

THE READER AS USER IN A RE-INTERMEDIATED SUPPLY CHAIN

MAKING THE SHIFT FROM CONSUMER TO USER

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...[I]t is always good to remind ourselves that we mustn't take people for fools. (Michel de Certeau, *The Practice of Everyday Life*)

INTRODUCTION

This chapter analyses the central role of the practices of readers in the development of viable new book product markets. We suggest that terms such as *supply chain*, *supplier* and *consumer* may have been useful for analysing traditional publishing markets but are less appropriate for markets that deal with electronically published materials. Further to this we suggest that if we cast the reader as a *user*¹ rather than as a *consumer*, those in the print and publishing industries can begin to understand a range of new opportunities in electronic publishing² markets.

Language is important in this context as it can imply a number of things about the place and the role of the reader. Use of the term *supply chain* suggests a linear and unidirectional movement of that which is created or produced along a chain of others to those who ultimately buy and consume what has been produced. The concept of reader as *consumer* suggests someone who simply buys and reads books. The concept of reader as *user*, on the other hand, implies someone who *uses* what is read. When the reader is recast as an *active*

¹ A number of authors (de Certeau, M. (1988) *The Practice of Everyday Life*, University of California Press, Berkeley; Manguel, A. (1997) *A History of Reading*, Flamingo, London; Barthes, R. (1993) *Mythologies*, Vintage, London) believe that readers have always been active users and co-creators of what was read.

² The realm of electronic publishing extends beyond the limited domain of digital imprints of traditional books. For the purposes of this chapter the terms e-publishing or electronic publishing refer to digital content, including text, audio, video or image, that is disseminated to others electronically via the Internet or distributed by means of various digital storage media e.g. CDs, DVDs, smart media cards.

user a fundamental change takes place in the way we understand readers.

Thinking of *readers as users* requires a shift in attention from, 'the supposed passive consumption of received products to anonymous creation, born of unconventional practice of these products' use' (de Certeau, 1998). What is suggested here is that products and services are actively used and reshaped in ways that are frequently unrecognised by producers. Michel de Certeau's caustic reminder that 'we mustn't take people for fools' is aimed squarely at the notion of a passive consumer.

DISINTERMEDIATION AND REINTERMEDIATION

Disintermediation and reintermediation of supply chains were popular themes in the literature of ecommerce in the late 1990s (Berghel 2000). Disintermediation was expected to emerge in the form of content creators shortening the supply chain by selling directly to consumers. In some cases technologically enabled new players were expected to emerge to supply products and services that were once the domain of others. Consequently, many publishers have been worried about the disappearance of their traditional roles as intermediaries and aggregators.

These predicted changes have happened to some extent, but a more complex picture is beginning to emerge. The immediacy of the technologies involved in electronic publishing, especially on the Internet, has caused the real-time dynamics of the 'market' and reader behaviour to be brought to bear on publishers. This has revealed a fragmented market, where traditional intermediary roles and forms of aggregation are not necessarily useful or relevant to readers.

Those who act as intermediaries and aggregators can still find a place for themselves, but they must understand the implications of the newly empowered reader. Recasting the reader as *active user* makes it possible to think in terms of the reader and to develop a mix of products, services and facilitative roles that are matched to the requirements of readers. In this context readers become co-designers of the mix of products and services they use, dramatically altering what was previously understood as the supply chain.

In what follows we examine the ways in which publishers and printers can come to terms with an electronic publishing paradigm, debunking the idea of a passive consumer who waits at the end of a chain. Understanding this paradigm requires more than just a change in the ways publishers think. It demands a shift in the ways publishers go about their business.

Specifically in the following sections we discuss:

- *Supply chain thinking versus an e-publishing ecology.* The creation and development of roles within an e-publishing ecology is contrasted with maintaining a place in a unidirectional supply chain.
- *Consumer versus user.* A shift is recommended in the way publishers conceptualise their markets.
- *Market research versus shared context.* An alternative approach to understanding e-publishing markets is suggested. XSIQ, an Australian e-publisher, is used to illustrate some of the concepts.
- *The concept of co-design.* A design orientation that places creators and publishers in the role of designers alongside users is promoted.

SUPPLY CHAIN THINKING VERSUS AN EPUBLISHING ECOLOGY

In this section we contrast a supply chain view of electronic publishing with an alternative view that characterises the interdependent relationships between e-publishing role players as an ecology.

SUPPLY CHAIN THINKING

The unidirectional concept of a supply chain implies a specific beginning, middle and end. The consumer is portrayed as the final entity in the chain, the recipient of a single flow. However, is such a mapping consistent with what users do and will want to do with electronically published materials?

In the traditional supply chain model, the publisher transforms the originator's content into a saleable product via a series of production processes and with the help of intermediaries. In this scenario we might expect the consumer to be waiting passively and anonymously at the end of the supply chain. The consumer is mute,

success or failure of the originator's content is determined by a series of unseen gestures—a book is taken from the retailer's display; the cash register rings up a sale; the book, enclosed in a paper bag, leaves the store held by an anonymous entity; a figure is entered in the monthly sales ledger.

These gestures are recorded as a single transaction. The transaction is multiplied by the *sale price*, less *cost of goods sold* and the publisher and retailer are left with their *margins*. Such stable and persistent concepts are the foundation of commercial practice but represent only one of many possible understandings of what is going on.

The publisher's economic survival depends in part upon a capacity to predict which books consumers will purchase, how much they will reasonably pay for those books and in what quantities those books will be sold.

What happens with a book after the sale seems to be of little consequence. Yet we would contend that what the reader or user makes of, or does with, their purchase is important.

We may be drawn to ask ourselves, what was the 'object' that the consumer purchased? Was the 'object' the laminated cards and printed pages enclosed by the retailer's bag? Perhaps the purchaser was buying an idea, a philosophy, a set of concepts, a fantasy or a moment of escapism. The object that is sold constitutes different things to different people in different contexts. The transaction constituted by the purchase of a physical object propagates up the supply chain, but only in terms of that object. In the case of a book the physical object is a container of stable content. Can electronically published digital objects³ be contained and controlled in the same way as a book? Will the ways in which digital objects are used remain stable and predictable?

THE CONCEPT OF AN EPUBLISHING ECOLOGY

For the purpose of this chapter an *ePublishing ecology* refers to the system of inter-relationships and interdependencies between role

³ The term *digital object* is defined by the OEBF as 'A sequence of bits that incorporates unique naming, metadata, and content. It may be recursive, enabling management of objects at multiple levels of granularity (the whole document, a paragraph, graph etc.) in any medium (text, audio, video, image etc.).'

players that has evolved, and continues to evolve, in an organic rather than systematic or controlled manner.

Tim O'Reilly (2000), founder of O'Reilly & Associates Inc, publisher of a variety of technical books and online publications, uses the term *ecology* to help explain open source software development. He describes the development of an ecology as requiring:

- *co-operation* between species 'each pursuing its own selfish goals, yet somehow weaving a cooperative web that, for the most part, benefits all';
- *time* for a rich environment to evolve as 'one species prepares the ground for another'; and
- *surprise*, 'those random plants and animals...that somehow survive the volcanic eruption.'

Eric S. Raymond (2001) also uses the term ecology to describe the behaviour of the open source community. Raymond defines an ecology as 'a collection of selfish agents attempting to maximise utility which in the process produces a self-correcting spontaneous order more elaborate and efficient than any amount of central planning could have achieved.'

The views of O'Reilly and Raymond help crystallise the interdependency, unmanageability and spontaneity that characterise the development of ecological systems.

The Open eBook Forum (OEBF), 'an international, non-profit trade organisation whose mission is to promote the development of a thriving ePublishing market' recently coined the term *ePublishing ecology* (Open eBook Forum). The OEBF use the term to describe a universal framework upon which electronic publishing entities and relationships can be mapped.

In a recent meeting the authors attended with representatives of the Australian publishing and printing industry the comment was made that, 'everybody is a customer in this industry.' If this is so, then perhaps the publishing industry is already a kind of ecology where role players are interconnected and interdependent.

However, in terms of the major themes of this chapter there are some important relationships that are omitted from the OEBF framework. These include the relationships between users and what is used, the relationships associated with practice, and the relationships *between* readers as they share, discuss, and jointly

understand or experience a text. Relationships between readers are particularly evident in organisational and educational settings and in recreational reading contexts where readers regularly share texts.

Publishers need to look at *why* people share books and other texts. What needs are being addressed in these exchanges? Perhaps there are opportunities for publishers to facilitate multi-directional flows *between* users.

Although OEBF also adopts the term *user* it is always in the context of *end-user*, which they define as ‘the category of person for whom an epublication is produced.’ This term suggests finality in the relationship between role players and ignores the productive use of digital objects from many sources. Digital objects are shared, traded, adapted, aggregated and re-purposed. These digital objects take on the quality of Lego blocks that can be endlessly put together, pulled apart and recombined in an unlimited number of user designed and constructed arrays. Such practices blur the distinction between creator and consumer and provide a rationale for adopting the term *user* rather than *consumer*.

In the evocatively titled *Small Pieces Loosely Joined* (Weinberger, 2002), a soon to be print-published book about the Web by David Weinberger, we find a text that was publicly authored online. Readers responded to Weinberger’s text while it was being authored offering comments and suggestions. Readers were cast as users and co-creators of the text. ‘In return, I’ll get great ideas, will be steered away from embarrassing intellectual lapses, and will turn readers into collaborators.’⁴ Weinberger’s readers both read and authored the text. Some of their ideas were incorporated in the ‘book’; other ideas influenced the content more subtly. Weinberger’s readers were not consumers and yet some of them will buy his book.

The practices of users in an emerging ecology are less likely to be predictable and more likely to be complex, diverse and difficult to isolate and observe. So how can publishers find roles in the midst of such dynamic and unpredictable circumstances?

Addressing the ways in which readers *use* electronically published material seems to be one way of developing a more complex understanding of an ePublishing ecology.

⁴ <http://www.smallpieces.com/content/chapter1.html>.

CONSUMER VERSUS USER

In this section we make clear a conceptual distinction between consumers and users⁵ and discuss why this distinction is more than just a preference for one term over another.

THE PERSON WHO USES IS A USER, NOT A CONSUMER

Donald Horne, author of the seminal 1964 commentary on Australian social, cultural and political life, *The Lucky Country*, was interviewed recently about his views on contemporary Australian society. In response to a question about consumers, Horne said:

...the word consumer should drop out. We're not consumers we're users, and using is a kind of productive thing (Doogue, 2001).

In this context, use evokes an ongoing rather than a bounded relationship, an active rather than a passive role. Horne's concept of using as 'a kind of a productive thing' is suggestive of a user who is also a producer. How does this fit with the dominant uni-directional supply chain paradigm, or OEBF's concept of the end-user?

The transactional model of an anonymous book-buying consumer excludes the possibility of a relationship between *reader as user* and publisher. The bookseller mediates the book-buying transaction. At the completion of the transaction the consumer goes home with a book, the bookseller with a payment and the relationship between consumer and bookseller is ended. The role of the bookseller is to provide books for sale, to find ways of attracting consumers, and perhaps to reassure the consumer that a particular book is worth buying. The bookseller remits payments to the publisher. The principal transaction begins and ends when a decision is made to buy.

The term *user* implies *use*, and use may be ongoing. In this context the emphasis is shifted from the transaction between buyer and seller, to the relationship between the user and what is used—from the product or service to the *use* of that product or service. Moreover, the use of a product or service may continuously

⁵ Thackara (2000) argues that the term *user* is also inappropriate preferring the term *actor* because of the sense of agency and self determination implied. Although we agree with Thackara's motive in directing attention to an active rather than a passive user, for the sake of this chapter we will continue to employ the term *user*, as it allows us to highlight specific characteristics and opportunities, which are central to our propositions.

modify both user and what is used. In this sense, we can talk of active *use relationships*, rather than passive transactions. In this context, where we set out to provide something to be used rather than something to be consumed, product and service designers must think in terms of designing an experience.

USER AND USE ARE UNPREDICTABLE

When we shift our attention from the reading (use) of books to the range of technologies and practices associated with electronic publishing, the rationale for a focus on the user and use becomes clearer. With a book the range of uses may be somewhat predictable, bounded by the limitations imposed by the form. Whereas, with digitised content and a continuing development of enabling technologies, many users' practices have become less predictable and not so well understood.

Whilst it is possible to maintain an abstract relationship with the reader as consumer seen from afar, we believe that this approach is less effective for understanding the active reader as user.

USERS KNOW? USERS ACT?

By definition users use things, they interact with things, and through such interactions they create relationships with, and alterations to, those things. So 'if a thing is worth using, people will figure out how to use it...in figuring out how to use stuff, users make the stuff better' (Thackara, 2000a). This is an important insight, sometimes overlooked in the design process. Users are active, they shape, they create. Sometimes users can articulate what they know about their use of something, at other times they are not consciously aware of what they do, they simply use that thing.

USER AND USE ARE INSEPARABLE

So, how will publishers discover what users may not be able to articulate? How will publishers learn to *listen* to a language of gestures, the embodiment of user practices, so that they can see what the user does, as well as hear what the user says? If publishers are to design experiences rather than products they will need to know their users very well. When McCullough says that 'little can surpass the hands in showing that we know more than we can say', it is clear that it will not be enough to listen to users with our ears

alone. To paraphrase de Certeau (1988) we must learn to capture the *murmuring* of their practices.

MARKET RESEARCH VERSUS SHARED CONTEXT

This is not a call to conduct more market research, surveys, focus groups or statistical analysis, as such studies measure only what is measurable and rely on knowing and asking the right questions. The capacity to predict what someone will buy implies that the buyer is well understood, but predictions are quite often based on interpretations of abstract data that 'represent' the customer.

Breaking down complex market forces into manageable types is a popular theme in market research. F. Scott Fitzgerald, commenting on his own fiction writing, said that if he began with an individual, he soon had a type, but if he began with a type, he soon had nothing (Forester, 1999). The reduction of complexity offered by demographic or sociographic models is appealing but at what cost?

Demographically segmented models loaded with statistical data tell us nothing about users and their practices.

Statistical investigation remains virtually ignorant of these trajectories,⁶ since it is satisfied with classifying and calculating, and putting into tables the 'lexical' units which compose them but to which they cannot be reduced, and with doing this in reference to its own categories and taxonomies. Statistical investigation grasps the material of these practices, but not their *form*. Statistical inquiry...finds only the homogenous. The power of its calculations lies in the ability to divide, but it is precisely through this analytic fragmentation that it loses sight of what it claims to seek and to represent (de Certeau, 1988).

Generalisations based on how things seem to be from a distance can be misleading. If we find only the 'homogenous' in our statistical analysis we may be less anxious, but no better off in terms of our understanding of users. If we begin with types we may end up with nothing.

A purely commercial interest may also impede our capacity to understand users. 'The end game is to own the customer... Mind share precedes market share' (Hilts, 2001). This is an example of the

⁶ de Certeau (1988) uses the term trajectories in a deliberately evocative way—'...consumers produce through their signifying practices something that might be considered similar to the "wandering lines" drawn by autistic children: "indirect" or "errant" trajectories obeying their own logic...their trajectories form unforeseeable sentences, partly unreadable paths across a space.'

customer as abstraction—an entity invented so that a seller can sell and, in this case, ‘own’ the customer. The commercial relationship dominates the seller’s thinking. The customer is a type.

The user on the other hand cannot be a type. The user is a person, and ‘users come in all shapes and sizes... There is clearly no such thing as an average user’ (Poulson, 1998). When users are perceived in this way the methods required to predict their behaviours and responses become impossibly complex. So how can publishers reconcile this diversity and complexity with a need to develop product or service offerings in ePublishing markets? What are the alternatives to a typological understanding of people? How can user practices be made visible?

If people are users not types, we will need to ‘give priority to human agency, and not treat humans as a ‘factor’ in some bigger picture’ (Thackara, 2000b). From this perspective, people become the central and dominant consideration; people act on products and services rather than passively consuming what has been produced.

Attention moves from developing products and services for abstract entities to figuring out how to provide something a user will value that supports or facilitates their practices.

We are shifting our emphasis from the product used to the relationship. The product (or service) in such a scenario is a tool that allows users to establish relationships with what they use. In a way, we can argue that we are designing experiences, not products or services (Thackara, 2001).

So what should publishers and printers design? A product? A service? A relationship? An experience?

In our view publishers and printers need to begin thinking in terms of creating relationships *with users* rather than producing products *for consumers*.

An important characteristic of such an approach is the development of a cyclical, reflective and iterative design process. According to Reardon, reflection ‘generates new assumptions, new theories, new hypotheses’ and that designers should ‘actively experiment with this knowledge to see if it has had the desired impact.’ (Reardon et al., 1993). Where does the cycle begin? How can publishers gain entry to this reflective, iterative loop?

We think, in part, it begins with questions.

The literature around user-centred design and co-design is studded with ‘how’ questions:

- How can we create intrinsically motivating computational environments and open systems, in which stakeholders feel in control and accept the role of active contributors rather than passive consumers? (Fischer, 1998, in Arias and Andrew Gorman, 2000).
- How can we bring a variety of aspects (social, cultural, physical, virtual) together to support the creation of shared understanding? (Resnick et al., 1991, in Arias and Andrew Gorman, 2000).
- How can we create co-evolutionary environments, in which stakeholders change because they learn, and in which systems change because stakeholders become co-developers and engage in end-user modification and programming? (Mackay, 1992, in Arias and Andrew Gorman, 2000).
- How can stakeholders incrementally construct domain models that do not a priori exist but instead are socially constructed over time by communities of practice? (Lave, 1988, in Arias and Andrew Gorman, 2000).

This set of questions, collated by Arias, indicates a sustained interest amongst designers in how the design of products and services can be reframed around the user as co-developer or co-creator. Such questions promote a reflective orientation and prompt us to develop methods that include users in the design of products and services. One approach to developing these methods is to create situations where users and product service designers share the same context.

CONTEXT IS CRITICAL

If we are serious about designing for real life, then real contexts have to be part of the process. User knowledge is always situated. What people know about technology, and the experiences they have with it, are always located in a certain time and place (Thackara, 2000a).

Our aim should be a shared understanding of users' practices—an understanding that results from sharing the same situation. This requires the development of an open and inclusive approach to the design of products and services where the user is an active participant alongside the designer.

In a communication between Malcom McCullough, Associate Professor of Architecture at Harvard University Graduate School of Design, and John Thackara, McCullough writes:

...design is increasingly about appropriateness; appropriateness is shaped by context; and the richest kinds of contexts are places (Thackara, 2000a).

Does this mean that the product or service designer should co-habit the user's space?

Is it practical for publishers to go where the user is using? Is this a proposition that sounds good in theory but cannot be translated to practice?

AN EXAMPLE: XSIQ AND JOHN PAUL COLLEGE—MORE THAN A PARTNERSHIP

In research undertaken for Chapter 10 in this book, the Vice President of XSIQ, Tony Carrucan, was interviewed. XSIQ has developed a software platform called CourseBuilder, which allows teachers to build their own digital-content courses by integrating material from 6000 XSIQ *digital objects* with teachers' own resources. The CourseBuilder platform accommodates and integrates a range of resource formats including digital audio and video files.

Initially XSIQ developed their digital media products as CDs, based on the design of traditional textbooks. Content was selected on the basis that parents were deciding what their children should be learning but XSIQ soon realised that it was teachers who made decisions about content—it was teachers who were XSIQ's users.

When XSIQ produced pre-packaged, subject-specific content, teachers responded with 'that's not the way I teach.' Now they provide their content as 700 learning topics, which are further broken down into 6000 digital objects.

Mr Carrucan stated that, 'the teacher can decide what is appropriate... They have the flexibility to change and adapt material to their own specific context.' Mr Carrucan also believed that content in this form can be readily adapted for international markets.

He said that a teacher can, 'put in anything they want, using CourseBuilder as a base, and burn their own CD textbook.' In this scenario the user creates the product through use. The user becomes a co-creator adapting and changing the product to match his or her own practices and needs.

XSIQ use a core group of teachers and students to review products. In addition they buy and re-purpose content from a number of schools, which they then on-sell to other schools. This

allows them to edit and adapt material to ensure consistent quality, whilst continually adding to the pool of content from which teachers can select.

When asked if he considered teachers to be co-designers of the content, Mr Carrucan replied, 'Yes, absolutely!'

Mr Carrucan says there are many Australian schools using XSIQ content. His perception is that no two schools use it in the same way. Each of the created and assembled courses represents a particular teacher's unique set of values and preferences. This is consistent with the view that 'content is something you do—not something you are given' (Thackara, 2000b).

In this context it makes sense to provide modular content at this level of granularity because it matches the practices and preferences of the users. These practices and preferences only became apparent after intimate engagement at staff and student level. It was this engagement that allowed a deeper understanding of the context of the school as experienced by students and staff.

Mr Carrucan believes that the XSIQ product became markedly more popular when it addressed what teachers (as users) wanted to do. 'Teachers don't want another digital imprint of a textbook,' he said, 'they want a resource they can use.'

It seemed to the authors that XSIQ had provided a means for teachers to manage and control the choice and flow of materials into their classrooms. In this context there appeared to be a shift occurring from content provider to classroom facilitator.

Tony Carrucan is moving to Queensland in February 2002 to locate himself at John Paul College (JPC). Mr Carrucan will stay on as Vice President of XSIQ, but spend the majority of his time working to contribute to the vision of the future at JPC. He sees this form of partnership, where he is embedded in the educational environment of the school, as desirable.

So, why is Tony Carrucan, epublisher, locating himself at John Paul College? Is it practical for publishers to go where the user is using?

Mr Carrucan seems about to find out. In an innovative partnership each entity is set to benefit from the experience of a shared context. Mr Carrucan will be operating alongside teachers and students. He will discover, first hand, their day-to-day requirements.

The circumstances that led to this move began with JPC's involvement in the development and review of XSIQ's products and services. This opened up opportunities for a dialogue between the school and publisher—they got to know each other.

If publishers are searching for a starting point to enable them to see the consumer as user, it is in the kind of face-to-face relationships that have been established between XSIQ and John Paul College, wherein each entity benefits from the relationship. From a design perspective, the XSIQ–John Paul College partnership is a model of co-design.

THE CONCEPT OF CO-DESIGN

We will not pretend things are simple, when they are complex. We value the fact that by acting inside a system, you will probably improve it (Thackara, 2000b).

The people at XSIQ and John Paul College seem to have been listening at Thackara's door, because the case study in the previous chapter exemplifies the principles of co-design.

Many researchers, industries and practitioners have understood the power and importance of user-centred design and associated methodologies. In user-centred design the emphasis is on understanding human characteristics and needs, and on the development of products and services that can satisfy these needs. 'This conflicts with a technology driven approach to design, which starts with an idea for a product, and then tries to find a problem for it to solve' (Poulson, 1998).

Co-design takes the concepts of user-centred design a few steps further. The designer ventures out of their office and into the space of the user, 'the social inclusion and active participation of the users' (Trigg, 2000).

Co-design requires, 'a philosophy of total user involvement with the systems they will eventually use in their roles as producers' (Jones, 1997). This picks up on our earlier theme of *using* as a productive activity and provides the means by which designers can capture de Certeau's *murmuring* practices.

As creators, providers or intermediaries we can often become disconnected from users' contexts and daily tasks. We can project onto an abstract and anonymous consumer or user our preconceptions of what they value or need, and use these

projections to predict what they will buy. We can try to imagine on their behalf, but in the end we may only be imagining our own needs.

Publishers are experts in the design of books as products, but less knowledgeable when it comes to designing relationships, services or experiences. A design process that allows users to participate is one way of avoiding the misleading abstractions and predictions about who people are or what they need. Such an approach will lead to the design of products and services that are directly informed by users' needs.

This type of orientation to design and the concept of co-design can be related to the broader context of *readers as users*. In this context a distinction needs to be made between *communities of practice* that have a physical hub of activity such as a school or an organisation, and those that have a virtual or philosophical hub, such as readers who share an interest in a particular genre or specialisation.

It may be straightforward to design experiences where a community of practice has a physical location, where it is possible to observe and listen to users. But how do designers get close to a community of practice that is widely dispersed, where activities or interests are shared, rather than a geographical place? Recreational readers are a widely dispersed but pervasive example of such users. Perhaps geographically dispersed users are drawn together by shared resonances rather than proximity. How can publishers identify and respond to these shared resonances?

CONCLUSION

People often don't behave in the ways we expect them to do, and have an uncanny knack of doing exactly the one thing which was not predicted (Poulson, 1998).

Product service offerings for electronic publishing markets must be designed, but we don't believe that publishers need to be designers. Succeeding in an emerging ePublishing ecology is not about being a designer but about being aware of changing practices and the potential roles such practices open up.

The notion of a stable flow of goods and services between creators and consumers has been undermined by the availability of digitised content, electronic reading devices and other enabling

technologies. The trafficking and control of this content is not linear and straightforward in the same way that it has been for traditional books and printed materials. Practices of sharing, trading, adapting, aggregating and re-purposing content are common. These practices have blurred the roles of creator and consumer, publisher and reader.

Readers are active members of an ePublishing ecology, so, in this context, we should abandon the concept of reader as consumer in favour of reader as active user. The multi-directional flows between active users should be seen as an opportunity for facilitative publishing roles, rather than as a threat to nascent markets.

The uniqueness of each context and the impossibility of applying types, categories, and 'rules' is as true for prescribing solutions for publishers and printers as it is for understanding users. The direction publishers seek is trapped in the many questions we have asked throughout this chapter, but the answers inhere in the changes taking place in users' practices.

Senses of future possibilities vary. Information is not perfect. Understanding is not guaranteed. Even if words are clear, there is still far more to learn than meets the ear (Forester, 1999).

NOTE

PROJECT-MU conduct all of their work in a collaborative mode. All authors contributed equally to this chapter and are listed alphabetically for convenience.

REFERENCES

- Arias, E., Hal Eden, Gerhard Fischer and Andrew Gorman and Eric Scharff. (2000) *Transcending the Individual Human Mind—Creating Shared Understanding through Collaborative Design*, HCI in the New Millennium, www.cs.colorado.edu/~gerhard/papers/tochi2000.pdf Accessed 15 January 2002.
- Barthes, R. (1993) *Mythologies*, Vintage, London.
- de Certeau, M. (1988) *The Practice of Everyday Life*, University of California Press, Berkeley.
- de Certeau, M., Giard, Luce., Mayol, Pierre. (1998) *The Practice of Everyday Life, Volume 2: Living & Cooking*, University of Minnesota Press, Minneapolis.
- Forester, J. (1999) *The Deliberative Practitioner—Encouraging Participatory Planning Processes*, The MIT Press, Cambridge, Massachusetts.
- Doogue G. (2001) Donald Home: A Conversation, ABC Television Australia, <http://www.abc.net.au/compass/s431230.htm>. Accessed 15 January 2002.

- Hilts, P. (2001), '21st Century Publishing', *Publishers Weekly*,
<http://publishersweekly.reviewsnews.com/index.asp?layout=article&articleid=CA83236&display=ePublishingNewsMore&industry=ePublishing&verticalid=127&starting=21>. Accessed 15 January 2002.
- Jones, P. H. (1997), *Revising the Roles of Management in Participatory Design*, Redesign Research. <http://www.poetics.org/redesign/pd-mgt.htm>, Accessed 15 January 2002.
- Manguel, A. (1997) *A History of Reading*, Flamingo, London.
- Open eBook Forum (2000), *A Framework for the EPublishing Ecology*, Public Comment Draft Version 0.78, Open eBook Forum. <http://www.openeBook.org>, Accessed 15 January 2002.
- O'Reilly, T. (2000), *The Network is the Computer*,
http://www.oreillynet.com/pub/a/network/2000/06/09/java_keynote.html?page=1. Accessed 15 January 2002.
- Poulson, D. (1998), *User Centred Design Methodology and Tools*, Husat Research Institute. <http://www.lboro.ac.uk/research/husat/include/1-0.html> Accessed 15 January 2002.
- Raymond, E. S. (2001), *The Cathedral and the Bazaar*, O'Reilly and Associates, Cambridge.
- Reardon, K., John Welsh, Brian Kreiswirth and John Forester (1993), *Participatory Action Research from the Inside: A Profile of Ken Reardon's Community Development Practice in East St. Louis*, *America Sociologist*, Vol24 Iss1, pp. 69–91.
- Thackara, J. (2000a), *The rules of engagement between design and new technology*, The Doors of Perception, Computer Human Interaction Conference, The Hague, The Netherlands.
http://www.doorsofperception.com/framesets/bubble_frameset.html, Accessed 15 January 2002.
- Thackara, J. (2000b), *The design challenge of pervasive computing*, The Doors of Perception, Computer Human Interaction Conference, The Hague, The Netherlands. <http://www.doorsofperception.com/projects/chi/index.html>, Accessed 15 January 2002.
- Thackara, J. (2001), *Why is interaction design important?*, The Doors of Perception, Computer Human Interaction Conference, The Hague, The Netherlands.
http://www.doorsofperception.com/framesets/bubble_frameset.html, Accessed 15 January 2002.
- Trigg, R. (2000), *The Participatory Design Conference 2000*,
<http://www.cpsr.org/conferences/pdc2000/>, Accessed 15 January 2002.
- Weinberger, D. (2002), *Small Pieces Loosely Joined*, Perseus Books.
<http://www.smallpieces.com/content/chapter1.html> Accessed 15 January 2002.