Literacy,
new technologies & education:
Aspects of the local and the global

Edited by
D. Koutsogiannis & M. Arapopoulou

TABLE OF CONTENTS

Thinking locally, acting globally: The new literacies as placed resources

Mastin Prinsloo
University of Cape Town, South Africa

The uses and applications of new technologies, those associated with computers and the internet, are resulting in new kinds of reading and writing practices. Such an observation is commonplace now, and hardly controversial. These new literacies have variously been labelled as technoliteracies (Lankshear & Snyder 2000), digital literacy (Gilster 1997; Koutsogiannis 2004), electronic literacies (Warschauer 1999), silicon literacies (Snyder 2002), and multiliteracies (Cope & Kalantzis 2000).[1] Changes have occurred in the forms and practices of literacy associated with changes in technolo-, gy, the media, work and the economy (Gee, Hull & Lankshear 1996; Snyder 1998; Snyder & Beavis 2004). The old literacies were print-based, paper-based, and language-based. Reading and writing associated with the new literacies integrate written, oral, and audiovisual modalities of human communication within screen-based and networked electronic systems. The new literacies and technologies allow multimedia texts to be widely distributed almost at once and are seen as providing access for some people to previously unimagined resources of data, knowledge, and entertainment. They coexist with the old literacies of paper and print and are said to change even the way people encounter these older literacies, changing the way people make communicative use of graphic space. For example, where information was generally print-based in the past and images of various sorts served mere-

---

1. I limit my discussion here to the new literacies as linked to the new technologies of computers, the internet and the "world-wide web". I note, though, that others talk about the "new literacies" as not being only technology-based. For example, Lankshear & Knobel include scenario planning, understood as has emerged during the past forty-fifty years as a generic technique to stimulate thinking about the future in the context of strategic planning (Lankshear & Knobel 2002, 4).

ly to illustrate that knowledge, graphic resources such as pictures and diagrams are said to have increasingly moved to share front-stage with print, including in educational contexts, imparting information directly, rather than providing backup for knowledge that is text-based (Kress & van Leeuwen 1996; Kress 1997, 2001).

What is not settled is how these new literacies are to be understood from the perspectives of how they work, how they are distributed, and how they are best engaged with, including in educational contexts. Many studies of the new literacies write about them with largely one context in mind, that of middle-class, usually American, European, Australian, or Asian contexts, but that context is assumed rather than explicit. When contextual issues are backgrounded or ignored, or when particular contexts are treated as if they are universal, then understandings of literacy tend to become more technical in nature. Under such conditions, the written texts of the old literacies and the post-typographic texts of the new literacies are sometimes treated either as simply the product of skills acquired by the writer or as the point of departure for different skills to be acquired and exercised by the reader. These skills are treated as something externally given, for the learner to "acquire" and utilize. The focus in literacy studies then becomes those skills, and the disabilities and obstacles to which would-be users thereof are subject. I develop an argument in this paper that the new literacies work in particular ways in low technology and socially distinctive African contexts, which illuminate the ways that they work more generally, that are obscured by much that is taken for granted in discussions of the new literacies in high technology and western contexts.

SKILLS-BASED PERSPECTIVES ON THE NEW LITERACIES

My discussion here is concerned with developing a perspective for the study of the new literacies which addresses the neglected issue of context in relation to the new literacies. Implicit in many discussions of the new literacies is a model of social consensus and assumptions of social parity at the macrosocial level. This is apparent in many studies of the new literacies that focus on individual and cognitive dimensions. For example, Leu et al. (2004, 15) identify the key new literacies as

- using a search engine effectively to locate information;
- evaluating the accuracy and utility of information that is located on a webpage in relation to one's purpose;
- using a word processor effectively, including using functions such as checking spelling accuracy, inserting graphics, and formatting text;
- participating effectively in bulletin board or listserv discussions to get needed information;
- knowing how to use e-mail to communicate effectively; and
- inferring correctly the information that may be found at a hyperlink on a webpage.

This list implies that the new literacies are core skills of an operational and generalizable nature. But the recurring word *effectively* in the various examples listed by Leu et al., and the word *correctly* in the last example, tell us little about what might be going on in each case. The crucial point here is that effectiveness and correctness are not contained or explained within the skills-based approach, and can thus only be asserted with reference here to some vague background of social consensus as to what constitutes effectiveness and correctness.[2]

Leu et al.'s view of the new literacies is consistent with their view on the "old literacies" which they refer to as "skill sets" that include "phonemic awareness, word recognition, decoding knowledge, vocabulary knowledge, comprehension, inferential reasoning, the writing process, spelling, response to literature" (Leu et al. op. cit., 15), in a hierarchy and taxonomy of decontextualized skills and knowledge. For Leu et al. these core competencies of the old literacies and new literacies are massively productive gateway skills. However, such lists of context-neutral skills are a problem because they treat as given the processes of signification and meaning-making involved, which on closer examination turn out to be considerably more complex and variable than they suggest.

Such assumptions of reading and writing as skills set in contexts of social consensus ignore the socially situated nature of such practices, I suggest. I reflect on research here carried out in contexts of social inequality, in South Africa, and ask how the new literacies work in such contexts, and, by implication, how they really work in the contexts of social inequality that characterize the USA and elsewhere. I draw on the orientation to literacy studies which studies literacy as situated social practices, also known as the New Literacy Studies (Street 1984; Barton 1994; Gee [1990] 1996) as well as on related theoretical resources. My discussion has application to the more general question of how the new literacies work in *all* contexts.

---

2. The social consensus that Leu et al. mostly assume in their discussion is explicitly stated at one point, where, quoting Banton-Smith, they present a perspective of evolutionary progress from the old literacies to the new literacies, against a background model of benign national development, where the story of American reading is a fascinating one to pursue... It is a story which reflects the changing religious, economic, and political institutions of a growing and progressive country... This evolutionaly progress... (Leu et al. op. cit., 4)

THE NEW LITERACY STUDIES,
SOCIO-LINGUISTICS AND INTEGRATIONAL SEMIOTICS

The idea of the "old literacies" as "core basic skills" presented above has been a contested one for decades now, challenged, in particular, by scholars working in the New Literacy Studies tradition (an older use of the descriptor *new* in relation to literacy, that refers not to the newness of the literacies but to the (new) ways of studying literacies). New Literacy Studies scholars' study of literacy as situated social practice provides important resources for studying the new literacies and their social consequences (Street 1984, 1995, 1999, 2001; Barton 1994; Barton & Hamilton 1998; Gee [1990] 1996, 1999; Baynham 1995; Prinsloo & Breier 1996). The term New Literacy Studies (NLS) was first introduced in the early 1990s in the work of Gee (1990) and Street (1995), referring to a body of work that emerged in the early 1980s (Street 1984; Heath 1983; Scribner & Cole 1981) and which studies literacy as situated social practice, drawing on interdisciplinary resources from anthropology, linguistics, psychology, sociology, and semiotics. These researchers have in common a broad focus on reading and writing as forming parts of purposive, relational, social action. Literacy practices are studied as variable, contexted practices which link people, linguistic resources, media objects, and strategies for meaning-making in contextualized ways. These practices vary across broad social contexts, and across social domains within these contexts, and they can be studied ethnographically.

New Literacy Studies researchers analyze practices in a detailed way, so as to identify the distinctiveness of literacy under different social conditions: What constitutes the social domains where particular literacy practices take hold? What is their location, the extent of their permeability and hybridity, the range and functions of literacy practices in those domains? This is what detailed micro-contextual research can reveal. Studies of literacy as situated social practice pay attention to the range of multiple contexts in which persons who are engaged in sign-based, communicative activity are situated. Such studies produce evidence that reading and writing, in whatever modality, appear as not exactly the same thing, in their uses, functions, modes of acquisition, and status across groups of people and across specific social domains within societies. Socially located individuals draw on particular sets of perceptual, cognitive, and cultural procedures and resources to make and take meanings from texts. Literacies cannot be understood as passive receptivities. That is, reading "effectively" and "correctly" (as in Leu et al. op. cit., cited earlier) does not involve just decoding of words and letters but also the practices of "seeing through" the representational resources of the texts to make sense in particular ways, that vary across social settings.

The social practices perspective on literacy drawn on by New Literacy Studies researchers is supported by work in a range of related disciplines. From a semiotics perspective, Harris (1995) shows that literacy, like all other forms of communication, is not *telementational.* Signs do not function as conduits, transferring already-formed thoughts or messages from one individual mind to another, because communication is not something separate, outside of social processes and isolated from social influences. Harris (op. cit., 13) describes communication as the contextualized integration of human activities by means of signs: the sign is what is produced by such social action and is also its enabling mechanism. Signs, and forms of signification, do not exist outside the context which gave rise to them; "there is no abstract invariant which remains 'the same' from one context to another" (Harris op. cit., 20, see also Lemke 1997). What might look like the same multimedia text on screen is not functionally the same in a different setting. It follows different meaning conventions and requires different skills for its successful use, when it functions in different social contexts for different purposes, as part of different human activities.

This point is also strongly made in relation to language, in Hymesian socio-linguistics (Hymes 1996; Blommaert 1999, 2002) and in Hallidayian functional linguistics (Halliday 1978, 1994; Hasan 1996) which see language-in-use (and other modes of signification) as forms of social action and as fundamentally social.

One aspect of these arguments is made clearer by looking at relatively familiar arguments made about the situated way that language works, as one form of sign-based communicative practice. Words have meanings that are intrinsically contextual. As Bourdieu (1991, 39) summarized the point, "The all-purpose word in the dictionary, a product of the neutralisation of the practical relations within which it functions, has no social existence: in practice, it is always immersed in situations…". Bourdieu's point echoes Bakhtin on the interactive, dialogical nature of all communicative practices:

> the word does not exist in a neutral and impersonal language…, but rather it exists in other people's mouths, in other people's concrete contexts, serving other people's intentions: it is from there that one must take the word and make it one's own" (Bakhtin 1981, 293-4).

Voloshinov identifies meaning-making in communication as a process where we strive "to match the speaker's word with a *counter word*" (Vo-

loshinov 1973, 102, quoted in Wertsch 1991, 52). Kress (1997, 58) makes the same point in relation to reading, where he describes reading as the *making of signs, "internally"*:

> Reading is a transformative action, in which the reader makes sense of the signs provided to her or to him within a frame of reference of their own experience, and guided by their interest at the point of reading. The transformative action of internal sign-making in reading is shaped by the sign that is read, but is not determined by it.

In carrying out the transformative action of reading, we are influenced by what is characteristic of our society and our place in it. We draw on what Bakhtin calls a *social language,* which is a "discourse peculiar to a specific stratum of society (professional, age group, etc.) within a given social system at a given time" (Wertsch 1991, 57). Such social languages vary according to including our social position (as regards age, gender, economic class) and the related dispositions that we carry as embodied history and practices, together with other members of our affiliation groups, family traditions, cultures, and subcultures (Bourdieu 1991).

Sociolinguists working in the Hymesian tradition, and drawing on Bakhtin similarly, point to the social relativity of linguistic function. Thus Blommaert argues that discourse *has* no intrinsic function; rather, "it is *granted* a function by others in a process which Bakhtin described as 'dialogical'" (Blommaert 2002, 17). All these perspectives point us to the ways situated, distinctive types of meanings are shared by groups of people who sustain them as part of their collective social practices. Bakhtin's concept of *heteroglossia* refers to the process whereby a proliferation of meanings is potentially and fundamentally available in the reading of any utterance (Bakhtin 1981). We make meaning when reading a text or image by making connections with other texts and other images we have read, seen, or imagined on other occasions. The connections we make are influenced by our experiences and social positions and is partly individual, but also characteristic of our society and our place in it. The extent to which such proliferation is contained by social power dynamics is described through the concepts of centrifugal and centripetal tendencies in meaning-making and -taking. Centripetal dynamics of the social and the sign are those which stress homogeneity and uniformity in social and sign-making practices (for example in official or institutional contexts, in moves towards monolingualism, in processes of ideological conformity) and centrifugal dynamic are those that foster heterogeneity, diversity, and multiple meanings.

Such a perspective as it relates to multiplicity of meanings sits well with studies of the new literacies which stress the multiplicity of routes and meanings that can be taken from web-sites and screens, where readers can choose to follow links as they want (Snyder 1997). Lemke suggests that meanings in multimedia are not fixed or additive, in the way word-meaning and picture-meanings relate. Rather, they are multiplicative, he suggests, where word-meaning is modified by image-context, and image-meaning in turn is modified by textual context (Lemke 1997, 4).

This paper draws attention to the social and situated nature of that variability. Because they are only contextually functional, rather than inherently functional, the signs of communication (spoken, written, visual, gestural, artefactual) are also and always signs of social value. They carry what Blommaert (op. cit.) terms *social indexicality.* Bourdieu made the same case with reference to "linguistic markets" whereby linguistic differences (e.g., of dialect, pronunciation, vocabulary in a common language) in their social uses reproduce the system of social differences, so that particular competencies function as "linguistic capital, producing a *profit of distinction* on the occasion of each social exchange" (Bourdieu 1991, 55). Blommaert (2002) analyzed the forms of written English used in a letter to him by a young Malawian woman, arguing that she is displaying what is an expensive resource in her context, but her departures from "good English" would make her language-use a cheap resource in the European context where the letter is received. I argue in this paper that the new literacies can also be viewed as cheap and expensive resources, in a variable social dynamic, that is context specific.

One of the corollaries of this situatedness of signs, for example, is that the act of writing, on screen or in print, may have significance in itself, *irrespective of what is written down.* In cases where writing and reading (in the old and new literacies, and in languages of status and authority) remain accomplishments restricted to a privileged class of people, evidence of such accomplishments in themselves acquire the status of social and political signs in their own right. This might even happen in cases where the person only appears to have the accomplishments in question (Harris 1995, 35).

The following interaction illustrates these points, recorded in a study of the new literacies in a Cape Town factory that assembles shock absorbers for the international motor vehicle industry. The conversation is between a team leader and a shop steward. The workplace has been designed as a "high performance" workplace under the pressure of international competition and under the influence of new management texts, which argue that flattened management hierarchies, self-directed work teams, empowered work-

ers, and partnerships with workers give competitive edge to such restructured workplaces (Gee, Hull & Lankshear 1996; Scholtz & Prinsloo 2001). There has a break-up of production and assembly work in this factory into relatively contained and self-monitoring cells or teams led by team leaders who are appointed from the ranks of the workers and trained extensively in team leading and team-building practices.

> Team leader: You need a computer to do all your work, maybe a laptop. That will ensure that you do not lose the agenda, and so on.
> Shop Steward: You see, we must look poor. We don't want a computer because we are poor. We want to show the bosses that we must do things the hard way, you see, comrade
> Team leader: You are stupid, having a computer is part of being poor. (laughter from other delegates) It is not *kwaai* (glamorous) to have a pc today; it is part of the furniture.
>
> *(Automotive component manufacturing company production site, Cape Town,*
> *in Scholtz & Prinsloo 2001, 710)*

The team leader represents a new kind of "shop-floor" worker, recruited and trained in leadership and quality control functions, and rewarded for showing loyalty and commitment to the production enterprise. The shop steward represents and invokes earlier workplace practices and relationships, where adversarial relationships between workers and management were explicit and built into trade-union discourses and relations with management. The antagonism between these two positions fuels this exchange about the old and new literacies. While the discussion is first framed as simply a question about the efficiencies of computers in relation to older writing technologies, it is clearly more complex than that. Computers operate as a sign around which differences assert themselves. The team leaders' embracing of the efficiencies of computerization are inseparable from their embracing of the new industrial relations order. While the team leaders still embrace the broad notion of working class identity ("being poor") they are in fact part of a new working class elite, enjoying relatively well-paid, demanding jobs, in an environment where unemployment and serious poverty are widespread. The shop steward's rejection of computers is tied into a commitment to older workplace structures and industrial relations including the assumption of fundamental antagonisms between worker and managers'/owners' interests. For the shop steward it is not the functionality of the computers which is the issue. It is rather what they index socially. For the team leader, it is a question of efficiency, but his identification of his position as progressive and the

shop steward's as backward is an ideological one, shaped by his embracing of the values, attitudes, and overall commitments of the new workplace and the work order (Gee, Hull & Lankshear 1996; Farrell 1997).

THE CHALLENGES OF THE NEW LITERACIES

While the resources of the New Literacy Studies are very suited to the uncovering of these dynamics which underlie the situated nature of communicative relationship in social practices, these same resources might be seen to be less appropriate for examining questions relating to, or resulting from, the technological dimensions of the new literacies, which are the basis of their demonstrably huge impact in contemporary life. Many studies of literacy as situated social practice have left aside questions of the technological dimensions of print-based literacy and its social incorporation and effects. The fact of the new literacies of screen-based and internet-based communication could be said to provide challenges to the "social practices" focus on local literacies, on local constructions of communicative practices, and on the New Literacy Studies' choice of detailed local ethnographic studies, focusing on local communities and their particular "ways of knowing". It is apparent that the technology that is at the core of the "post-typographic"[3] new literacies is what makes possible their social impact. The technological developments associated with the new literacies, include the linking up of huge numbers of computers across continents so as to allow their users to communicate without substantial time-lags, or in "real time" (Castells 2000) make possible a level of economic and social integration at a world level that would have been impossible otherwise. More people can communicate more often with more geographically and culturally diverse communities than ever before. They allow "real-time" financial transactions at a global level, allowing centralization of control of enterprises and decentralization of operations, through computer-facilitated network relations. They also change the practices of reading and writing, where screen-based "pages" regularly combine words images and sounds in complex ways, and with links to various other "pages" and computers. The new technologies are undoubtedly what makes globalization in the form that we currently understand and experience it possible.

The new literacies are said to be *translocal* in their capacities to set up exchanges and communicative practices that are precisely *not* local. The question, then, is how to take account of the impact of the new technologies that

---

3. I take this term from Reinking, McKenna, Labbo & Kieffer 1998.

does not revert to a generalized, decontextualized, and deterministic view of their impacts, and how they should be taught. I argue, drawing on my earlier discussion, that despite their global impact, the new literacies are best studied as *placed resources*, with local effect, and develop this case by drawing on social models of literacy, language, and communication.

THE NEW LITERACIES AS SOCIAL PRACTICES IN WESTERN CONTEXTS

Lankshear & Knobel (2002) develop a detailed and nuanced alternative perspective of the new literacies as socio-cultural practice. However, their examples of new literacy practices share many of the assumptions about technology-rich access and have a locatedness that is not fully identified. Amongst the examples of new literacy practices that interest them are the following (op. cit., 1):

> "culture jamming" campaigns which combine familiar images and tweaking texts can produce bitingly honest social commentaries that everyone everywhere is able to read-a kind of global literacy.
>
> "blogging" – the practice of publishing personal weblogs (personal diaries/journals and/or hyperlinks) – a practice which they see as changing the media world.

While these new literacies are undoubtedly social practices rather than lists of decontextualized skills, there is a question as to what the social context is that sustains and produces them. In particular, there is a question as to whether "culture jamming" campaigns really do constitute a global literacy or are not the products and interests of particular groups in North American and European societies. I suggest that the practices listed by Lankshear and Knobel aren't the situated new literacy practices that are prevalent in an African context, also that the social commentaries that Lankshear and Knobel find interesting can't actually be read "everywhere" by "everyone". Besides the technological difficulties of internet access and low bandwidth that are African problems, much of the internet content, including such "culture jamming" practices do not necessarily have interest for people beyond that of a north Atlantic (and perhaps more global) counter-hegemonic educated elite. To "read" the multimodal representational resources at such sites one needs to be a certain kind of person who has learnt to "see through" them in particular kinds of ways, drawing on a particular body of background, implicit knowledge.

Much of the internet must be viewed as digital "white noise" because of its lack of connection to local concerns as they are commonly understood in non-elite African contexts (those that are not themselves urban, global centers of sorts). Evidence from telecenters and internet cafes set up in community centers around Africa is that internet sites are generally of less attraction to many African people than are the telecommunication resources made available at these centers, which are often used primarily for speaking telephonically to distant family or friends, and for text production services, particularly for the production of curriculum vitae for out-of-work job-seekers (Etta & Parvyn-Wamahiu 2003).

In contrast to Lankshear & Knobel's list quoted earlier, one emergent new literacy practice of African web designers which Miller (2001, 3) describes from South Africa is that of the design of web-sites on the principal of "graceful degradation" which asks "what will users see, if they don't see what I intend them to see, and is this of good quality?" For African internet users with low band-width and bad connectivity, such practices are critically important. And then even the interactive informational networks constructed by such sites tend to be development workers, health and social workers and activists, not the mass of African people.

The point here is that while the new literacies probably reflect the hegemonic influences of the economically and politically dominant wealthy nations and business enterprises, and of English as the dominant language in internet exchanges, they do so in ways that require attention, ways that are complex, problematic and not accounted for in much of the literature. An extension of a "social practices" perspective on the new literacies must have a way of taking full account of the technological dimensions without losing the insights and resources which the new Literacy Studies brings to their study and to the addressing of educational concerns in this regard.

A related challenge raised by the new literacies for a social practices perspective refers to the small-scale, "interactive" focus of many literacy ethnographies. Micro-studies such as those carried out in Literacy Studies usually uncover the local, idiosyncratic, and contingent nature of action, interaction, and knowledge, the cultural specificity of thought, speech and discourse. Their link to what are commonly called "macro-social processes", those of large-scale, translocal economic, military, political and ideological dynamics, is sometimes seen as a problem. This point is most sharply illuminated by the globalized aspects of the new literacies.

THE NEW LITERACIES AND GLOBALIZATION

Literacy Studies might well need a holistic perspective from where local events are read translocally, and theories of globalization might appear to offer that vantage point. But there might also be a problem with the "flatness" of globalization perspectives, their impetus to homogenize the local.

The "global view" on globalization is that of a radically new form of capitalist, socio-economic organization that arose in the later decades of the last century and is world dominating in its influences and effects (Castells 1996, 1998, 2000). Globalization is fundamentally new, in the theoretical perspective presented in the work of Castells, because it is tooled by new information and communication technologies. This information-technological revolution makes possible new forms of production and organizational forms, resulting in a global economy where capital markets are interconnected worldwide and where multinational corporations, in manufacturing, services, and finance constitute the core of the world economy. The global economy relies on a technological infrastructure of telecommunications, information systems, microelectronic-based manufacturing and processing, as well as information-based travel and transport systems. These allow the core activities of the economy to work as a unit in real time on a planetary scale. Highly skilled labor is correspondingly also increasingly globalized. Low-end, low-skill jobs too are tied into the global market, as regards the values assigned to them and the standard of living that are available to local workers.

> Globalisation is highly selective. It proceeds by linking up all what, according to dominant interests, has value anywhere in the planet, and discarding anything (people, firms, territories, resources) which has no value or becomes devalued, in a variable geometry of creative destruction and destructive creation of value (Castells 2000, 6).

This global perspective on globalization makes sense of world events through the logic and dynamics of the model of the network as system.

> A network is simply a set of interconnected nodes. It may have a hierarchy, but has no centre. Relationships between nodes are asymmetrical, but they are all necessaries for the functioning of the network, for the circulation of money, of information, of technology, of images, of goods, of services, of people, throughout the network... The strength of the networks is their flexibility, their decentralizing capacity, their variable geometry adapting to new task and demands without destroying their basic organisational rules or changing their overarching goals. With new information and communication technology, the network is, at the same time centralized and decentralized, it can be coordinated without a centre (Castells 1998, 6).

This logic can explain why there is increasing inequality between countries in the world at large, while intra-country inequality offers a mixed record. So while some countries improve their condition, such as India, Spain, and some Asian countries, levels of inequality within many countries, such as the USA, increases. The extreme social unevenness and inequalities across the world show the extent to which individuals and groups are valued and productive, or not valued and excluded.

In the middle 1990s Castells thought that that the new global economy did not have much of a role for the majority of the African population. Primary commodities were of less value in the network economy than in the earlier industrial economy, African markets were too narrow, investment was too risky, labor was not skilled enough, communication and telecommunication infrastructure was clearly not good enough, and politics and administration were too unpredictable, corrupt, and inefficient. Emphasizing the relentless logic of the system he suggested that structural irrelevance was a more threatening condition than dependency might have been in preceding decades (Castells, 1996, 135).

LOOKING UP AND LOOKING DOWN: SYSTEMIC AND ETHNOGRAPHIC PERSPECTIVES

Castells' systemic perspective on globalization is precisely a global view, which emphasizes pattern, system, and congruence in complexity, despite being "decentered". It is a perspective which can be seen as an example of what Law & Mol (2002, 4) called "romantic complexity", or "looking up", where the global conjures up an image of a reality that it is complex and large scale. "Looking up" is a sense-making process (a kind of "joined-up thinking") that identifies a number of different elements, and then shows how they relate to produce a complex reality, which , while abstract, makes a larger and higher sense of the parts. Globalization, in this view, is a reality that is qualitatively different from its component parts; and it can only be grasped if we look at the whole, at a level of abstraction. Once we have done that we can go back to look at the local and explain how it is determined by this larger reality. One of the outcomes of this sense-making strategy is that the local bits tend to be made homogeneous in this process. While it provides an elegant account, a non-deterministic de-centered model of globalization such as that of Castell's does not deal with complexity, detail, hybrids and implicit processes. The environment inevitably gets homogenized in the attempt to make sense of the complexities of an emergent whole.

We can also "look down" to look at globalization, and it then becomes something different. By "looking down" we make an effort to understand local cultural processes, meanings, and symbolic processes, in a way that is sensitive to local variation. This does not at all mean that we stop thinking of larger processes of economic exploitation and historical change, rather that we stop thinking of them in a holistic and decontextualized way. As Law argues, "There *is* no system, global order or network. Instead there are local complexities... Local globalities". The global is specific. It changes shape and

size when it travels, and it travels only uncertainly. In other words, if one "looks down" rather than "up", the different and contending practices that come into view may not add up to a whole.

The imagination of complexity in the systemic, network model is what Law calls "patchy and partial", just as earlier versions of modernization were. In this light we can be sceptical of unqualified assumptions about expanding monolithic cultural homogeneity under the weight of globalization, and the vanishing of cultural diversity. Globalization has not entailed the massive spread of cultural norms and modes of communication in Africa. Indeed Blommaert (1998, 6) suggests that the new media facilitate "highly particular modes of interaction, containing extremely specific rules of communicative behavior, across a thin layer of communicators worldwide". If that claim is even partly true as regards the reach of the new literacies, then we are talking about a restricted socio-technological resource, and this is reflected in most discussions of the new literacies in terms of a "digital divide".

THE DIGITAL DIVIDE: VIRTUAL GAPS AND SITUATED REALITY

The notion of a "digital divide" is a familiar association when the new technologies and Africa feature in the same paragraph, and likewise when the new technologies and the underclasses of the USA or Europe are the focus.

> ...the availability and use of information and communication technology is a prerequisite for economic and social development in our world. It is the functional equivalent of electricity in the industrial era ... for those economies that are unable to adapt to the new technological system, their retardation becomes cumulative – as it happened in Africa (Castells 2000, 3).

In the USA as elsewhere, "digital divide" rhetoric is invoked when strategies for disseminating "new literacies" skills are made. The No Child Left Behind Act, passed by the Federal Government in 2002 enacts a wide range of initiatives, many of which are designed to improve reading outcomes in schools, and with addressing inequalities in educational outcomes. The Act has a section devoted to technology (Title II, Section D), with the stated goal, "To assist every student in crossing the digital divide by ensuring that every student is technologically literate by the time the student finishes the eighth grade, regardless of the student's race, ethnicity, gender, family income, geographic location, or disability" (quoted in Leu et al. 2004, 9).

For Castells the "digital divide" is a structural feature of the Network Society. From this perspective the "new literacies" exaggerate and define the divide between the marginalized and the included sectors of society – the old literacies could at least be taken hold of by poor communities because of the relatively low technological load involved. The spread of the internet can be seen as both mimicking earlier patterns of colonialism such as the legacies of poverty and displacement, language destruction, and islands of affluence, but also following the new power dynamics of globalized economics, where there is not simply a north/south split, but there are power centers also distributed across the major cities of the south, where one might see young middle class persons, whether Kenyan, Malaysian or South African, "wearing Nikes, clutching a cell-phone and speaking in techno-babble" (Miller 2001, 9).

The digital divide rhetoric recalls the New Literacy Studies attack in the 1980s and 1990s on "great divide" arguments with regard to literacy and its cognitive and social consequences (Scribner & Cole 1981; Street 1984; Gee [1990] 1996; Prinsloo & Breier 1996). Influential anthropological perspectives on literacy, particularly associated with Goody, but also drawing on the work of Havelock (1976) and Ong (1982) claimed that there was a fundamental divide, both cognitively and socially, between those who were literate and those who weren't; that oral language had one set of features, written another, quite different from each other. "Great divide" logic assumes that literacy produces the same social and cognitive changes, because of its intrinsic characteristics, no matter who learns to read and write, and no matter where or when literacy emerges (Schieffelin 2000, 298).

Street's work (1984, 1995) and later NLS studies identified the logic of this "autonomous" model of literacy as one of technological determinism (Street 1984), in that it treated literacy as having uniform consequences regardless, "as though it were outside the social and political relations, ideological practices, and symbolic meaning structures in which it is embedded" (Rockill 1993, 162). The strategy that such thinking produced for the "old literacy" was the assumption that a national program would provide all citizens equal access to these powerful resources, and, thus, equal opportunity for upward social mobility and economic prosperity. Former USA Vice-President Al Gore's enthusiasm for the concept of an information superhighway reflects this logic. Multilateral agencies like the World Bank have been similarly enthusiastic about the developmental potential associated with the new literacies:

> This new technology greatly facilitates the acquisition and absorption of knowledge, offering developing countries unprecedented opportunities to enhance educational systems, improve policy formation and execution, and widen the range of opportunities for business and the poor (World Bank 1998, 1)

Critical anthropologists such as Finnegan (1973) and Schieffelin identified the ethnocentric bias of the "autonomous model": "Literacy *itself* does not have agentive force to change societies. It is humans who are the active force in any transformational processes accompanying the introduction of literacy" (Schieffelin 2000, 299)

Such arguments about "great divide" logic in relation to the "old literacices" suggest a cautionary approach to the study of the "new literacies" in terms of a "digital divide". It is abundantly clear that the capacity of the internet is distributed highly unevenly throughout the world, with real consequences along the lines suggested by Castells. Nor is it simply a question of access to the internet, but also one of ease and speed of access. The bulk of internet connectivity is reported to link the US with Europe (56 Gbps in 2000) and, to a lesser extent, the US with the Asia-Pacific region (18 Gbps) By late 2000. Africa had extremely little bandwidth reaching Europe (0.2 Gbps) and the USA (0.5 Gbps) (bridges.org, 2003, 6). A 256Kbps line in South Africa (which has considerably more advanced technology that the rest of Africa) is a speedy connection to the Net, while a DSL or T-1 (1.5Mbps) connection is a *minimum* small business connection in the United States (bridges.org, 2003, 6). The slower the connection, the longer it takes to retrieve information over the internet, the less information and benefit a person can effectively gain.

The problem with "digital divide" thinking is that encourages simple digital solutions, along the lines that "great divide" thinking proposed solutions that focused on getting people exposed to basic techniques of coding speech and decoding print, without adequate attention to the way these limited skills where embedded in wider ways of social and individual being. The World Bank and UNESCO have been enthusiastic over the idea of "telecentres" in African villages and centers, with an internet-linked computer providing a multi-function resource. Much of the research into these centers has been disappointing, however, with many such telecenters used for telephonic communication with friends and families and for preparing job applications rather than using the Internet than anything else (Stavrou May & Benjamin 2000).

"Digital divide" thinking posits material relations as determinate over social relations, and is thus technicist when conclusions are drawn about these relations have social effect.

Warschauer has drawn on the New Literacy Studies to argue that the concept of a "great divide" provides a poor framework for both analysis and policy. He argues that the "digital divide" overemphasizes the importance of the physical presence of computers and connectivity to the exclusion of other factors that allow people to use ICT for meaningful ends. ICTs injected from the outside to bring about certain results encounter situated social practices that do not at all result in these resources being used in a way that promotes social inclusion or development (Warschauer 2002).

Snyder, Angus & Sutherland-Smith (2003), on the basis of ethnographic research into uses of computers and the internet in working class homes and schools in Australia, found that at a local level, various dimensions of disadvantage came into play in different contexts. They were concerned to find that even when people from poor backgrounds managed to gain access to technology, they remained relatively disadvantaged. They found that the "socialization" of the technologies, their appropriation into existing family norms, values and lifestyles, varied from family to family. They suggested that that old inequalities had not disappeared, but were playing out in new ways in the context of the networked society. They argued that we require more sophisticated and textured accounts of the ways the new literacies are being encountered and taken up.

THE NEW LITERACIES'S PLACED RESOURCES

Such arguments about the limits of digital divide logic point back to the view of the new literacies as "placed resources" that I presented earlier in this paper. At the level of practice, the new literacies are never reproduced in their entirety across different contexts. They function as artefacts and as signs that are embedded in local relations which are themselves shaped by larger social dynamics of power, status, access to resources and social mobility. As Blommaert (2002, 20) explains, "placed resources" are

> resources that are functional in one particular place but become dysfunctional as soon as they are moved into other places. This process of flows creates difference in value, for the resources are being reallocated different functions. The indexical links between signs and modes of communication on the one hand, and social value scales allowing, e.g., identity construction, status attribution and so forth - these indexical links are severed and new ones are projected onto the signs and practices.

The problems with not thinking of the new literacies as placed resources can be seen in early literacy studies which assume a generalizability from middle-class American or European contexts to elsewhere For example, Labbo & Reinking (2003, 338) write that:

> By the time many young children begin formal schooling, they are likely to have had countless experiences involving digital forms of communication, for example sitting

in the lap of an adult who is corresponding with a relative via email or who is making an on-line purchase over the Internet. Or, they may participate in engaging interactive multimedia stories and games on a home computer…

The authors contrast the experiences that children have with computers outside of school with those they have in school, to make the point that schools are not doing enough with the resources of the new literacies:

> for many youngsters literacy activities involving computers prior to and outside of school are typically more frequent, richer, and more meaningful than are such activities they encounter when they enter elementary school (ibid).

Clearly this contrast between in-school and out-of-school experiences with the new literacies only works when children's out-of-school experiences are "digitally-rich" in the way Labbo & Reinking describe.

THE NEW LITERACIES AS PLACED RESOURCES IN LOCAL CONTEXTS

I now discuss brief examples of how the new literacies operate as placed resources in South African contexts, from school ethnographic research that I have taken part in. The first example is from the CELL research project. This is a transcript of a recorded, informal classroom conversation between two seven-year olds, a boy and a girl, in their first year of schooling, in Khayelitsha township, Cape Town.

Vuyiswa: It's Tuesday today. Aren't we going to the computer? (*KungoLwesibini namhlanje. Akuyiwa kwicomputer?*)

Thulethu: Those who haven't paid school fees are not going to the computers (*Abangasibhatalanga ischool fees abayi ecomputeni.*)

Masibulele: You'll see when you are the ones who haven't paid school fees and we have paid even if it is next year. (*Niza kubona xa ininiabangasibhatelanga ischool fees thina sibe sisibhatele noba kukulo nyaka uzayo .*)

Thulethu: What I know is that we have a lot of money at home. (*Into endiyaziyo eyasekhaya imali ininzi.*)

Masibulele: If you have a lot why are you not staying in a brick house, why are you staying in a shack? (*Xa ininzi kutheni ungahlali esiteneni uhlala ehokini?*)

Masibulele: You are bragging about computers. You'll see next year. We all have to start afresh paying school fees. (*Niqhayisa ngecomputer. Nizakubona kulonyaka uzayo. Kuyaqalelwa ukubhatalwa ischool fees.*)

Olwethu: The fact remains you are not going to computers. (*Okusalayo aniyi kwi-computers.*)

Masibulele: You'll see next year. (*Nizakubona kulonyaka uzayo.*)

Briefly, children at this state school whose parents have not paid their school fees are held back from going to computer classes. This is because the school wants to put pressure on their parents to pay up. The school receives state funding that is insufficient for its purposes. State schools are allowed to charge fees, which vary from very low fees (as is the case here and in other schools in the socio-economically poor areas of Khayelitsha and its surroundings) to very high, depending on the socio-economic location of the school. The school is forbidden by the state from turning children away for unpaid fees. The computers in this case are not provided by the state but are a donation from a business foundation, which the school has solicited. The school thus sees itself as having discretionary control over these valued resources and attempts to use access to computers as a leverage to get parents to pay up on children's school fees. When asked by their teachers to compare the school with neighboring schools, the children identify the presence of computers as something which marks their school as better than the others, which don't have them. Access to computers is clearly an index of social status in the preceding exchange between Masibulele and her friends: the computers are a sign whose social indexing function is tied up in larger discourses about wealth and its social display. The young girl Masibulele is being teased in the extract above by a boy who is taking advantage of her exclusion from access to this resource status, to "bring her down". She responds by undermining his claims of family wealth, pointing out that he lives in a shack, while she lives in a "bricks and mortar' dwelling. But the boy's attack on her is only blunted: "The fact remains you are not going to computers".

The assumption might still remain that the resource and its potentialities that the children identify as "computers" is exactly the same "thing", down to how it is used and its attractions for children as in, say, Athens or Singapore. The reality here though is very different. For example, computers don't feature in these children's home environments at all. Secondly, the way they encounter them in schools is particular. The nexus of social practices and material relations in this local context produces a very different configuration.

As an example, what follows is a description of one class of six year-old pre-school children:

> Children wait outside the computer room. Children go in. The school has 20 computers in the lab. Children are told to put hands under the table. Teacher selects a "pre-reading" programme and calls it up on all the computers. There are 8 balloons, numbered and in a bunch on the screen, and below that a key consisting of numbers in squares from one to ten and below each number the name of a colour. The children can change the colour of the balloons by clicking on the number-colour key.

The teacher asks the children to click on the 1/Red button at the bottom of the screen. One child, Sesethu, holds the mouse and moves the cursor to number one. She places it there but does not click. Children seem confused. Ms R revises the names and places of colours in the sequence again, in case children do not know the colours by name. She then tells them to click on number 1/Red again. Sesethu says she has clicked but hasn't. Teacher asks them to find balloon number one and click on it. Teacher comes to Sesethu and friend and shows them where the click button is. He first asks them to identify the two number ones in the balloons. They identify them and click on them. The balloons become red. Teacher says there isn't a number 2 on the balloons. Asks what number comes after number 2? Learners say three. Teacher asks what colour is number 3. Learners say blue. Teacher asks them to click on number 3. Sesethu identifies number 3 and clicks on it. It turns blue. Teacher says good, and asks for children's attention. Teacher asks the class to look on the board. He says our 4 looks like this 4 and their four looks like 4. It is the same thing. Now first click on the yellow and then find the 4 in the balloons. Sesethu (six-years old) clicks on four but it turns blue. Teacher comes and says they must click on the four first. He helps her to click on number 4 (yellow) and then balloon number 4. Teacher says, "excellent!"

It is clear that the school is using what have been called "first generation" skill-and-drill computer software. The teacher explained in an aside to the researcher that this was a very difficult exercise but a very good one. She said that it taught children fine-motor skills and eye-hand co-ordination. He said that the following term he was going to teach the children how to get in and out of a programme, but now they were started with pre-reading exercises. The teacher at the school encounters the resources of the computers from a perspective that is shaped by local versions of the reading readiness and skill-based perspectives that came from the USA in the 1980s and 1990s and are deeply entrenched as part of local thinking by teachers as to what constitutes literacy and learning. These assumptions are reflected in the drill-and-practice assumptions that guide teachers classroom literacy teaching and are consistent with the software they have access to, which give strong emphasis to skills-based phonics packages delivered by computers. Such software by no means makes use of, or introduces children to key distinctive features of the new technologies, its networking and interactive features.

The computers in this setting do not operate within the networks of assumptions, practices, artifacts, and infrastructure that "normalize" their use in some other settings. As Latour (1993) has pointed out such technologically embedded practices require undisrupted networks of practices and machines for their smooth working. The "tracks" along which the computers run, in this case, has been altered and disrupted by the refigurations of the local setting, so they cannot be said to be doing the same thing here as they might do elsewhere. Their translocal nature has been greatly exaggerated.

The teachers themselves are not secure in their knowledge or use of computers. There is a specialist teacher who works across a number of schools in the area. This situation first came to the researchers' attention when the class teacher came in to tell the researcher that she wanted to sort something out with the principal.

> She says that the computer teacher does not come to school when it's her children's turn for computers. Her children haven't had computers for a month now. They love computers. Teacher goes out.

Later the upset teacher tells the researcher that she's mad at the computer teacher.

> The problem now is that she does not have proof that the computer teacher didn't teach her children for a month. She was supposed to write down that he did not come because of this and that. Today the computer teacher is giving a computer lesson at Sivile Primary in Khwezi knowing that he's got responsibility to teach her children today.

Neither the teachers nor the children encounter computers in their day-to-day routines, and they thus remain a specialist and exotic high-status resource whose functionality is very different to that taken for granted in some other settings.

ACTING LOCALLY

Responses to talk of the "digital divide" should take account of what the situated study of the new literacies shows us of how they *really* work. Rolling out newer and better machines and more up-to-date software will not mean that the new literacies will suddenly start to work "as they are supposed to" in such contexts as the school studied here. Assumptions that we are simply dealing here with a context of backwardness that can be addresses by way o f technology transfer mistake the way the new literacies work in varied contexts.

This paper drew on and developed various arguments and analyses of literacy, signs, language and communication in social practice to make the point that *all* sign-based communicative activity is shaped both by immediate interactive dynamics and by wider social and material practices. I have also argued that the new literacies don't have an intrinsic resourcefulness. Whether they offer opportunities for particular users is something that has to be established by situated research, not assumed.

References

BAKHTIN, M. 1981. *The Dialogic Imagination: Four Essays by M. M. Bakhtin*. Ed. M. Holquist. Austin: Texas University Press.

BARTON, D. 1994. *Literacy: An Introduction to the Ecology of Written Language*. Oxford: Blackwell.

BARTON, D. & M. HAMILTON. 1998. *Local Literacies: Reading and Writing in One Community*. London: Routledge.

BAYNHAM, M. 1995. *Literacy Practices*. London: Longman.

BLOMMAERT, J. 1999. The debate is open. In *Language Ideological Debates*, ed. J. Blommaert, 1-38. Berlin & New York: Mouton de Gruyter.

———. 2002. Writing in the margins. Notes on a sociolinguistics of globalization. Unpublished written version of a lecture given at Cardiff University, April 2002, during a workshop of the Leverhulme Trust project on Language and Global Communication.

BOURDIEU, P. 1991. *Language and Symbolic Power*. Cambridge, Mass: Harvard University Press.

BRIDGES.ORG. 2003. *Spanning the Digital Divide: Understanding and Tackling the Issues, Chapter Two International and Domestic Digital Divides*. Washington: bridges.org. Downloaded December 2003 from http://www.bridges.org/spanning/chpt2.html

CASTELLS, M. 1996. *The Rise of the Network Society*. Oxford: Blackwell.

———. 1998. *End of Millenium*. Oxford: Blackwell.

———. 2000. *Materials for an Exploratory Theory of the Network Society*. Special millennium issue of *British Journal of Sociology*.

COPE, B. & M. KALANTZIS, eds. 2000. *Multiliteracies: Literacy Learning and the Design of Social Futures*. London: Routledge.

ETTA, F. & S. PARVYN-WAMAHIU, ed. 2003. *Information and Communication Technologies for Development in Africa*. Vol. 2, *The Experience with Community Telecentres*. Ottowa: International Development Research Centre. Dowloaded December 2004 from http://web.idrc.ca/en/ev-33004-201-1-DO_TOPIC.html

FARRELL, L. 1997. Literacy, schooling and the workplace revolution. *English in Australia* 119-120:56-62.

FINNEGAN, R. 1977. *Literacy and Orality*. Oxford: Blackwell.

GEE, J. [1990] 1996. *Social Linguistics and Literacies: Ideology in Discourses*. 2nd ed. London: Falmer Press.

———. 1999. *An Introduction to Discourse Analysis*. London & New York: Routledge.

———. 2000. The new literacy studies: From "socially situated" to the work of the social. In *Situated Literacies: Reading and Writing in Context*, ed. D. Barton, M. Hamilton & R. Ivanic, 180-96. London: Routledge.

———. 2003. *What Video Games have to Teach us about Learning and Literacy*. New York: Palgrave.

GEE, J., G. HULL & C. LANKSHEAR. 1996. *The New Work Order: Behind the Language of the New Capitalism*. London: Allen & Unwin.

GIDDENS, A. 1990. *The Consequences of Modernity*. Stanford, CA: Stanford University Press.

GILSTER, P. 1997. *Digital Literacy*. New York: John Wiley.

GOODMAN, Y. 1986. Children coming to know literacy. In *Emergent Literacy: Writing and Reading*, ed. W. Teale & E. Sulzby, 1-14. Norwood, NJ: Ablex.

GOODY, J., ed. 1969. *Literacy in Traditional Societies*. Cambridge: CUP.

HALLIDAY, M. A. K. 1978. *Language as a Social Semiotic. The Social Interpretation of Language and Meaning*. London: Edward Arnold.

———. 1994. *An Introduction to Functional Language*. 2nd ed. London: Edward Arnold.

HARRIS, R. 1995. *Signs of Writing*. London: Routledge.

HASAN, R. 1996. Literacy, everyday talk and society. In *Literacy in Society*, ed. R. Hasan & G. Williams, 377-424. London: Longman.

HAVELOCK, E. A. 1976. *Preface to Plato*. Cambridge, Mass.: Harvard University Press.

HEATH, S. 1983. *Ways with Words: Language, Life and Work in Communities and Classrooms*. Cambridge: Cambridge University Press.

HULL, G., ed. 1997. *Changing Work, Changing Workers: Critical Perspectives on Language, Literacy, and Skills*. New York: State University of New York Press.

HYMES, D. 1996. *Ethnography, Linguistics, Narrative Inequality: Toward an Understanding of Voice*. London: Taylor & Francis.

JOHANSEN, J. D. & S. E. LARKSEN. 2002. *Signs in Use: An Introduction to Semiotics*. London: Routledge.

KRESS, G. 1997. *Before Writing*. London: Routledge.

———. 2001. Writing, knowing, learning in the era of multimodality. Keynote presentation, International Literacy Conference (Cape Town, November 2001). Downloaded from http://www.ched.uct.ac.za/literacy/GuntherKress.html.

KRESS, G. & T. VAN LEEUWEN. 1996. *Reading Images: the Grammar of Visual Design*. London: Routledge.

KOUTSOGIANNIS, D. 2004. Critical techno-literacy and "weak" languages. In *Doing Literacy Online: Teaching, Learning and Playing in an Electronic World*, ed. I. Snyder & C. Beavis, 163-84. New Jersey: Hampton Press.

LABBO, L. D. & D. REINKING. 2003. Computers and early literacy education. In *Handbook of Early Childhood Literacy*, ed. N. Hall, J. Larson & J. Marsh, 338-54. London: Sage.

LANKSHEAR, C. 1997. Language and the new capitalism. *International Journal of Inclusive Education* 1(4): 309-21.

LANKSHEAR, C. & M. KNOBEL. 2002. Young children and the national grid for learning. *Journal of Early Childhood Literacy* 2(2): 167-94.

LANKSHEAR, C. & I. SNYDER. 2000. *Teachers and Technoliteracy: Managing Literacy, Technology and Learning in Schools*. Sydney: Allen and Unwin.

LATOUR, B. 1987. *Science in Action: How to Follow Scientists and Engineers through Society*. Cambridge, Mass.: Harvard University Press.

LATOUR, B. 1993. *We Have Never Been Modern*. Cambridge, Mass.: Harvard University Press.

LAW, J. & A. MOL. 2002. And if the global were small and non-coherent? Method, complexity and the baroque. published by the Centre for Science Studies and the Department of Sociology, Lancaster University. Downloaded June 2004 from http://www.comp.lancs.ac.uk/sociology/soc096jl.html

LEMKE, J. 1995. *Textual Politics: Discourse and Social Dynamics*. London: Taylor & Francis.

——. 1997. Metamedia literacy: transforming meanings and media. In *Literacy for the 21st Century: Technological Transformation in a Post-Typographic World*, ed. D. Reinking, L. Labbo, M. McKenna & R. Kieffer, 283-301. Mahwah, New Jersey: Lawrence Erlbaum.

LEU, D., C. KINZER, J. COIRO & D. CAMMACK. 2004. Toward a theory of new literacies emerging from the Internet and other Information and Communication Technologies. In *Theoretical Models and Processes of Reading*, ed. R. Ruddell & N. Unrau. International Reading Association. Pre-print copy, downloaded December 2004 from http://www.readingonline.org/newliteracies/lit_index.asp?HREF=/newliteracies/leu.

LUKE, A. 1994. Genres of power? Literacy education and the production of capital. In *Literacy in Society*, ed. R. Hasan & G. Williams, 308-38. London: Longman.

MILLER, A. 2001. Reaching across the divide: The challenges of using the Internet to bridge disparities in access to information. *First Monday* 6 (10). Accessed on 27.03.2004 from http://firstmonday.org/issues/issue6_10/miller/.

MORSON, G., ed. 1981. *Bakhtin: Essays and Dialogues on his Work*. Chicago: University of Chicago Press.

NEW LONDON GROUP. 1996. A pedagogy of multiliteracies: Designing social futures. *Harvard Educational Review* 66 (1): 60-92.

ONG, W. 1982. *Orality and Literacy*. London: Methuen.

PRINSLOO, M. 1995. Provision, acquisition and culture: Literacy research in South Africa. *International Journal of Education and Development* 15 (4): 449-60.

——. 2000. Globalisation and local literacies: Standards and situated practice. *Journal of Education* 25:109-30.

——. 2004. Literacy is child's play: Making sense in Khwezi Park. *Language and Education* 18 (4): 291-304.

PRINSLOO, M. & M. BREIER. 1996. *The Social Uses of Literacy: Theory and Practice in Contemporary South Africa*. Amsterdam: John Benjamins.

REINKING, D., M. MCKENNA, L. LABBO & R. KIEFFER, eds. 1998. *Handbook of Literacy and Technology: Transformations in a Post-typographic World*. Mahwah, NJ: Lawrence Erlbaum.

ROCKHILL, K. 1993. Gender, language and the politics of literacy. In *Cross-Cultural Approaches to Literacy*, ed. B Street, 156-75. Cambridge: Cambridge University Press.

SCHIEFFELIN, B. 2000. Introducing Kaluli literacy: A chronology of influences. In *Regimes of Language: Ideologies, Politics and Identities*, ed. P.V. Kroskrity, 293-327. Santa Fe, NM: School of American Research.

SCHOLTZ, S. & M. PRINSLOO. 2001. New workplaces, new literacies, new identities. *Journal of Adolescent and Adult Literacy* 44(8): 710-13.

SCRIBNER, S. & M. COLE. 1981. *The Psychology of Literacy*. Cambridge, Mass.: Harvard University Press.

SNYDER, I. 1997. *Hypertext: The Electronic Labyrinth*. Melbourne: Melbourne University Press & New York University Press.

——, ed. 1998. *From Page to Screen: Taking Literacy into the Electronic Era*. London: Routledge.

——, ed. 2002. *Silicon Literacies: Communication, Innovation and Education in the Electronic Era*. London: Routledge.

SNYDER, I., L. ANGUS & W. SUTHERLAND-SMITH. 2003. Building equitable literate futures: Home and school computer-mediated literacy practices and disadvantage. *Cambridge Journal of Education* 32 (3): 367-83.

SNYDER, I. & C. BEAVIS, eds. 2004. *Doing Literacy Online: Teaching, Learning and Playing in an Electronic World*. New Jersey: Hampton Press.

STAVROU, A., J. MAY & P. BENJAMIN. 2000. E-Commerce and poverty alleviation in South Africa: An input paper to the Government Green Paper. Paper prepared for input into E-Commerce Green Paper Process, 20 June, Graduate School of Public and Development Management, University of Witwatersrand. Downloaded 27 March 2004 from http://docweb.pwv.gov.za/Ecomm-debate/myweb/greenpaper/academics/stravrou.html

STREET, B. 1984. *Literacy in Theory and Practice*. Cambridge: Cambridge University Press.

——. 1995. *Social Literacies*. London: Longman.

——. 1999. New literacies in theory and practice: what are the implications for language in education? *Linguistics and Education* 10 (1): 1-24.

——, ed. 2001. *Literacy and Development*. London: Routledge.

VOLOSINOV, V. 1973. *Marxism and the Philosophy of Language*. Trans. Ladislav Matejka & I. R. Titunik. New York: Seminar Press.

VYGOTSKY, L. 1978. *Mind in Society: The Development of Higher Psychological Processes*. Ed. M. Cole, V. John-Steiner, S. Scribner, & E. Souberman. Cambridge, MA: Harvard University Press.

ARSCHAUER, M. 1999. *Electronic Literacies: Language, Culture, and Power in Online Education*. Mahwah, NJ: Erlbaum.

—. 2003. *Technology and Social Inclusion: Rethinking the Digital Divide*. Cambridge, MA: MIT Press.

ERTSCH, J. 1991. *Voices of the Mind: A Sociocultural Approach to Mediated Action*. Cambridge, Mass.: Harvard University Press.

ORLD BANK. 1998. *World Development Report*. Washington, DC: World Bank.

Discourses in researching children's digital literacy practices: Reviewing the "home/school mismatch hypothesis" in the globalisation era

Dimitris Koutsogiannis
Aristotle University of Thessaloniki, Greece

1. INTRODUCTION

The aim of this paper[1] is to explore some concerns with respect to the content and direction of the debate on children's out-of-school digital literacy practices, indicating its underlying political[2] character. Specifically, I argue that discussions in this area are –for the most part– either of an instrumentalist character, supporting conservative political choices, or of a limited socio-critical character, focusing mainly on the local. In most cases, the second kind of discussion avoids making the link between digital media and children's digital literacy practices, on the one hand, and the forces and power penetrating what is widely known as "new world order", on the other. It is suggested that there is a need for further research towards an internationally oriented socio-political discourse, with a deeper historical awareness. This is attempted through an indicative example, using some of the results from a recent research conducted in Greece, whereby the so called "home-school mismatch hypothesis" is discussed.

The paper is divided in four parts. After explaining my preference to approach the topic through the critical discursive perspective (first part), I attempt to classify both academic and non-academic discussions on children's digital literacy practices (second part). In the third and more extensive part, I concentrate on highlighting the importance of conducting research from

---

1. Most part of this text was written during my sabbatical at Monash University (Australia) and it was presented in two seminars: one in the Faculty of Education, Monash University and the second in the Linguistics Dept. Adelaide University. I would like to thank all participants for their comments. I would also like to thank Ilana Snyder and Bessie Mitsikopoulou for their comments and suggestions.

2. The term *political* is used here in its Aristotelian sense, following Gee 2005.