

Introduction

Contrary to Romantic notions of individual ‘genius’ and Divine inspiration, innovation requires access to existing bodies of human knowledge. All knowledges are cumulative, built by processes of accretion, not exclusion. Knowledge is formed by branching generative processes; the action of knowledge upon knowledge creates new knowledge. Repeat sequence *ad infinitum*. In an ‘information society’ labour undertaken by ‘knowledge workers’ becomes a primary productive force, call centres nudging out the factories. Communication and co-operation remain key to technological development, whether this be the capacity to build smarter bombs, smarter dwellings or smarter networks.

For technological innovations to generate social impacts, they must enter the public sphere.⁰¹ A spirit of reciprocity—a mutual sharing of ideas, stories, knowledge and expertise—is critical for the evolution of any field. Information and knowledge are prerequisites to wisdom, a human quality which is surely needed to solve the urgent problems we face on a planetary level. Yet today there prevail cultures of scarcity, and enclosures of knowledges—via the unprecedented and aggressive application of intellectual property law extending even to lifeforms. The social circulation of knowledge is significantly impeded. Authors of the Vienna Document anticipate “a silent spring in Information Society when even a bird’s song becomes subject to copyright control”. They suggest that “intangibile information resources raise the issue of a digital ecology, the need to understand ecosystems constituted by information flows through various media”.⁰²

If we consider the big ecological picture of the global mediascape, a few mountains loom so large it is no longer necessary to name them. The landed crossmedia and telco owners transform themselves and their heirs into digital entrepreneurs. They divert large amounts of debt capital away from traditional advertainment channels to colonise electronic spaces opened up by the internet. The glare of mergers and acquisitions is blinding, and the rewards of wayfaring in the once unbounded frontier zones are often disappointing. Too many billboards and increasing restrictions choke the way.

Yet outside the shadows cast by these giants, irregularly-shaped landforms can be found. Small chains of interconnectivity. Digital ecologies of fringe media systems, exploratory artforms, software and media activism have always been pushing at The Impossible. Archipelagos of freely-shared knowledges, atolls of recycled and custom-built free media tools, riverine networks carrying ideas and informational goods through hundreds of cultures. This is the subject of this book—stories about innovation within art and media and beyond—from the isles of free culture.

The Coding Cultures project was conceived by David Cranswick, Director of d/Lux/MediaArts, to introduce audiences in Australia to some of these new ecosystems. The focus is upon socially-engaged cultural practices that provide frameworks to cooperatively build and share free media tools, content, visions of change. This is a powerful historical moment, involving networks of networks, spaces of flows, cultures of abundance, and local and global social campaigns and movements. By opening up access to the means of production, people around the world are creating knowledge-based products and social relations that resist commodification, command and control. *A Handbook for Coding Cultures* offers readers a small series of “deep excursions”⁰³ into the nexus between creative practices and social goals of groups from the UK, Belgium, Australia, Brazil, Italy, Hong Kong, Canada and Jamaica.

Open Code, Open Culture

These emergent forms of cultural production emanate from the Global South and the Global North, from ‘centres’ and ‘peripheries’. They are enabled, in part, by socio-technological phenomena such as the Free Software movement, and the related Open Source Software design and development model.⁰⁴ Geographically-distributed, highly communicative networks of people utilise the internet to build digital artefacts which remain ‘open’. That is, the deepest strata of these artefacts, their source codes, are not proprietary or exclusively owned in the conventional sense.⁰⁵ Thus the resultant products resist privatisation and can be modified and used by others, as long as they likewise agree to retain this open quality.⁰⁶

In his book *Behind the Blip: Essays on the Culture of Software*, Matthew Fuller (2003) proposed that computers are “assemblages”, combining technical, mathematical, conceptual and social layers. Through critical examination we can better understand “the wider assemblages which they form and are formed by”. Software creates sensoriums, “ways of seeing, knowing and doing in the world”.

So-called Open Code has ramifications, beyond the technics of bits and bytes of data, that feed into a global movement of ‘Open Culture’. Code as craft, language and cultural text. The labour processes required in making free media tools feed back into broader social visions, cultural mores and creative practices. Such collaborative processes become templates for ‘contributory culture’ or ‘participatory culture’. Experimentation with others ranges from open access to knowledge fostered by the Open Science movement, to encyclopaedic Open Knowledge projects like Wikipedia; and from the Open Editing of citizen journalism platforms such as Indymedia and OhMyNews, to the copying and remixing of creative output enabled by Open Content media platforms.⁰⁷

These kinds of autonomously-managed, horizontally-organised, generative activities have been termed ‘peer production’. Each of these cultural practices has its own trajectories and histories and influences—from nineteenth-century political activism via self-published pamphlets, to the visual/textual collages of Dadaism and environmental sound sampling methods of Fluxus, from the anarchic *auto-gestiti* (self-management) of Italian social centres to the *Do It Yourself* praxis of early Punk.

According to sociologist Manuel Castells,⁰⁸ internet-based technological transformation of media participation is of “historic dimensions”. He likens it to the “new alphabetic order” of the ancient Greeks, which “provided the mental infrastructure for cumulative, knowledge-based communication”. Hypertext and a “meta-language” integrate oral, textual, aural and visual modalities into one system of communication, which reunites the human spirit, says Castells, in “a new interaction between the two sides of the brain, machines, and social contexts”.

The knowledge-based outcomes of peer production contribute to a global ‘digital commons’. Just as earthly commons centre around communally-shared and co-operatively managed material resources—land, trees, water, air, and so on—so the digital commons can be imagined as shared *immaterial* resources. These proliferating nodes of electronic spaces, social technologies, intellectual goods and cooperative labour are made manifest by the internet. The voluntary labour driving this phenomenon is acting on an unprecedented scale, effecting both knowledge generation and social organisation.

In a recent text, cultural commentator and curator, Armin Medosch, stated:

Fundamental to Open Source Culture’s value system is the belief that knowledge should be in the public domain. What

is generally known by humans should be available to all humans so that society as a whole can prosper. For most parts and wherever possible, this culture is based on a gift economy. Each one gets richer by donating their work to a growing pool of publicly available things... Open Source Culture is a culture of conversation and as such based on multiple dialogues on different layers of language, code and artefacts. But the key point is that the organisation of labour is based on the self-motivated activity of many individuals and not on managerial hierarchies and ‘shareholder value’.⁰⁹

Coding Cultures Concept Labs

The Coding Cultures project initiated by d/Lux/MediaArts comprises four main strands. Firstly, there are the **Concept Labs**: a week-long program of peer-to-peer, face-to-face interaction and exchange between four guest artists, two associated with the Proboscis group (UK) and two with the Container Project (Jamaica), and local Australian artists and community cultural workers. The Concept Labs will run from 5–8 March 2007, and are hosted by Campbelltown Arts Centre, situated in the vibrant, culturally-diverse region of Western Sydney. Reflecting the spirit of free culture, the Concept Labs are free of charge, and each participant will spend an intensive session with Proboscis or Container artists. Workshopping specific art project ideas together, the focus is on testing ideas about how digital tools, hybrid technologies, community-based media centres and web platforms can provide affordable means of collaboratively crafting imaginative works for local or geographically-dispersed audiences.

We anticipate a serendipitous synergy arising from interactions within the Concept Labs. Our guest artists bring with them very specific experiences—in art and in life—but what they share is a passionate commitment to co-operative creative processes that can illuminate experiences and (potentially) transform specific material conditions. Cross-cultural dialogues occurring in compressed spaces of time (like conversations with strangers on trains), and invitations to reveal a creative idea while still a seed, can summon some alchemical power—jump-starting an embryonic idea, suggesting unexpected ways of materialisation, or doing a total Rumpelstiltskin makeover, from straw to conceptual gold, and maybe back to straw again.

Alice Angus and Giles Lane form the heart of UK-based Proboscis. Collaborating with geographic communities and communities of interest in partnership with other subject specialists, Proboscis innovates within and extends many media forms, from tactile paper-based, unfolding multi-narrative *StoryCubes*, to gleaned net-based

mapping tools which enable “guerilla public authoring”, to customising and hybridising toy robots and environmental sensors in *Participatory Sensing*. The group’s interdisciplinary practice offers visionary frameworks for “playful experimentation for how society can question and understand what it is to be social beings in a networked world”.

Camille Turner (Jamaica/Canada) brings a substantial experience as a black new media artist working to create “points of access for other marginalized people to represent themselves”. To fulfil this aim she has helped tailor sustainable Digital Storytelling and multi-lingual Peer-Facilitator programs aimed at empowering a range of communities. These diverse groups include refugee and immigrant women, and deaf girls, from housing projects in downtown Toronto, to under-employed youth in Jamaica.

Artist mervin Jarman employs “street art-technology (arTec) initiatives... to ignite the curiosity, imagination and emerging energy of young mongrels on the street corners”. Collaborating with other “mongrels”, mervin has drawn upon his own experiences on the streets of Jamaica and London. He uses art, especially digital and internet-based forms, as a means of cultural intervention and social transformation, “repatriating technology”, and exchanging skills and ideas, with other marginalized communities around the world. The hub for many of mervin’s activities is his Container Project initiative, a community-based media centre inside a converted shipping container situated in rural Jamaica.

Coding Cultures Symposium and Regional Program

The second strand of Coding Cultures is the **Coding Cultures Symposium** on March 9th, 2007. This event brings together our international guests artists with Australian cultural activists, filmmakers, creative producers and artists. Using examples from their community-based internet, software, video, performance and public art projects, speakers will share experiences of coding / recoding / uncoding cultures. These will illustrate how digital and communications technologies can amplify and extend cultural production.

Writer, film director and interactive media producer, David Vadiveloo, draws upon his experiences with the groundbreaking Indigenous children’s television and web series, *Us Mob*. He speculates—with a sense of urgency—how “substantive partnerships”, those authentically inclusive of some of the most disregarded, neglected and scorned in local communities, those offering real opportunities for skilling-up, can be developed and sustained. How can these kinds of process-driven collaborations, feeding into the new distribution

portals of the internet, “exploit the commercial hunger for new content” and reshape political, cultural and social landscapes?

Jennifer Lyons-Reid and Carl Kuddell from tallstoreez productionz will describe their creative processes, concentrating on two projects—*First Fleet Back*, a reality TV mockumentary made in collaboration with Arabunna elder, Uncle Kevin Buzzacott, and *Directing the Hero Within*, a highly successful digital storytelling and video skilling project involving groups of young people around urban and rural Australia. They will share their first steps in creating a web-based social network and video-sharing platform to foster dialogue amongst the young videomakers in the *DTHW* program, and discuss how this project can be considered a form of dynamic ‘social sculpture’.

Big hART, an acclaimed and prolific Australian arts company, opens up opportunities “for people experiencing the effects of marginalization to make positive changes to their lives through participation in the arts”. Chris Saunders, a Big hART creative producer and program coordinator, discusses three very different recent collaborations—*Junk Theory*, *Ngapartji Ngapartji*, and *Northcott Narratives*. These have employed a mix of technologies, languages and artistic approaches with which to explore issues of critical importance to many Australians—Indigenous, ‘settled’, and recent immigrants.

Lena Nahlous is the Director of Information & Cultural Exchange (ICE), an organisation based in Western Sydney “working at the intersection of arts, culture, technology and community”. ICE initiates and supports a wide range of projects within affinity-based and ethnic communities. These projects include blogging narratives, hip hop poetry performance, documentary and experimental video, and sound works, and employ art methodologies and outcomes to “build community resilience, autonomy and infrastructure and to enhance quality of life and well-being”. Sharing the symposium presentation slot with two artists who work with ICE, Ben Hoh and Trey Thomas, Lena Nahlous will discuss the collaborative processes underpinning recent projects and the social networks forming through new critical platforms of expression.

The third strand of Coding Cultures is the **regional tour** of artists from Proboscis and Container to Broken Hill, an iconic mining city in rural New South Wales. d/Lux/MediaArts has mentored Broken Hill Art Exchange in a recent project, setting up a residential media art lab. The Coding Cultures rural outreach events aim to inform and inspire local artists and community arts development workers, with a view to fostering future joint projects that could include an extended artist-in-residency program, and media skilling workshops.

A Handbook for Coding Cultures

The fourth strand is this book itself, *A Handbook for Coding Cultures*. As Commissioning Editor for the publication I wanted to invite texts from people who are co-operatively building some of the nodes and networks, tools and processes, of participatory culture. But a mere handful of authors could not represent the diversity of approaches, cultural influences and ethical positions driving this emergent phenomenon, especially within the confines of a small book. I decided upon a series of “deep excursions” into the fields and fiords of open culture, commissioning six original texts from artists, writers and cultural activists whose work I have followed with interest. Their projects and processes are emblematic of many of open culture’s animating key principles and practices. *A Handbook for Coding Cultures* also includes contributions from guest artists Alice Angus and Giles Lane, Camille Turner, and from mervin Jarman with Jamaican journalist Sonia Mills, plus statements from each of the Symposium speakers. When these texts are considered together they offer a framework for understanding the interrelations between free software and free culture, open code and open knowledge, co-operative research and production, nodes and networks, and the dynamic conjunctions between art and activism.

Ruth Catlow and Marc Garrett from Furtherfield, a non-profit arts organization that is physically based in London and simultaneously manifested as a distributed community of “sister-sites and projects” around the world, discuss their experiences in using and developing “networked media” to enable socially-engaged projects. They introduce the concept of “artware”, which they describe as “software platforms for generating art”, where users—who often come from under-represented constituencies—become “co-producers in a network”. Furtherfield term the co-operative relations generated when people come together in this way “Do It With Others” or “DIWO”, a new kind of DIY approach to collaborative grass-roots cultural production. DIWO enables the generation of new kinds of art projects, digital tools and “structures of co-operation”, and the dissolving of modern(ist) boundaries separating an elite class of artists from a passive consumer class of audiences. The results of such co-production—from online art residencies to realtime media jams over the net—are seen as contributing to a “cultural landscape that has value and meaning for all participants”.

In their text Maja Kuzmanovic and Nik Gaffney from FoAM, a small artist-led organisation with studio bases in Brussels and Amsterdam, discuss workshop structures and learning processes for enabling knowledge sharing and skills exchange. FoAM have a particular research and production focus on collaborative ‘Mixed Reality’ or

‘Hybrid Reality’ work, in which digital and physical worlds intertwine, and scientific knowledge coupled with appropriate technologies, contribute to the making of art works. The writers present case studies of two interdisciplinary, social learning events they co-ordinated that have used the flexible ‘Open Space Technology’ workshop format: *Soft-Wear* (using responsive textiles), and *Soft-ware* (using real-time computer-generated animation). From electro-luminescent spuds to sound-responsive pattern-changing wallpaper, to “amazing feats of abstraction-wrangling”, the workshops skill people in new ways of making innovative cultural forms. For FoAM, the processes of art production are not separate from quotidian realities. They consider that “transdisciplinary knowledge and hands-on skills encourage a more pro-active and responsible participation in all aspects of our everyday lives”.

In his discussion of two free media projects, EngageMedia and Transmission, Australian media activist Andrew Lowenthal provides a brief introduction to free software, and highlights some of the guiding ethical principles of this movement that have been “ported” to other realms, influencing and shaping new socio-technical assemblages. His text draws out important distinctions between the popular, commercial media-sharing (or “pseudo sharing”) sites such as YouTube and MySpace, and independent grassroots manifestations of the “free culture movement” as exemplified by the open publishing Indymedia network or the recently established EngageMedia video sharing website. Andrew Lowenthal delineates some of the trade-offs that are (often unwittingly) made by users of proprietary online spaces, where the so-called Web 2.0 business model is another way of advertisers and media oligopolies accessing demographically-enhanced “communities for sale”. With the internet increasingly resembling a shopping mall, the symbolic and strategic importance of independent, inclusive, cultural production frameworks and related peer production networks, becomes apparent. As “the masses are replaced by the network, [and] command by collaboration”, different kinds of productive and co-operative social relations emerge, prefiguring new pathways for building progressive social change.

Leandro Fossá is the international coordinator of the Brazilian Government’s Digital Culture team. In collaboration with Claudio Prado (a “counterculture activist” from the 1960s, and now Digital Policy Coordinator of the Cultural Ministry of Brazil), he sketches out the groundbreaking initiatives around “free culture” emanating from Brazil’s Digital Culture Agenda. The *Pontos de Cultura*, or Cultural Hotspots, radiate out from the heart of this vision, hundreds of community-based free media centres, situated in urban *favelas* and rural villages, “laboratories of technology, based on free knowledge”. Valorizing and stimulating existing (and very diverse) socio-cultural

projects, the *Pontos de Cultura* combine hybridised multimedia production kits (low-tech, recycled gear and free software) with three web-based knowledge-sharing systems. Added to this are “Free Knowledge Meetings”—a touring program of community discussion and practical skilling labs. Leandro Fossá highlights the linkages between collaborative cultural production, social inclusion projects and the new opportunities afforded generally by digital culture, especially when utilising the communicative platforms of the internet. He concludes that the strategic “experiment in Digital Culture in Brazil constitutes a laboratory of the new ways of the twenty-first century”.

Agnese Trocchi recounts ten years of working with *CandidaTV*, a Roman video collective that aimed “to give space and tools to people’s points of view on reality and to give legs to our dreams”. In tracing the group’s history—from their involvement with digital networking via the birth of the first bulletin board in the Forte Prenestino social centre, to their collaboration with software artists to make innovative narrative tools for projection in self-organised rave parties, to their production of community-based “domestic television” programs that were also “narrowcasted” via the Italian *Telestreet* network of neighbourhood tv—she also depicts the changing media horizon. *CandidaTV*’s slogan is “Make your own TV!”, and to encourage this goal the group ran technical and creative workshops with socially marginalised communities, “passive spectators becoming active creators when handed the tools to produce spectacle”. Agnese Trocchi describes the role of events such as the annual *Hackmeetings*, and web platforms like *NewGlobalVision*, in which collective decision-making and practical work generate free digital tools and public electronic spaces to enable “the engineering of the next medium...where internet, videos, art practice in the streets and hacking technology, are mixed all together... to express people’s freedom of communication and people’s imaginary”.

Media activist Lam Oi Wan takes us into the heart of Hong Kong, chronicling a social movement campaign in 2006 that sought to to preserve the integrity of two significant piers. The controversial outcomes of a secretive urban planning process (demolition followed by Disneyfication) generated a series of public interventions played out in both the symbolic field of art, and the discursive field of media representation. Nostalgia was generated by a series of site-specific performances and art installations, events that also attracted mainstream media coverage. This mood of discontent was “politicized later into a citizen campaign through the involvement of media activists”. Hong Kong In-Media, an online platform for citizen journalism, provided space for reflection and dialogue between local artists, media activists, academics, students and interested residents. A “fading subject” was unexpectedly revived, developing momentum as it rejected “the politics of public relations”. Lam Oi Wan analyses the

interplay between the symbolic interventions of cultural activists and the reportage of media activists, each contributing to the making of meaning in the public sphere. She concludes that finding ways “to bring together the forces of the art and media activists would be a most important and experimental agenda for the future”.

Conclusion

The projects included in *Coding Cultures* illustrate how decentralised, networked social laboratories for experimentation can adroitly bypass the digital divide. In each instance their inclusive participatory processes are coupled with clearly articulated philosophical and ethical perspectives. The manifestation of these, and thousands of similarly-shaped projects, challenges the poverty of a Globalization agenda determined solely by narrow economic imperatives. In so doing they instigate broader participation in democratic processes, and perhaps more importantly, generate new social imaginaries. Flights of butterflies outreaching the plod of the behemoth.

Endnotes

01
An invention (accompanied by technical documentation such as design drawings, notes, and prototypes) must at some point be released into the public realm. There it can be tested in real world conditions, faults identified and remedied, and improved. Patented inventions and tightly guarded trade secrets notwithstanding, it is only through such circulation of ideas, schema and the machines or processes themselves, that the generative potential of inventiveness and creativity can be fully manifested.

02
‘The Vienna Document’, *World-Information*, Vienna 2005.
<static.world-information.org/infopaper/wi_ipcitedition.pdf>

03
My thanks to my twin, artist John Tonkin, for this way of conceiving the contents of this handbook.

04
Acknowledging some key philosophical and political differences between the two camps of Free Software and Open Source Software, they are often grouped by umbrella acronyms FOSS, and FLOSS (Free/Libré Open Source Software), or the neologism ‘Open Code’.

05
Source code provides the underlying building blocks of any software system, the lines of alpha-numeric instructions. When source code is ‘open’ people are legally entitled to make changes to the instructions, to improve the code, or to expand it to enable the program to do something requested by user communities. Free and Open Source Software (FOSS) include operating systems (the classic example is GNU/Linux), programs (for example, OpenOffice word processing, or the Apache web server), and protocols (for example, the TCP-IP and HTTP protocols for data transmission over the internet).

06
Such agreement is legally reinforced through viral ‘copyleft’ licensing schemes, like the pioneering GNU General Public License (GPL). Created in 1989 by

programmer Richard Stallman, the GPL has inspired other licensing schemes, including the Creative Commons licenses for media content. See <www.gnu.org/licenses>.

07

The examples of participatory culture are numerous, and multi-lingual. For a small taste in the English language, see <sciencecommons.org>, <opensource.mit.edu>, <www.opencontentalliance.org>, <wikipedia.org>, <english.ohmynews.com>, and <indymedia.org>.

08

Castells, M. (2000). *The Rise of the Network Society* (2nd ed. Vol. 1). Oxford: Blackwell. pp 355-56.

09

'The Next Layer or: The Emergence of Open Source Culture', a draft text by Armin Medosch for Pixelache publication, London/Vienna 2006-2007. Published on the *nettime* mailing list 17 February 2007. <www.nettime.org/Lists-Archives/nettime-l-0702/msg00029.html>