodic textuality and cybersemiosis, particularly in digital forms and genres, constitute a growing area of literary experimentation and theoretical inquiry (Peterson, 2006; Glazier, 2001).<sup>9</sup>

Hyperfiction and kinetic or animated poetry as electronic genres are dependent upon digital properties of specific hypertext and animation programs, such as Eastgate Storyscape or Macromedia Flash. Digital ergodic experiments have brought into the digital space the kind of paper ergodic experiments undertaken by OULIPO and by concrete poetry, in the second half of the twentieth century. Such a connection is 'clearly seen in the use of concrete poems as storyboards and scripts for electronic texts' and in their 'close attention to the visibility of language and to the materiality of reading' (Portela, 2006). A similar type of hypertextual self-consciousness is to be found in many CD-ROM and online intermedia works of hyperfiction, such as Shelley Jackson's *My Body: A Wunderkammer* (1995, <http://www.altx.com/thebody/>), Stuart Moulthrop's *hegirascope* (1997, <http://iat.ubalt.edu/moulthrop/hypertexts/hgs/>) or Jason Nelson's *hymns of the drowning swimmer* (2005–2006, <http://secrettechnology.com/hymns/navigate.html>). On the other hand, world-wide-web writing and reading environments and electronic hypertext have also begun to influence fiction on paper, a case of the old remediating the new, as we can see in many blog-derived books and in works of fiction such as *House of Leaves* (2000), by Mark Z. Danielewski.

Brian W. Chanen's essay deals with formal and structural relationships between digital media and print fiction. He shows how narrative and bibliographic structure in Mark Z. Danielewski's *House of Leaves* may be linked to electronic hypertext and a network structure. Attributes of

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<sup>9</sup> For a catalogue of online works, see the Electronic Literature Directory (University of California at Los Angeles), <http://directory.eliterature.org/>.

hypertext, such as fragmentation and recombination, are built into the structure of *House of Leaves*, whose textual embodiment resembles a digital writing and reading space. Brian W. Chanen shows, in particular, how nested layers of annotation in Chapter 9 emulate a networked reading environment. A constant need for recontextualising makes the reader experience cognitive and narrative disorientation, thus challenging his/her coherence-forming strategies. We may think here of a sort of intermedia feedback loop, by means of which features of ergodic literature imported into electronic media in the first place are re-imported back into the print medium, with remarkable formal and structural consequences. It is a case of the book remediating the electronic network, by making the bookscape emulate a digital space. According to Chanen, Danielewski's typographic and page layout experiments have structural implications for print narrative and for narrative in general: 'narratives in all media will be more akin to networked text' (pp. 163–76).

James Joyce's work, particularly in *Ulysses* and *Finnegans Wake*, can be described as prolonged textual experiment. Its linguistic and literary materiality challenges the representational capabilities of both print discourse and narrative form. Joyce's verbivocovisual blending of sound and image, and ear and eye, has expanded the notational possibilities of the alphabet and of the printed page. The relation between orality and literacy in *Ulysses* is the object of Jefferey Simmons' paper. His essay takes as its starting point the intricate genetic and social history of *Ulysses*'s textual composition and transmission. It examines textual instability in *Ulysses*'s textual diachrony: in manuscript text – including early drafts and fair copy – typescripts, placards and page proofs, but also in its subsequent transmissional history between 1922 and 1997. Evanescence of the letter on the page manifests itself in the various acts of authorial writing/revision and in the work's resistance to editorial closure. Simmons proposes the concept of 'aural literacy' to account for such forms of 'literate evanescence'. By showing how *Ulysses*'s seventh episode thematises this relationship between voice and print, Simmons argues for the critical value of this understanding of the interplay between speech and writing in literary interpretation. As an experiment in print/writing and bibliographic notation *Ulysses*'s textuality remains a textual and interpretive challenge that 'bears witness to the fleeting arrival and departure of signs' (pp. 207–20), both in their written and aural forms. One might be tempted to say that Joyce was looking for a multimedia form to represent human multimodal interaction. The phonographic dimension of his writing posits his play with signs firmly between sound and image.

The six essays in this issue of EJES give us a snapshot of ongoing inquiries, from methodological issues related to multimodal corpora, textual mark-up and image tagging to a re-examination of print materialities. Digital textuality has produced new textual phenomena that we are still trying to understand. It has also originated new tools for collecting, structuring and analysing data, which promise to change the study of signifying practices, including literary, linguistic and iconic meaning production. Many research projects are now fully committed to re-examining textual materiality in the electronic age, and to redefining its technical, social and cultural nature. The effect of this retroactive conjunction of technical media and theoretical insights is already echoing across a wide range of disciplinary fields, as texts and textual models receive widespread critical attention.

The pace of innovation in computer-mediated communication and in digital forms means that groups and individuals will continue to explore new textualities in countless ways, whether in literary and artistic practices, or for teaching and research purposes, or in many other forms of social interaction. In the present state of flux and turbulence in textual materialities, it is difficult to predict future developments, namely when and whether digital genres will stabilise, or what kinds of delivery systems, access devices and tools will be available for collecting, structuring, analysing and distributing data. Considered from a linguistic or literary perspective, there is a wide range of possibilities which will continue to reshape both textual production and reception, and thus reframe and redefine the problems and contexts outlined here.

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