Introduction

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Humanities Computing is a new discipline unfamiliar (and even inimical) to the South African literary community. For instance, while welcoming delegates to the 2000 ICLA conference in Pretoria, Nadine Gordimer scoffed at the notion of e-publishing as a solution to this country's bookless communities by citing notable e-book failures, such as Stephen King's experimental *The Plant* (2000). King suspended his online e-serial after five instalments when it turned out that less than half his readers had paid their $1.00 per episode download subscriptions. Gordimer's solution to illiteracy was more libraries in townships, filled with tangible printed books. What she neglected to mention was King's later success with *Riding the Bullet* (2000) an e-book sold through online retail bookshops, or Patricia le Roy's e-novel *The Angels of Russia* (1998), the first e-book ever to be nominated for the prestigious Booker Prize. More regrettably, Gordimer's comments mitigated the crippling cost of conventional printing and publishing, and the near impossibility—perhaps difficult for an established author to understand—of any new South African author getting into print at all.

Wider public access to literature via the e-book is, however, only one of many concerns in the humanities computing debate. Gordimer's work, despite her reservations about the feasibility of e-publishing, is already being subjected to critical analysis (as are Jane Austen, Shakespeare and Sol Plaatje) on the PCs of literary scholars around the globe. The resulting papers and articles are subsequently published online. In South Africa, we may access the full texts of critical research articles on, say, *July's People* in e-journals like *Critique*, *Research in African Literatures*, *New York Times Book Review*, and the *Journal of Modern Literature*—the medium has already absorbed her full corpus and rendered her observations quaintly out of touch with the realities of current academic practice. Study guides on *July's People* and short stories *The Train from Rhodesia* and *Town and Country Lovers* are available in e-book format (Gale Group 2001). Discussion and debate about her writings will

be occurring—while you read this—in virtual classrooms around the world (see for example Susan Spearey's article in this issue).

With this number of *Alternation* we hope to bring some perspective to the practice of humanities computing in South Africa by publishing a divergent set of reflections and approaches to the introduction/ intrusion of computers into the contemporary study of literature, and in particular the study of South African literature. Potter (1994) laments the fact that scholarship in humanities computing has sometimes been marginalised or ignored because it falls between two stools—the established disciplines of humanities and IT:

> Beautifully clear essays about literary critical data have gone unwritten because of the necessity of using a generally accepted scientific style to meet the standards of reviewers at journals interested in computing research. As a result, many computer critics have written themselves out of the range of their natural audiences (Potter 1989:xviii).

So while the humanities eschews IT, and IT distances itself from literary criticism, the aspiring humanities computing scholar has somehow to accommodate the predilections of both camps. Olsen (1993:310) commends Potter herself for offering a solution by 'publish[ing] essays that do not have the dense statistical and linguistic terminology that she believes is the most formidable obstacle to general acceptance of computing in literary criticism'. We hope that the papers published in this volume will contribute similarly to the debate around computers and the humanities; and with a minimum of esoteric terminology.

The papers in this issue may also be viewed against a backdrop of a curriculum for humanities computing (Siemens 2001; Rockwell 1999). In his search for a coherent context for the new 'discipline', Siemens' questions about the current state of humanities computing overlap with concerns and issues raised by the authors in this volume:

> For the purpose of our teaching, is there an accepted set of tools and techniques, and a unique and related collection of theories having a commonly-understood application, that are associated with the (inter)discipline of humanities computing? In other words, is there a humanities computing curriculum, a curriculum that appropriately treats the role of the computer, today, in the context of the centuries-old tradition of the arts and humanities? (Siemens 2001).

The sheer range of approaches reflected by our contributors would suggest that there is no such curriculum as yet in South Africa, but their quality and innovativeness represent a first attempt to find a coherent conceptual framework to accommodate a humanities computing research agenda and provide a springboard for further development.

> What must be considered when designing and implementing courses that bring the computer to the arts and humanities, courses in humanities computing? Can such courses discover and survey the influence of computing technology, broadly construed, in the arts? Must courses in humanities computing reflect the tradition of the computing humanist? Should they embrace all current applications of computing in the humanities? Can textual description and mark-up, cyber cultural studies, text analysis, and (multi)media theory and practice, etc., co-exist? What are others in the field bringing to their classrooms and to their programs that have humanities computing components? Such are the questions that many face as they and their institutions formulate, for the first time, new academic courses and programs that seek to apply computing to established arts and humanities curricula (Siemens 2001).

The articles in this number demonstrate that questions like these are being asked in South African institutions, and that promising work is being done to find solutions. Because the field of humanities computing is as yet ill-defined, the articles in this edition are inevitably eclectic—indeed, the primary purpose of this number is to range as widely as possible over an emerging discipline to identify focus areas and expose areas of contention and also future research directions. One dispute which emerges here is between enthusiastic converts to digital technologies and skeptics. The former tend to dwell on the benefits that the systematic exploitation of ICTs can offer the humanities, and the latter —who are more apprehensive about the contribution computers can make in the humanities—on its limitations and disadvantages.

De Beer's article reflects on the philosophical implications of 'cyberspace', the new virtual space that digital media offers the reader-writer-participant, and finds in it a challenge to conventional epistemology. De Beer relates the unique non-linearity of hypertext to the literal meaning of 'intellect'—*inter legere*—'reading between or across boundaries or lines'. Quoting from Pierre Lévy, he explores the expanding possibilities for

intellectual activity in the seemingly limitless medium of cyberspace. He describes profound changes in our understanding of human subjectivity where

> there are no longer subjects as thinking substances. 'It' thinks in a network where neurones, cognitive modules, humans, teaching institutions, language systems, writing systems, books and computers are interconnected while transforming and translating transformations.

De Beer's hypertexual future is a type of utopian 'collective intelligence' rather than a dystopian technocracy, characterised by a 'big brother'-like surveillance and control. With this collective intelligence 'the computer can, through technologies like "knowledge trees", provide us a means by which to share knowledge with others and meet them in ... democratic cyberspace'.

An emphasis on the characteristic inventiveness of those working in humanities computing, combining theory and praxis, medium and message, is articulated by Lévy: 'The one who does not invent works somewhere other than in intelligence'. Added to this is his contemptuous dismissal of the conventional activities of academia: 'The rest? Copying, cheating, reproduction, laziness, convention, battle, sleep'.

Nareen Moodley is less sanguine about the influence of computers and recalls the early 19th century Luddite resistance to technology and today's direct action by the Greens, and raises 'questions about social and moral accountability and responsibility' to counter unquestioning acceptance of the role of computers in learning and scholarship. Against the backdrop of an uncritical embracing of the Age of IT, she cautions against mistaking increases in computing speed and efficiency with advances in human evolution; an anthropomorphism which confuses digital proficiency with human intelligence.

Moodley frames a response to the widely held assumption that computers are rapidly reaching a point in their development where they will be able to behave like human beings. Since other authors in this number argue for a greater role for computers in education and research, it is helpful to ask whether they are making the implicit assumption that IT may ultimately be able to take over entirely from human beings. A de-humanised humanities may not be as far-fetched a notion as we may at first suppose. Moodley's juxtaposition of the capabilities of the 'thinking robot' with Jousse's holistic conception of the human being challenges the complacent acceptance of

machines into parts of our lives and work that may be threatened by the resulting lack of human interaction. When we compare humans and computers, the whole is most definitely more than the sum of its parts. Human intellect is more than the sum of all measurable brain activities: 'The switches that make up the human brain ... do *not* entirely account for the various psychological activities that the human being can accomplish. In other words human intellectual capacity stretches beyond the capacity of the brain'.

Rita Wilson's article goes to the heart of what a contemporary engagement with IT can mean to the creative writer. Wilson explores hypertext fiction in relation to the postmodern notion of intertextuality and considers the extent to which the new medium offers an opportunity to investigate a writing space that literally embodies what Wilson refers to as the 'decline of linearity'. Hypertext provides an 'almost embarrassingly literal embodiment' of literary theory (Landow 1992:34). Wilson cautions that the multiple tangents wired into the structure of a hypertext may, paradoxically, inhibit our engagement with the text, compared with the multiple interpretations generated by the reader's imagination in a conventionally printed text. Wilson provides a lucid and comprehensive view of the state of the art in hypertext fiction writing, and the possibilities opened up by using the Internet as a limitless extension to the otherwise closed boundaries of the text: 'The painted-on *trompe l'oeil* doors (or windows) become real, letting the reader open them to explore alternative juxtapositions and interweavings'.

Although alert to the potentially reductionist and technicist influence of the medium itself and so echoing some of Nareen Moodley's concerns, Wilson provides examples from fiction in which constructs of artificial intelligence are personified, and are made to play out the debates and ambiguities of their existence with other fictional characters, and with the reader him/herself (Covito's 'Computer Lady', and Eco's 'Abulafia'). Indeed Morrow and Murray's program called *Character Maker* becomes both amusing and terrifying in the light of Moodley's thesis. Perhaps the best response to Moodley's reservations is Wilson's reminder that computer code is a species of language, and its 'goal, like that of the natural languages we speak and write, is at least partly to embody human thought. Hypertext literature can be viewed as an effort to integrate these two branches of language to form a richer, deeper medium of expression'.

Like de Beer, Susan Spearey attacks the type of academic hypocrisy that sets itself up as 'expert in the field', and then perversely goes on to use the notion of the academic discipline to discourage inter-disciplinary research

and perpetuate the *status quo*. We may fiercely protect our 'academic territory ... even while we speak the need for modes of learning and exchange that are quite the opposite of what we practise'. She concludes that interdisciplinarity is 'what Humanities research should be all about ... that if we believe in the public role of the intellectual and in the potential of the academy to be instrumental in forging an active and engaged practice and understanding of global citizenship, it is the socially responsible way to proceed, and that it could be a particularly fruitful exercise at the juncture of disciplinary boundaries'.

Spearey acknowledges the dangers of potentially 'depersonalizing' and 'dehumanizing' the learning experience by adopting IT-based learning approaches, but successfully exploits the medium's capacity to provide an open forum for discussion and dialogue, which effectively transcends some of the technology's negative connotations. By exploiting the counter-hegemonic possibilities of the virtual classroom, Spearey observes 'how the technology enables students to track not only their initial impressions of a given text, but also their evolving understandings of the issues raised therein as they proceed though seminar discussions, reflective summaries of these discussions, essay writing, collaborative projects, and through the opportunity to engage with one another's essays or their own previous thoughts in the second course essay and the final examination paper'. Spearey looks forward to the possibility of using the virtual classroom environment to engage her Canadian students in dialogues with literature students in South Africa.

Harriet Deacon reminds us that it is very rare for a university to have a team of multimedia courseware developers, especially in the humanities. Her case study demonstrates how valuable such courseware development can be—not as a bolt-on, one-size-fits-all solution to teaching and learning, but because of its capacity to integrate the content and the essential skills of the discipline (in this case, History). This is especially the case when the developers are concerned to 'emphasize content over medium by making the tutorial user-friendly'. Deacon also insists that a close relationship between the multimedia component and the rest of the course is crucial to its success.

Faced with a student body with highly diverse abilities, the MEG (Multimedia Education Group) hoped to exploit the flexibility of the digital medium to match the varied capacities of individual students. An additional set of materials was intended to complement the existing course with explanatory material for students who were experiencing learning difficulties. The other set provided more sources and background for enterprising students who wished to explore the subject more extensively. Given the often

jaundiced reactions of academics in the humanities to the use of IT in their disciplines, Deacon's account of student feedback on the course is illuminating. One student, for instance, complained that the course developers, by having included 'funny pics' in the material, were guilty of lowering standards and dumbing-down a serious academic activity. To which Deacon tellingly responds: 'It is a sad reflection of the type of history that has been taught in many schools and universities to date that pictures (especially 'funny' ones) are not seen as material for "serious research", but only as motivational tools for the less enthusiastic student'.

Anand Naidoo reviews the work of Science Fiction author William Gibson, who coined the term 'cyberspace' in his first novel *Neuromancer* in 1984. Tapping into the growing sense that computer networks could be self-contained virtual worlds in their own right, Gibson projected himself and his readers imaginatively into this new 'cyberspace'. In some ways, the later rapid development of the World Wide Web and the evolution of sophisticated computer games both vindicated Gibson's vision and overtook it, and in Naidoo's view, deprived Gibson of an adequate creative response in his subsequent writing. The irony of 'cyberpunk' literature is that it imaginatively re-creates a virtual world within the thoroughly conventional medium of the printed novel. Unlike the novels of Covito or Eco, Gibson does not experiment with the form of the novel, or explore the possibilities of the inter-text in his non-linear cyberspace. He remains, for all his visionary foresight, an unadventurous novelist.

The promise of new library and archiving technologies to provide the environment for collaborative ventures is the focus of Dale Peters' article. Digital technologies impact on various arts and humanities disciplines: 'archaeology, art, art history, history, information studies, languages and linguistics, literary studies, music, the performing arts'. Peters looks beyond the current stereotype of the library as an inert storage facility, envisaging a 'digital library [that] could support ... academic research projects in providing access to high quality scanning equipment, computer workstations, multimedia development software, and personal technical support'. The Campbell Collections in Durban has been a leader in the adoption of digital technologies in pursuit of the preservation of rare manuscripts and photographs, in the interests of protecting rare artifacts while simultaneously increasing access to them via the Internet.

Theo Bothma, Karen de Wet and Paul Bothma contribute two related articles 'Implementing a Digital Library for Afrikaans Poetry' that examine

both the theoretical foundations and the technical aspects of conceptualising, designing and implementing a digital library for Afrikaans poetry in an XML environment. The authors argue that a 'system theory approach to literature and the hypertext environment' are suitable for such a project, and then go on to describe the design of their digital library—consisting at this stage of the project of the poems (and related material) included in the 2000 edition of *Groot Verseboek*.

Beatriz Resende argues that the Internet can provide a way for under-resourced and marginalised southern hemisphere literature to claim its place in world literature. She suggests that one strategy open to southern writers and academics is to tap into the existing global resources of the Internet. Resende describes the launch of the electronic magazine *Z* published by the Advanced Program of Contemporary Culture (PACC) at the Universidade Federal do Rio de Janeiro. *Z* grew out of a 'desire to publish new texts about emerging issues such as Cultural Studies, a certain motivation to mix literature, art, behavioral themes, and theoretical reflections as well as the need to establish a net for the exchange of interdisciplinary knowledge—which implies contacts between scholars in geographically distant places, in different campuses, in remote spaces and cities—all that associated with the belief that we had to enter the globalised space for the exchange of information'. Resende's discussion of the marginalisation of Portuguese as a minority language on the Internet has implications for South Africa's non-English official languages.

Joan Conolly's article considers the potential of computers to capture the nuances of oral performance in digital form. Such digital representations may be 'frozen' and subjected to analysis in various dimensions. Conolly points out that 'Oral-style texts are constantly challenged by the limitations of the medium available for their record and analysis'. Advances in digital recording now provide the 'capacity to record and analyse texts that are vitally and dynamically multi-faceted: records constituted not only of words, but of the voice, body and the hands as well'. However, a computer alone cannot produce any meaningful interpretation of such recordings, ultimately 'its applications are dependent on human understanding of the psycho-biology of human memory and performance, human capacity for cybernetic invention and the consequent limitations and dilemmas attendant upon ventures into Virtual Reality'.

Beyond the articles dealing with humanities computing, the last few articles make important contributions towards current discourse in their respective fields. These are examples of areas in which encyclopaedic

knowledge may be generated and disseminated with the assistance of further computing developments.

In her paper, Kalpana Hiralal examines the nature of anti-Indianism and Indo-White race relations within the economic, social and political context of post-war Natal. The Indians, both in colonial and post-colonial Natal were often perceived negatively by many Whites, especially those who competed with them in trade and industry. Much of the antagonism stemmed from competition in the spheres of retail and African trade. Often, the Indian trading class of 'passenger' origin, was a target of racial antagonism and hostility. This group, unlike the indentured Indians, came to Natal as free British subjects, from the West Cost of India. From the 1870s onwards, they came to exploit economic opportunities. Imbued with trading skills, determination and in some cases capital, they settled in Durban and Pietermaritzburg. Many also settled in remote parts of Natal. With their family-orientated businesses, few overheads, and long working hours, they were able to monopolise much of the retail African and Indian trade in Natal, and were a serious economic challenge to White petty traders. By the end of the First World War, they were firmly established in Natal. Their entry and success in Natal's economy was resented. White petty traders agitated for restrictive trade legislation and wanted a greater degree of protectionism from the Government. The formation of the South African League, a non party-political association, aimed at protecting White economic and political interests against the 'Asiatic menace', and offered many an outlet to vent their economic fustrations and resentment.

Kwame Owusu-Ampomah's article analyses 'Africa's dilemma', and indicate possible directions for Africa to extricate herself from the quagmire of poverty, political instability and insecurity. In this task, the paper acknowledges that Africa faces an enormous challenge. This challenge will not only require radical or unorthodox approaches but will also demand an unflinching patriotism, dedication, and partnership of all Africans—the rulers and the ruled; workers and the business community; commoners and intellectuals; states and civil societies. The article, among other things, discusses the Euro-centric idea of Africa and what it means to be an African in the 21st century, the prospects for Africa's emancipation, and the values, and philosophical ideas—including traditional ideas—required to underpin African initiatives in the socio-economic and political transformation of the continent. For Africa to achieve stability and progress, Owusu-Ampomah argues, she would need to take responsibility for her emancipation, overcome

her fragmentation with a strong continental body, make a paradigm shift and support rhetoric with action and commitment.

In 'Colonial Cousins in Poetry', Veena Lutchman briefly surveys Hindi poetry in India during the period of British rule and South African poetry written by black poets in English during South Africa's period of apartheid. Her focus is on the degree to which poetry has both social and historical dimensions and how poetry can be regarded as a representation of what one might call the 'universal' human mind.

It is surprising that having won the Ad Donker prize for originality of voice and vision in 1983, South African poet and artist Wopko Jensma has attracted little critical attention. Apart from brief articles by Peter Horn and Michael Gardiner and a spate of book reviews, no comprehensive biography or critical study of what is certainly a major South African poet has been undertaken. In his article, therefore, Ayoob Sheik not only endeavours to reconstruct Jensma's biography, but also reflects on a hitherto unpublished and mostly unknown anthology entitled 'Blood and More Blood'. Together with his published volumes, *Sing for Our Execution* (1973), *Where White is the Colour, Where Black is the Number* (1974) and *Have You Seen My Clippings* (1977) Jensma's poetry constitute an interesting and idiosyncratic response to the strife and turmoil in South Africa in the seventies. It is hoped that this biography would provide insight and understanding into the context and milieu in which Jensma wrote and stimulate renewed enthusiasm for his often cryptic and experimental poetry.

In his article, Rembrandt Klopper presents a theory of human communication that he calls the *Theory of the Optimisation of Human Communication* (TOHC). He proposes the TOHC as a general theory to account for the progressive complexification of forms of communication among modern humans in response to the progressive complexification of human culture, how it developed through time and how it articulates current realities.

In the final two articles, this issue places two keynote addresses. The first one by Mogomme Masoga addresses the challenges African intellectuals face and in the last one, Shane Moran enages the issue of the 'politics of critical thought'.

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