Chapter 15
Visions and Suspicions

Introduction

Larry Cuban (2001) cautions about technology being 'oversold and underused'; and, broadly, we agree. So here, in this concluding chapter, we recapitulate some of the issues, which we have discussed and allow ourselves the luxury of some 'visions'. Here and there too we indicate suspicions around problems, pitfalls and wrong directions in speculating about the future of mobile devices and technologies and 'mobile learning'. It is not our intention to offer solutions or clear directions; it is too early to set out clear routes to possible futures. In any case, our intention has been, and is, to stimulate a debate – as informed as it is possible to be at this time – about the potentials of mobile devices in relation to a society's educational needs, purposes and desires.

Getting Beyond 'Being Critical'

In line with the socio-cultural ecological approach taken in the book, we argue for the importance of reflexivity. Subjecting 'taken for granted', 'everyday' social practices and forms to critique, is a sine-qua-non of academic and intellectual work; it is normal, essential, inevitable. The practice of critique, the stance of 'being critical' is embedded in all aspects of such work. In that context, the use of the adjective 'critical' becomes not much more than a redundant flourish. At the same time, its use harks back to strong concerns in the 1970s, when 'critique' had a political edge. 'Critique', then, as the means of 'putting things into crisis', offered the possibility of effecting changes, away from skewed distributions of power and its effects.

The present seems neither the time to 'put things into crisis' – patently they are – nor a time when socially progressive projects can easily be articulated, advocated and hope to gain wide consent. Yet we concur with the many who insist that there is no question that 'things could be better'. We want to play our part in that, by shaping tools for *purposeful agency* in the *design*, *production* and *dissemination* of social and pedagogic conceptions founded on the interests of social actors. These could be articulated as *texts* or as *practices* and *dispositions* for actors in the 'mobile complex' that we have sketched in this book. Mobile devices enter into the picture

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because in their affordances, their potentials, they can be seen as 'tracking' broad social developments in relation to power, agency, diversity, provisionality. In that, they offer potentials for (selectively) amplifying or modifying these social developments; maybe at times in their use they suggest a path, and seem to lead – by virtue of their affordances – where social understandings and practices might follow. Text-messaging may be one such case in point; though we have indicated others throughout the book. We are clear, however, that in or by themselves the technologies and devices we have discussed are not, and do not offer the panacea to the solution of educational problems.

The devices and their affordances are now a part of the everyday life of very many people in the media-dominated fabric of our society – though there remain significant variation in ownership and use in terms of age, region, gender, wealth. Yet their near ubiquity, especially among the young, makes it imperative for educational systems, institutions and educators to take them seriously as an integral part of the communicational and, therefore, of the 'learning landscape'. There is a need for schools and other institutions to become clear whether or not, or how, to utilise the affordances and potentials of these devices – alongside many other technologies, new and old – to enhance possibilities for learning, for learning experiences and to attempt to understand their place – actually now and into the near future – as instruments in learning and their place in environments of learning. That much is clear; and it is more than urgent.

The devices are taken into most personal and social spaces, contexts and situations as a matter of course, so that these spaces are now connected with, have access to, and interact with the convergent media landscape, which increasingly dominates social life. The German term 'Handy' for the mobile/cell phone – meaning either 'in the hand' or, as a loanword, meaning 'practical'/'versatile' – is revealing in that respect; these devices are useful tools for the integration of divergent cultural practices across social milieus and national and geographical boundaries, due to their potential for fostering communication of all kinds. That includes the school.

One of the inherent challenges posed for their (potential) integration into institutional educational practices arises precisely from this transgression of boundaries. The school has been, and still is, an institutional site, which insists on maintaining forms, frames and boundaries: of knowledge, of authority, of site/space/location, of time, of identities. The features and affordances of the devices all go in the direction of unmaking these *social* – rather than technical – framings and boundaries. The introduction of the device thus poses the problem, first and foremost, of dealing with these social (and ideological/epistemological) issues. In that respect, the devices and their affordances are less a threat within a paradigm of *critique*, where what is at stake is access to alternative articulations of a given curricular issue with the intention of subjecting that to critique, than in a paradigm of 'new production', of *design*, arising out of the interests of students, the issue is their claim to agency in relation to the making of texts and knowledge.

The Issue of 'Recognition': The Education System and Prevailing Social/Cultural Transformations

If mobile technologies have become 'normalized', they can no longer be ignored by the education system: banning them is not a (sensible) option. The question is how to harness their affordances. That goes to the issue of 'recognition', in a number of distinct yet related dimensions: *recognition* of the potentials of the devices; *recognition* of the potential uses of their affordances for the purposes of the school; and a *recognition* above all, of the agency of students who use the devices and integrate their affordances into their everyday life-worlds. Such *recognition* would offer a start to solving one major challenge in relation to school-based education: how to gain the support of parents, of politicians, of those in authority; getting parents and others to view learning with mobile devices as absolutely serious, not as a facile pandering to orientations to entertainment, not an expression of a narrowing conceptualisation of learning.

Interestingly, this raises yet again, with new seriousness, the issue – both old and ever new – about technologies and social practices: should mobile devices be viewed as a new technology with which to do old things in new ways or whether the time has come to do the new things afforded by the technology (see e.g. Noss and Pachler 1999).

Schools, teachers and students face the deep effects of the transition from the authority of the state to the power of the market, from a particular work ethic, sense of duty and obligation to the seductive promises by the market of gratification through consumption. In that context, schools and other education institutions are facing a crisis of legitimacy. When knowledge is ubiquitously available at any time in any place, when the canonicity of knowledge is no longer guaranteed by official authority, then school can no longer function as the gatekeepers for 'knowledge' as such: their legitimacy is challenged at many points, which manifests itself in forms of refusal and avoidance of school(ing); and the use by students of alternative routes to information and knowledge.

There is another and significant problem of *recognition* from two further perspectives: an older generation does not have the *conceptual* (and *affective*) *means* to recognize what the young are *actually* doing; the younger generation in its turn has neither the experience nor the conceptual means to question the conditions of their own present – which the old see as 'fragmentation' and which the young know as 'what is'. This leads to a hugely problematic 'generational divide', in that the adult population went to school before any or some of the real impact of digital and mobile technologies had begun to be felt and consequently has no 'inwardness' with it. Yet it is these adults who are today's policy-makers and teachers, who determine curricula, while those who are the most affected in their educational experience have no real say in the formulation of those curricula.

The educational impact of the transition of authority and a shift from stability to instability is significant: 'reproduction', whether of society and its culture(s) – producing the young in the image of that society, with its knowledges and values – is

no longer possible. Different curricular, conceptual, social and ethical resources are required: distinct, and apt for the social world of today and tomorrow. The effects of social fragmentation, of fast-moving cultural forms and media practices, including the effects of the technologies we have been discussing, mean that there are no longer any stable 'givens' to which curricula might be anchored, with some certainty that they would fit the society of tomorrow.

In the context of the changes to social structures and cultural practices which we have outlined, schools and other educational institutions are finding it increasingly difficult to gain their communities' assent to, or their students' engagement with *curricula of content*. In the face of this the school will have to move to curricula based on the recognition of those factors, which make for fragmentation and contestation: shifts in power, still increasing diversity, including increasingly marked *generational* divisions. The school will, as well, need to strive to give recognition to the principles and practices, and the values of their students in a world of instability and provisionality. The curricula could then provide the tools, which enable reflection, production with full awareness of the potentials of the resources used in the communicational environments – shaped by power of different kinds – for which materials would now be designed and destined.

Students are finding it increasingly difficult to engage with the characteristics of the environments of learning proposed and enacted still, by schools as agents of state power or groups of parents – whether in terms of the imagined social relations projected into forms of pedagogies enacted in classrooms, which, in terms of social relations, remain lodged in a conception of a state and its relation to (prospective) citizens no longer recognizable to the young whose subjectivities and identities are shaped by the market as consumers. This disjunction emerges in all aspects of curriculum, of pedagogy and of agency assigned, assumed and of agency denied. It emerges in the role of power in relation to knowledge; in the value given to correctness (a social issue, linked to convention) as against accuracy (an ethical issue, linked to truth); in the choice of modes for representation, which are admitted and permitted and which are marginalized or banished; of what media of dissemination are imagined and whose power is validated in them – the contrast illustrated perhaps by school-authorized materials as against the principles of Web 2.0 production by students.

The state still expects schools to fulfil this role and these functions, though now without the support of the social structures and forms which gave their strong if implicit framing, nor of the power of a state which provided legitimacy, even if through coercion.

Learning and Life-Worlds: Environments of Learning

These fundamental changes in the environments in which educational institutions operate, brought about by a large variety of factors and often accelerated by technological innovations, of which mobile technologies and devices are one part, raise fundamental questions about the constitution and focus of formal learning

environments. We are not arguing that schools abandon a clear and strong sense of the significance of much of the knowledge and values traditionally conveyed by the school. What we are arguing is that the significance of that knowledge cannot be 'pressed' on students through power of various kinds – in places like the UK in forms of coercion ranging from the exclusion of children from school to the imprisonment of parents on the grounds of their children's truancy. Rather, the school's task is to propose what the communities, which it serves, continue to regard as the significant *and* essential achievements in understandings and knowledge of their cultures, based, often, on centuries of work of social agents in their production of cultural resources of all kinds.

In proposing such curricula the school will need to be aware of the principles on which learning proceeds: not on the basis of power pressing on the young – learning seen as acquisition or adaption, or accumulation – but learning seen as transformative engagement with the *curricular ground* provided by the school, in the light of the learners' interests. Framed in the light of an understanding of the principles, the interests and the assumed agency of the young, the teachers' task is to guide learners to an understanding *achieved* by them in the light of their interests and principles. In that, the school's task remains central: to act as the agent of the community, society, state in proposing the *ground* for the learners' engagement; and elucidate the issues of significance for the lives of learners in the light of the learners' interests and principles.

One such way would be for schools to *recognize* and to acknowledge the learning that takes place in many other sites, constituted around different principles of authority, power and values, as well as strategies for encouraging learning using notions of pleasure rather than necessarily only of work. There is a well-recognized danger in bringing students' everyday life into schools – taking from them their life-world and its interests and turning it into the curricular stuff of school-authority, fed back to those who initially shaped and owned it in the frames of a now extraneous authority. This links to the definition of learning we proposed in Chapter 1 of this book and it might allow schools to harness the learning that takes place in everyday life, as the result of the ceaseless, constant engagement with the world. The key notion here is that of the active, transformative engagement of young people with the world on the basis of principles, which they bring to that engagement, captured by us in the notion of 'agency' in our model of a socio-cultural ecology.

To repeat: our argument is not at all one of schools becoming superfluous or marginal – quite the opposite: we see them as continuing to have a central *social* role, albeit one that is different to what it has traditionally been: a role along the lines of the social changes that have marked the last four or five decades. Educational institutions and their professionals remain agents of culture and society; their task has become that of *proposing* 'what is to be learnt'. That implies a significant change in power relations and pedagogical practices. We see the role of schools and teachers as facilitating engagement in the materials presented by the school shaped for students in terms of their interests and principles, including 'navigational aids' for students to take further on the basis of their interests. In this way both schools' expertise and students' interest, i.e. their agency in their life-worlds,

would be affirmed. In this we see the role of mobile devices as enabling both educators and learners to set up, and to integrate new environments for learning – using the facilities provided by media convergence. Mobile devices can then become an important interface with the media-rich world of young people.

We use the term 'school' as a compacted, short-hand term for a whole set of institutional factors: of those who are contemporaneously regarded as 'stake-holders', different in different contexts, with differing powers. So when we speak of a certain inability, if not reluctance, of 'schools' to change, to engage proactively with the fundamental features and factors inherent in the 'mobile complex', we do not wish to lay 'blame' at the door of schools or their staff; rather, we wish to point to a complex in which the school is the most visible entity, and the one encountered by students and parents. The 'holy grail' of education, namely '"a resurgence of thirst" for learning' (Borgman et al. 2008, p. 12) or a clear means for reconnecting the young with the school, or of integrating technologies meaningfully with the interests and purposes of schools and students, all that remains elusive and to be played for.

Participation, Social Divides and Cultural Resources

Our approach via a socio-cultural ecology is particularly timely given the (still) increasing ubiquity of mobile devices; there is a real prospect of 'everyone' owning a multifunctional mobile computing device in the near future. The cost of a 'learning-technology' thus becomes individualised, reducing the burden on the state to provide (part of) a technological infrastructure to support formal education. If, as a society, we are able to provide low cost technological tools for everyone, then democratisation in the form of access as well as contribution to cultural production through mobile devices by everyone can be part of the vision. If we are unable to do so, there is the clear likelihood of the 'digital divide' opening further. Potentially, individualisation dramatically transforms the technological infrastructure, which is available to learners. With the convergence of affordances onto a single mobile device, private, informal and formal spaces, situations and contexts become intermingled. Learning, working, entertainment, community and social communications, commerce, shopping and other activities become intertwined. But what does the prospect of such a convergent, technology-rich and – compared to prior arrangements – entirely differently framed world mean for the future of learning?

One of our main lines of arguments in the book has been and is: mobile devices are, and have to be understood as, part of a convergent media landscape. They are tools for accessing data and networks. Even if mobile devices include features such as GPRS, their connectivity, convergence options, interoperability and handling are inextricably linked with web-based technologies.

But to repeat: what will be the impact on learning, whether in institutional sites or in general?

‘Situated Learning’ and New Practices of Learning

Chan (2007) has recently noted that in institutionally fostered mobile learning we should aspire to context-aware, authentic, and situated learning. We agree; though just before leaving it there, it might be useful to unpack – even if belatedly – some terms. For instance: ‘what is inauthentic learning?’ ‘what or when is learning *not* situated?’ Is not the problem that students are only too aware of these things? And of course, the more important question: ‘when is there not learning?’

Let us attempt careful phrasing of our concerns. For instance, a concern ‘that schools or other institutions should strive to produce situation in which “what is to be learned” corresponds to core features of the environment in which the learning is to be done’; or: that schools produce environments for/of learning in which there is a congruence between the environment and that which is to be learned. Or maybe strive much more in the era of the dominance of the market to find means to link what is to be learned to concerns and interests shared by learners – rather than relying, as before, on power and sanctions to ‘motivate’ learners. Chan points to a key problem, namely the need for the restructuring of the school: its curricula, pedgagogies, didactics, timetables, in which the school is being transformed to respond to the ubiquity of multifunctional computing devices. He presents an intriguing map of the future that captures the relationship between the physical word (Natural Platform) and the digital world (Cyber Platform); it indicates that mobile devices will increasingly be embedded in the smart ‘ubiquitous environments’ that we have shown in Chapter 13, in the example of Seadragon and Photosynth.

In a more cautionary vein, Bruce (2008, p. 583) provides a useful perspective by noting that ‘Education would certainly be easier to promote if we could simply identify some new technologies that would make ubiquitous learning occur. But the new technologies are neither necessary nor sufficient for this to happen’. Bruce argues that it is the vision for ubiquitous learning that matters most, not simply the technical affordances: ‘We need to define ubiquitous learning in an historically legitimate way, one which recognizes the possibilities afforded by the new technologies without reducing the argument to a technocentric position.’ Bruce goes beyond the concerns of Cuban by stressing that learning extends far beyond the confines of the classroom. Bruce stresses that as new technologies and media penetrate nearly every aspect of daily life, so does learning – though our qualification would be, as just stated, that there has always been and always will be learning in all aspects of daily life; the difference being the erasure now of a boundary between learning in and about everyday life and learning in institutional sites of learning.

Context Awareness

Haythornthwaite (2008) picks up on the work of Bruce by looking at the changing relationships in who learns from whom. When we learn, she suggests, we are increasingly dependent on online sources and the hidden work of retrieval

algorithms; she argues that this increases the work of the learner, and raises the need for what she calls *critical media literacy,* as well as *critical retrieval* and *retrieval technology literacy*. As before, we might want to ask what learning is meant? And what actually are the real differences in kinds of learning and in what has been and is being learned. The present is also marked by massive loss of learning: of things, practices, means of relating with, and to others all of which were commonplace. And just what work does the adjective 'critical' do in these terms, not to mention the noun 'literacy' – rather than capacities, skills (of information retrieval), or competences.

What position or perspective does Haythornthwaite adopt when she suggests that 'criticality is often not a primary concern when users share personal data'? Is it conceivable that the users' criteria for evaluation are different ones, not recognized from the perspective of a different generation, or the elevation of the academics view? What do generationally different users of social networking sites such as MySpace and YouTube know about the criteria of evaluation brought by those from a younger generation?

There are questions here for those who do research as much as for those who are researched. Any move towards context-aware services and social operating systems could further intensify the situation. We propose that there is an absolute requirement for a curriculum of 'navigational aids' in relation to text-making, reading, discernment and discrimination, both for the researched and the researchers. The latter have the difficulty of labouring with inappropriate antiquated theoretical tools; while the former face the problem of practicing as they go along, without maybe some of the tools for reflection that could be provided to them by an older generation – newly informed. That is, both groups stand in need of a curriculum founded on principles of judgement and evaluation in ethical and aesthetic issues as an essential response to market principles of 'choice'.

There is a debate to be had and work to be done on both 'sides' of this divide: how best to sensitise young people to the opportunities and challenges, the pitfalls and potentials, in navigating what are seen by an older generation as increasingly fragmented and segmented media – quite decisively not experienced as such by the set of younger, contemporary users; and how best to give the older generation the means for recognition of the principles inhering in the practices employed by the younger.