Tapscott, Don, *Growing Up Digital: The Rise of the Net Generation*, McGraw Hill, London and New York, 1999, ISBN 00713 4798 4, 338 pp.

For those familiar with Don Tapscott's other books, *Growing up Digital* is but a variation on a common theme. This time the proof for Tapscott's claims of a digital revolution of epochal significance is found through a study of users which he calls the N-generation.

These are those who are growing up with interactive digital media, particularly the Internet. Characteristically, this generation is growing up with computers, assimilating technology and seeing it as a playful prosthetic device - an extension of themselves in contrast to the perceptions of their parents, who have had to accommodate and therefore struggle to learn it (p. 40). This cohort 'look at computers the same way boomers look at TV' - as a generationally defining technology.

From the start, we are informed that *Growing up Digital* is 'written on the Internet' (p. ix). It involved a research team which 'collaborated with several hundred children and adults'. We also learn that 'analysis drafting and editing was conducted by a core team in five locations using a shared digital workspace, electronic mail and computer conferencing'. Both the content and how it is produced mirror each other. This research statement (which is strategically positioned in the front section of the book on p. ix) draws attention to the book's exemplary status as not only a digitally savvy book, but also a digitally generated one.

The book is a curious amalgam. It reports a user/audience research project carried out via the Internet. It is a self-help manual for baby boomers to come to terms, perhaps, with their imminent generational displacement in work and elsewhere by N-geners who are 'lapping' them in the technological race. It is for parents, to help them understand and deal with their N-gen children. (The N-geners of his study give Tapscott some reasons why 'parents should relax about cyber love': 'alcohol isn't served in IRCs; time on the Net is time away from the TV; no curfew disagreements; meeting someone in a chat room doesn't require new clothes; heavy breathing won't fog up a computer screen; the car won't run out of gas; kids have to read and write to chat; your son can't get someone pregnant in a chat room; your daughter can't get pregnant in a chat room; no one ever contracted an STD though a modem cable', p. 174). It's a marketing primer forecasting the new market and marketing requirements for effective marketing to this particular cohort. ('N-geners love to play. They love to communicate and discuss things. Expect to see a growth in net-based entertainment.', p. 204) It's for managers to think through the transition to a new networked firm and to figure out how to personnel-manage this new and potentially recalcitrant group.

Now the first of a wave of 88 million N-geners are entering the workforce at a time when the corporation needs to reinvent itself through the new technology; when intellectual assets are the most important form of capital; when fresh thinking and innovativeness are the key drivers of success; and when those fluent with the new media and comfortable with non-hierarchical ways of working are critical to success. The writing is on the wall for the technophobic, old-style-thinking boomer.

The book is, in short, a manifesto drawing together and synthesising a variety of contemporary positions on pedagogy (student-centred and lifelong learning), management (horizontal, team-based, collaborative work environments) and personal relationships (open families and relationships) and attaching them to the N-generation. The N-generation becomes an exemplary bearer and instance of these paradigms in action. In their turn, these positions on pedagogy cease to become models and instead become generational styles of mind, values, learning, play, family, consumption and leadership. Each of these is rounded out with its own chapter, with predictions made for the future.

Central to the book's claims about the N-generation is interaction. It becomes the book's *leit motif*. It is technologically embodied in digital media and the Internet and it is a central metaphor describing the N-generation. Interaction is what distinguishes the contemporary era and its media from its predecessors. Consequently the book promotes itself not so much as a study of 'audiences', but as one of 'users' - a generational lifestyle and values segment. Indeed, the broadcast model of transmission to audiences is singularly inappropriate for describing interactive digital media and the kinds of activities of the group in question. Why? Well, it's about interaction. He claims that the Net is the 'antithesis of TV' because children control much of their world on the Net (p. 25).

It's not only TV that has this problem, it's also print and radio - these technologies are apparently 'unidirectional and controlled by adults'. They are 'very hierarchical, inflexible, and centralised' and 'by contrast the new media is interactive, malleable, and distributed in control' (p. 26).

The new media are in turn connected to new interactive styles of learning which are in their turn contrasted to the older styles of learning. Here too it is a stark contrast: 'from learning as torture' to 'learning as fun' (p. 147); 'from pedagogy to learning partnerships' (p. 143); from 'teacher-centred to learner-centred' (p. 144). With the N-geners and digital technology, we are moving from 'the teacher as transmitter to the teacher as facilitator' and co-learner (p. 148) as students are 'learning through discovery and through new media'. The net result is that 'this combination of a new generation and new digital tools will cause a rethinking of the nature of education' (p. 127).

Families too are being founded on this interactive paradigm. As with their teachers, to whom the digital generation often have to 'teach' the technology, parents encounter a circumstance where children are 'authorities for the first time' (p. 36). In these circumstances, 'family members begin to respect each other for what their authorities actually are' (p. 37).

It's not hard to find fault with these altogether too pat binary opposites. The descriptions of TV, radio and print are contradicted by the overwhelming evidence of a non-passive and active audience provided by just about every paradigm of audience research over the past 40 years. The claims for the uni-directionality of print and the interactivity of hypertext are just as specious. Reading is a family of practices, not a single thing, and some of these practices (like those associated with 'flicking through' and 'browsing') are in some ways even more random than the hypertext equivalents which are built on these older practices and prescribe where such randomness can take place. The contemporary fashion for student-centred learning is yet another and familiar turn in a longer and oscillating narrative of schooling which has little to do with the emergence of interactive multimedia. The claim for the overturning of sources of power and centralisation in the media is contradicted by the almost daily evidence of takeovers and mergers built on the unparalleled economies of scope and economies of scale made possible by digital media. The association of computing and the Internet as a young person's medium against the old media's control by oldies is too simple a description of Internet useage and the sources of power and control in this same medium. It reduces the relations (and emerging ecology) among media forms to an issue of generational conflict between the younger generation - the current outsiders who will inevitably become the insiders - and an older generation of baby boomers. Clearly the difference between digital technology and older analogue forms, as with the difference between this generation and previous generations, is significantly overstated.

But these criticisms to some extent miss the point of a book like this. Its purpose is to make people digitally minded and to promote a space for thinking about the significance of digital media. Getting people digitally minded involves getting them to put the issue and significance of digital media and online services and technology upon their diverse horizons - when they think of family, learning, work, play, their children's schooling, etc. To do so, Tapscott needs to make exaggerated claims about such media. Specious before and after narratives function to place new media in the best possible light and dubious schematic distinctions between how we use old and new media become useful devices to build up a coherent digital world and a digital persona appropriate to this world which possesses new (digital-friendly) attributes. James Carey and John Quirk's electronic sublime becomes here the digital sublime. Perhaps we should not be too critical of this boosterist activity. It does register digital developments on public horizons in ways which prepare the way for the more

incremental but cumulatively more significant changes in the ways we use, do and think about things. Without such manifestos, we would not have the public existence and therefore public purchase of a set of verbal associations about digital media and its social significance which we could use to think with and orient ourselves in relation to even if only to disagree.

There's also another reason why I think this book is significant. Like generation X before it, Tapscott's formulation of the N-generation has become part of our vocabulary, making in the process a hardcover book published in 1997 for McGraw-Hill's business library market an international paperback bestseller in 1999. The notion of an N-generation - an 'audience' with a mindset and a generational style developed through growing up with interactive media and the Internet - now has a life of its own, independent of this book. The very multiplicity of purposes to which it can be put, its perspectives on social panics around online content, its mix of cautionary tale (for the baby boomers), wake-up call, inspirational tract, parental self-help manual, marketing guide and policy primer all give the appearance of a 'digital world' in which the reader can wander around. It is also a book in which those who might be described as N-generation members can come to identify themselves as N-generationers, where they can find out about themselves and gain instructions for living as an N-gener. This heady mix of purposes undoubtedly explains the book's popularity and considerable sales which are seeing the kinds of print runs that permit Amazon.com (in January 2000) to market the paperback for (US)\$11.96 and the hardcover for (US)\$16.07 plus postage (it is also given there a 4 out of 5 star reader rating). In my university library, the book is on closed reserve.

Those involved in audience research would naturally express considerable reservations about *Growing up Digital*. It is written with a view to creating a category - an identifiable generation - which could be used by a variety of agents from planners, policy-makers, product-developers, investors, teachers and parents to variously accommodate, reach, teach, care for and exploit the constituency the research has created. The book's involvement in creating a phenomenon which it then exploits is a little uncomfortable, not least because it is in the interests of the author's institution - in this case, a think tank the author runs - to find an audience to fit its prescriptions and diagnosis for the digital economy. But it is this structural connection between audience research and intervention into the audience which makes this a fascinating book rewarding close attention.

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