

JOURNAL OF *Music* RESEARCH ONLINE

A JOURNAL OF THE MUSIC COUNCIL OF AUSTRALIA

How online social networks are redefining knowledge, power, 21st century music-making and higher education

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Introduction

Many may recognise the music *Won't Get Fooled Again* as the theme from the television series, [CSI Miami](#)¹. Older audiences may also remember this piece in its original form, written by Pete Townsend on the album *Who's Next* ([The Who 1971](#)). The industry process through which the music transferred to TV we know as 'licencing' is now omnipresent in advertising, compilation albums, film soundtracks, political campaigns, gaming and mobile phone ring tones. The music of 'boomer generations' is high value content but mostly owned not by its creators, but rather by corporations that control and claim profits from sound recordings, thus propelling the relatively recent idea that art can be digitised and mass produced. Copyright profits are artificially separated from the artist, and in the licencing example above, it may be more profitable for corporations to recycle and extract the maximum returns out of earlier investments rather than to develop and risk on new talent ([Cadd and Morris 2007](#)).

While the idea of a 'record industry' once suggested a Fordist-like production chain of musicians, sound engineers, promoters, A&R managers and record companies, now in the 21st century such workflow is increasingly devolved to independent artists creating with portable digital systems, home studios and multimedia communication technologies. The nature of music-making is being revised via an Internet-based democracy where social networks seek out music and events, through innovation around business and cultural value systems, and in framing new kinds of interactions between musicians and audiences. The traditional audience/artist divide can blur where 'prod-users' ([Lessig 2001](#)) become actively engaged in the creative process in ways that allow amateur and professionals alike to co-exist and enjoy the shared experience of creating art. Broadband networks have become a platform to host virtual, asynchronous composition and performance ([Duckworth 2005](#)).

This paper seeks to explore this next generation 'music 2.0' landscape more deeply. To do so, it will explore a brief history of events which led to this point, then move on to examine a number of relevant music practices in turn, together with their impact upon economies, education and music-making in the 21st century. The latter half of the paper will examine case studies of working ensembles and a related university-based music training example to posit implications for higher education.

In the Wake of the Dot-com Bubble

The 'dot-com bubble' ([Wikipedia 2007](#)) was a speculative period covering roughly 1995–2001, during which stock markets in Western nations saw their value increase rapidly from growth in the Internet sector. The bursting of this bubble in 2001 marked the beginning of a relatively mild early 2000s recession in the developed world. While many dot-com companies profited quickly, they just as rapidly went out of business, with centres such as San Francisco facing 30–40% vacancies in its business sector offices following the crash. This also marked a turning point for the web, although many argued that the web was over-hyped when in fact such 'bubbles' and 'bursts' appear to be a common feature of all technological revolutions. Shakeouts typically mark the point at which an ascendant technology and its culture become ready to take a central role, and in this case, the Internet infrastructure was eagerly appropriated by those formerly known as 'the audience', as described in the insightful Video 1, below.

Video 1: *Day of the Long Tail* (2006) 



The term 'web 2.0' was born as a way to describe this next generation of user-created value and services. Coined in a conference brainstorming session by US think tank O'Reilly Media ([2005](#)), it was noted that far from having 'crashed', the web was more important than ever, with new applications appearing and accelerating in their reach and scope. The communities that had survived the collapse seemed to have much in common, marking some kind of turning point for the web; and today, according to [SimpleSpark.com](#)², there are now more than 5,000 active web 2.0 sites.

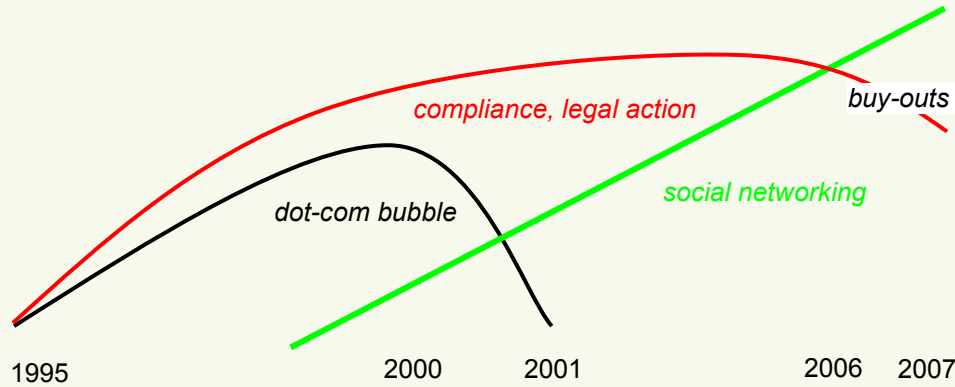
However, throughout the preceding decade there have been a number of evolutionary features worth noting. Social networks shared, remixed and ranked media, they swapped music files and hacked into systems where this was not allowed. Big media cartels went into denial, refusing to accept this evolution was occurring ([Landley 1999](#)). In Hollywood and in the music industry the cry was that such 'piracy' was a crime, and that under no circumstances were corporate copyright owners to be undermined ([Fleming 2007](#); [Graham 2006](#)), a somewhat hypocritical perspective when powerful companies aggressively funded political change and legal restrictions – many had built their own empires on appropriation and 'standing on the shoulders of giants', for example, in the case of Disney, by reworking traditional Hansel and Gretel stories into cinema feature cartoons ([Lessig 2004](#)).

Lawsuits were actioned, cease and desist orders were enforced, music file-sharing sites such as Napster, Kazaa and others were shut down; but just as quickly, other networks were created ([Frost 2007](#)). Digital Rights Management (DRM) schemes were invented, failed and withdrawn where music CDs could be played on some devices but not on others ([Schechter, Greenstadt and Smith 2004](#)). Windows 'spyware' appeared on PCs to monitor and report information ([Hampton 2005](#)). Corporate lawyers sought out file-sharing students and threatened to jail them unless universities and schools complied with suitable licencing arrangements ([Harmon 2003](#); [Sherwin 2003](#)).

* Click the cinecamera icon to view the video. Certain video samples in this paper link to sources external to JMRO and may, in the future, become inaccessible if they are removed from the external site. Only samples, the loss of which will not diminish the thrust of the paper, are in this category.



Figure 1: The wake of the dot-com bubble



As represented in Figure 1, more recently, activity has begun to shift: new online music services have reinvented file-sharing through negotiations with companies and artists for more equitable arrangements. The CD is being replaced by iPods and their derivatives (interestingly, not invented by the record industry, but by computer companies capitalising on indecision). After a decade of denial, the most recent trend is that web 2.0 start-ups are being bought up *en masse* by established companies. For example, Yahoo bought Flickr, Google bought YouTube, News Corporation bought MySpace, and CBS – a company out of the music business for over a decade – purchased the music ranking service Last.FM for US \$280 million ([Kiss 2007](#)).

The Problem with Music

The underlying corporate themes have been the same: ‘How can we control this? How can we upgrade the industry to “version 2” in order to continue to enjoy the profits made in the past?’ While the music industry has represented one of the most centralised and well developed systems of publication, in recent times the world has witnessed shifts of global significance led by the file-sharing of MP3 music recordings deemed illegal because corporations demand recording and marketing investment returns through official sales outlets. Nonetheless, contracted artists do not own their recorded work, where 70 years plus the life of the author is the current *de facto* term for company claims to artists’ copyright.

Steve Albini has been one outspoken opponent of predatory practices by the recording industry and wrote about these issues in the early 1990s, perhaps foreshadowing the dissatisfaction to come from many other artists. He is a well-respected and prolific songwriter, singer, guitarist, music journalist and audio engineer who has produced the recordings of some 2,000 albums from artists including PJ Harvey, Bush, Cheap Trick, Page and Plant, Neurosis and Nirvana. In *The Problem With Music* (1993), Albini produced a scathing attack on record companies, citing detailed facts and figures from the working life of a band, as shown in Tables 1 and 2:



Table 1: Advance and expenses detail (adapted from [Albini 1993](#))

Item	\$		
Advance:	250,000	Bass guitar:	1,000
Manager's cut:	37,500	Bass amp:	1,000
Legal fees:	10,000	Rehearsal space rental:	500
Recording Budget:	150,000	Party for friends:	500
Producer's advance:	50,000	Tour expense [5 weeks]:	50,875
Studio fee:	52,500	Bus:	25,000
Drum Amp, Mic and technicians:	3,000	Crew [3]:	7,500
Recording tape:	8,000	Food and per diems:	7,875
Equipment rental:	5,000	Fuel:	3,000
Cartage and Transportation:	5,000	Consumable supplies:	3,500
Lodgings while in studio:	10,000	Wardrobe:	1,000
Catering:	3,000	Promotion:	3,000
Mastering:	10,000	Tour gross income:	50,000
Tapes, ref. CDs, misc. expenses:	2,000	Agent's cut:	7,500
Video budget:	30,000	Manager's cut:	7,500
Cameras:	8,000	Merchandising advance:	20,000
Crew:	5,000	Manager's cut:	3,000
Processing and transfers:	3,000	Lawyer's fee:	1,000
Off-line:	2,000	Publishing advance:	20,000
Online editing:	3,000	Manager's cut:	3,000
Catering:	1,000	Lawyer's fee:	1,000
Stage and construction:	3,000	Record sales:	250,000 @ 12 = 3,000,000
Copies, couriers, transportation:	2,000	Gross retail revenue Royalty:	[13% of 90% of retail]: 351,000
Director's fee:	3,000	Less advance:	250,000
Album artwork:	5,000	Producer's points:	[3% less 50,000 advance]: 40,000
Photo shoot and duplication:	2,000	Promotional budget:	25,000
Band fund:	15,000	Recoupable buyout from previous label:	50,000
Professional drum kit:	5,000	Net royalty:	-14,000
Professional guitar amp rigs [2]:	4,000		



Table 2: Breakdown of gross and net income ([ibid.](#))

Record Company Gross income		The Balance Sheet: Net Incomes	
Record wholesale price:	6.50 x 250,000 = 1,625,000	Record company:	710,000
Artist royalties:	351,000	Producer:	90,000
Deficit from royalties:	14,000	Manager:	51,000
Manufacturing, packaging and distribution:	@ 2.20 /record: 550,000	Studio:	52,500
Gross profit:	710,000	Previous label:	50,000
Total	3,250,000	Agent:	7,500
		Lawyer:	12,000
		Band member net income each:	4,031.25

Albini elaborates on these figures as follows:

The band is now 1/4 of the way through its contract, has made the music industry more than 3 million dollars richer, but is in the hole 14,000 on royalties. The band members have each earned about 1/3 as much as they would working at a 7/11, but they got to ride in a tour bus for a month. The next album will be about the same, except that the record company will insist they spend more time and money on it. Since the previous one never 'recouped', the band will have no leverage, and will oblige. The next tour will be about the same, except the merchandising advance will have already been paid, and the band, strangely enough, won't have earned any royalties from their T-shirts yet. Maybe the T-shirt guys have figured out how to count money like record company guys? ([1993: para. 9](#))


While Albini's example is no longer atypical of newer corporate approaches (for example, [Howe 2006](#)), there remains continuing evidence of resistance amongst well-established rock stars. For example, the UK's *Guardian* reports that Prince recently drew ire from Sony-BMG who declared that he'd now be known as 'the artist who formerly sold in record stores' ([Allen 2007](#)), following his controversial decision to give away his latest album for free, bundled with the UK's *Mail on Sunday* newspaper. Prince subsequently went home to the US with a reported \$US30 million from 20 London concerts promoted through the giveaway, while Sony continues to refuse to distribute his album in stores. The *Australian* ([Sherwin 2007](#)) noted that Radiohead released their new album online with a donation value to be decided by their audiences, while also offering a limited edition box-set in UK stores at £40. Elsewhere, Nine Inch Nails and Trent Reznor ([Goldmeier 2007](#)) are among the musicians raising the revolutionary notion that the Internet may offer them a better deal than the labels, which they accuse of restricting artistic direction and income through unfair contracts.

Music 2.0: Beyond 'Stardom or Bust'

Pulitzer prize winner Thomas Friedman ([2005](#)) and author of *The World is Flat: A Brief History of the Twenty-first Century* characterises the Internet workplace as 'one where hierarchies are being flattened and value is created less within vertical silos, but more through horizontal collaboration' ([ibid.: 15](#)). Similarly, in *The Long Tail* Chris Anderson ([2006](#)) argues the case for how products that are in low demand or have low sales volume can collectively make up a market share that rivals or exceeds the relatively few current bestsellers and blockbusters.

In this context then, musicians now use the Internet to interact and continue to define an 'economics of attention' ([Lanham 2006](#)) to launch and support their careers. For new artists, the business model has evolved rapidly from CD/shopfront/contract-of-old to new, independent modes of production (for example, see the innovative Video 2, developed by Brisbane film-maker Tim McGahan). The idea of 'music 2.0' therefore indicates creative responses to O'Reilly's web 2.0 concept ([2005](#)), where control of intellectual property (IP) and distribution models are transformed. Notions of cultural capital and value are being deconstructed in what Yokai Benkler terms 'a battle over the institutional ecology of the digital environment' ([2006: 123](#)); and like it or not for corporate copyright stakeholders, young people continue to define the information



Video 2 (10MB): *Some Postman* (2006), Presidents of the United States of America 



society, and in turn, redefine the music industry.

Dr Frank Millward heads up UK Kingston University's Popular Music and Live Art programs. In a recent visit to Australia, he recounted that the profile of band members had changed enormously in recent times (Millward 2007). What he called 'transdisciplinarity' is increasingly pervasive, that is, where band members might include not only highly trained instrumental and voice specialists, but also video artists (VJs), cyber-artists, webmasters and lawyers – often sharing multiple roles. They are aware of the 2.0 landscape, success oriented, and understand their IP rights regarding contractual terms, territory and returns. This includes opportunities as varied as performance and site-specific installations, synchronisation, advertising, ring tones and other work across hybrid or niche musical genres. Such ensembles draw attention to their work through Internet-based viral marketing, blogs, videos, and free recordings. Download activity may be tracked, then tours subsequently arranged in active areas of interest. The face-to-face relationship with audiences is enhanced through social networking and so music careers can be nurtured and sustained. The Fordist ethos of old is replaced by that of the independent digital artist, where the creative project becomes the new business model:

... a work structure based on temporary workers mainly involved in projects ... exchanged in the market through networks of creativity, not simply driven by the will to achieve a better position in the employment ladder or social status, but by the objective to increase personal reputation and get in touch with always more interesting projects and team working opportunities. (Frederiksen and Sedita 2005: 28)

It is clear that label-free artists can in fact make a living. It is not somehow polarised between 'stardom or bust', and next generation practitioners are taking advantage of careful planning and collaboration where value is created through independent networks which allow for eclectic tastes, new audiences and a breakdown of former cultural, territorial or stylistic barriers. However, it may be that contemporary education and musical training cannot easily keep pace with such contextual developments for art and craft. Therefore, now I will turn to examine what these environmental features might mean in terms of music curricula and the Australian higher education sector.

Conservatoriums at University

Somewhat cautiously, Gabriel Jacobs (2005) produced some well-argued research in a recent education technology journal, questioning the benefits of hypermedia and so-called 'discovery learning'. In this she says: 'the aim of educating students such that they can transfer learning to unfamiliar problems and situations is not ... achieved by giving them their reins before they have learned to walk safely. Hypermedia technology, for all its great potential ... is a dangerous weapon in the hands of the inexperienced' (2005). University of Georgia's Tom Reeves (1995) adds:

Although there are many advocates of discovery-based environments for the learning of social studies, science, and even mathematics in schools, most of these people would probably prefer their brain surgeons to be trained via direct instruction (1995).



It would be fair to say that conservatoriums have indeed maintained a strong tradition of direct instruction. Craft and technique reign supreme, but what I question is the changing professional context identified herein as music 2.0 and the possibly outmoded nature of the learning environment which may limit the discovery of new applications for the skills. An increasingly corporate-like 'one size fits all' higher education environment has had a heavy impact on conservatorium training. However, musical activities often necessarily incorporate risk taking, creativity and innovation to drive original compositions, performances, public engagement and media-based works. Authentic practice follows the natural ebbs and flows of intensive event cycles and new audience outreach but do not necessarily assimilate well within standardised approaches to higher education. It is useful to recall that the merging of arts institutions with universities is a relatively recent Australian formation, borrowed from Thatcher's England. Some commentators agree that the results have been less than satisfactory, as Ross Fitzgerald (2007) noted in *The Australian*:

Australia has a history of adopting failed overseas educational ideas, it followed suit ... although arts institutions are not solely academic, the solution ... has been to treat them as academic and place them into university structures ... In creative areas there are no right answers but a whole range of choices ...requir[ing] very particular pedagogy ... studio teaching focuses on a close interaction between practising artist-teachers and students, inspired by an aesthetic philosophy of 'thinking through making'. (para. 7)

From the John Dawkins reforms of the 1990s to more recent Australian Federal imperatives, university ideology has been consumed by massification, a 'client-focus' and a preoccupation with branding. Institutions have sought to control web sites as marketing and information delivery tools, while commercial e-learning systems format-shift, scale and distribute pedagogical models to compartmentalise artists' educational opportunities. Degree programs are segmented into semesterised courses both online and off, by school-like timetables, lectures and tutorial groupings. Consequently, university students are often separated from the rest of the cohort and the ambiance of social and intellectual communities. Complex tensions remain amid the demands of conformity, attitudes about artistic standards and career destinations, collaboration and participation, and the evolving needs and often naive conceptions of Gen Y student musicians.

Participatory Culture: Implications for Higher Education

The term Participatory Culture was coined by Henry Jenkins, Professor of Literature at MIT and Director of their Comparative Media Studies Program. In his report for the US MacArthur Foundation (2006) he speaks of the need to rework the nature of 21st century education based on changed global contexts and opportunities enabled by social networking. That is, to provide:

- relatively low barriers to artistic expression and civic engagement;
- strong support for creating and sharing one's creations with others;
- some type of informal mentorship whereby what is known by the most experienced is passed along to novices;
- a culture where members believe that their contributions matter;
- an environment where members feel some degree of social connection with one another and care what other people think about what they have created.

Jenkins's MIT research team asserts that access to participatory culture functions as a 'new form of the hidden curriculum' (ibid.: 3) shaping just which graduates will succeed, and which will be unable to integrate within new knowledge economies. In summary, the key skills drawn from this embedding of social networking tools and culture include:



Table 3: Key 21st century skills (adapted from [Jenkins 2006](#))

Appropriation	the ability to meaningfully sample and remix media content
Collective Intelligence	the ability to pool knowledge and compare notes with others toward a common goal
Distributed Cognition	the ability to interact meaningfully with tools that expand mental capacities
Judgment	the ability to evaluate the reliability and credibility of different information sources
Multitasking	the ability to scan one's environment and shift focus as needed to salient details
Negotiation	the ability to travel across diverse communities, discerning and respecting multiple perspectives, and grasping and following alternative norms
Networking	the ability to search for, synthesise, and disseminate information
Performance	the ability to adopt alternative identities for the purpose of improvisation and discovery
Play	the capacity to experiment with one's surroundings as a form of problem-solving
Transmedia Navigation	the ability to follow the flow of stories and information across multiple modalities
Simulation	the ability to interpret and construct dynamic models of real-world processes

Technically, this should align well with many Australian university strategic goals and graduate outcome statements (but perhaps less so in practice). For example:

Graduate skills have become increasingly important over the last decade ... because without them, graduates cannot function in today's changing world. Content, or disciplinary knowledge is no longer enough to guarantee a job at the end of university study. It's often out of date in three or four years ... today's graduates need to be flexible and adaptable ... able to solve (and frame) problems, communicate effectively, think critically and creatively, be information literate and be able to operate as effective team members ... as well as being able to work independently throughout life ([Griffith University 2006a:para. 1](#)).

Open Access Courseware

Social networking tools may provide a bridge. Just as the corporate sector bought up web 2.0 applications and are restructuring accordingly, so too are universities now cautiously examining the social networking phenomenon and beginning to incorporate a range of blended learning strategies ([Bersin 2004](#)) to try to better engage so-called GenY 'digital natives' ([Prensky 2001](#)), who increasingly create, rank and collaborate in the online world. While there is a range of open source software adopted by some (for example, see [SourceForge.net](#)³), its use is dependent on significant levels of support and specialised expertise. Therefore, identified here are some common examples of recent institutionally-supported, semi-commercial approaches, including:

- [Classroom 2.0](#)⁴, a social networking site for those interested in web 2.0 and collaborative technologies. It has an extensive membership of educators, providing a supportive community and a comfortable place to start being part of the digital dialogue. Classroom 2.0 provides detailed studies of a range of disciplines which exclusively use an 'open' environment for engaging teaching and learning.
- [iTunes-U](#)⁵ is an initiative of Apple Inc., following the worldwide success of its innovations in online music and podcasting. iTunes-U currently provides a range of material from academics, administrators, students and alumni in US, Australian and New Zealand universities and K-to-12 education.



- [Stanford on iTunes](#)⁶ began as a collaboration between Apple and Stanford University's DVC Teaching and Learning, its Library Department and its Alumni Association. The drivers were not only to increase university profile, open learning and free knowledge citizenship, but also to provide an effective framework with which to maintain connection with its graduates – podcasts of *alma mater* activities can be subscribed to and downloaded for flexible use as required.
- [MIT Open Courseware](#)⁷ presents a more extended open environment which challenges corporate-styled thinking about 'ownership' of knowledge. MIT provides courses, resources and lessons plans online which anyone can engage with as they choose. This then becomes a highly effective marketing and recruitment tool for MIT because the open content reinforces the desire to participate in on-campus tutorials and lectures, to meet experts and to engage in deeper knowledge transfer while becoming accredited with the MIT brand upon graduation.

Just as these examples show how educators and institutions are beginning to respond to the needs of Jenkins's ideas about participatory culture (2006), I will now return to briefly examine how contemporary musicians are beginning to engage with these same ideas. This will suggest possibilities then for how the aforementioned university-based conservatorium training environment might better align in the preparation of its graduates for music 2.0-styled careers.

Case Studies in Niche Markets

While classical music CD sales continue to fall dramatically, the online environment trades at markedly higher levels. As *The New York Times* (Midgette 2006) reports, 'by conventional wisdom, classical music accounts for 3 to 4 percent of overall recording industry sales. But on Apple iTunes, the leading site for music downloads, classical music represents 12 percent of all sales' (para. 10). *Billboard*, *The New Yorker* and the UK's *Gramophone* magazine present similar reports by noting that classical music's online market share is substantially higher than through traditional outlets, and that 'digital is set to get a wider reach of consumer and the whole long-tail approach works well with classical music' (Panethiere 2006: 6). Opera singer Renée Fleming adds to this discussion:

I'm excited by the opportunities to reach new audiences ... being online is a great way to overcome the image opera has for some people of being unapproachable. I often hear from new fans who have discovered me for the first time online ... The possibilities that this opens up are truly exciting since recordings don't need to go out of print or be deleted from the catalogue; and I'll be glad when the possibility of streaming live performances from the opera house becomes a reality, particularly if it can reach the kind of international audience that the Metropolitan Opera radio broadcasts now reach (ibid.: 8).

In Australia there are also many examples of how young career artists are integrating web 2.0 into their professional skill set and working life. To cite only a few, but as representative of professional activity outside mainstream popular music culture:

- [Collusion](#)⁸ are a niche, high quality 'new music' ensemble who launched their debut album *In Depth* (Collusion 2007) in 2007. Distributed by Move Records this is a licencing-only arrangement where the album master is owned by the creators and where a majority of the sales profits are returned to the artists. The licencing applies specifically to the Australian territory and only for music CDs. This means that Collusion are free to sign distribution agreements in other countries while they maintain the rights to utilise their music for other opportunities, for example, such as in film synchronisation. Their web site maintains touring schedules, concert promotions and media kits and the band are highly active in building and maintaining their fan base through email lists, subscription services and though links to other sites such as [Musica Viva](#)⁹ and the [Brisbane Artists Directory](#)¹⁰.
- [Melissa Forbes](#)¹¹ is a jazz artist who took up vocal training and a focus on recording at a conservatorium, following qualifications and professional practice as a lawyer. She's taken skills in all these areas and honed these to build a career in composition, production and performance, coupled with a wide selection of web strategies of which the following are examples:

All About Jazz: www.allaboutjazz.com/php/musician.php?id=2105



Amazon: www.amazon.com/No-More-Mondays-Melissa-Forbes/dp/B0007XH5QM

Australian Government: www.culture.gov.au/wsd/3692.htm

Download.Com: music.download.com/melissaforges/3600-8519_32-100610775.html

Garage Band: www.garageband.com/artist/melissaforges

MySpace: profile.myspace.com/index.cfm?fuseaction=user.viewprofile&friendid=32199970

NoTalkRadio: notalkradio.podspot.de/post/notalkradio-17-third-and-forever-melissa-forbes-cherry-hill-states-of-the-mind-supaphat/

Soundclick.Com: www.soundclick.com/melissaforges

- [FourPlay¹²](#) are a notable export of the Sydney Conservatorium and the Australian Youth Orchestra, promoting themselves as ‘the eclectic electric string quartet’. They have developed a good sense of ‘transdisciplinary’ creative opportunity ([Millward 2007](#)) and have diversified across radio, performance, recording and sound track mediums: FourPlay won the Golden Fiddle Award at the 2007 Tamworth Country Music Festival, they self-produced seven independent albums and continue to work with film makers to document their art, and they are regular guests on popular Australian television programs such as *Spicks and Specks* and *Sunday Arts*. FourPlay’s Internet presence is widespread and their reviews and rankings build a strong presence along with a loyal and expanding following. Sites include:

CD Universe: <http://www.cduniverse.com>

Facebook: guedu.facebook.com/group.php?gid=2580636366

Gig guide: www.fourplay.com.au/gigarchive.php

MySpace: www.myspace.com/fourplaystringquartet

Online shop: shop.fourplay.com.au

Radio downloads: www.fbi.org.au/content.php/772.html

Wikipedia: en.wikipedia.org/wiki/Fourplay_Electric_String_Quartet

Now armed with some understanding of contemporary university education, music 2.0 ensemble practice and participatory culture, I want to explore some examples of social networking systems and creative projects in action within one Australian conservatorium. While these examples do not intend to convey any widespread assumptions about the music training sector, because they take place in the author’s faculty at Griffith University, they provide a close ethnographic perspective on how one institution is beginning to work in the context of this paper.

Video 3: *Now To The Future (2007)* – FourPlay on *Sunday Arts* 





Experiences in music 2.0 Education

At a recent [conference keynote lecture](#)¹³, Su Baker from the Victorian College of the Arts and Chair of the Australian Council of University Art and Design Schools (ACUADS), examined the idea of 'Art schools as a new cultural economy in the information age'. In this, Baker posed the questions:

1. What is the infrastructure for such a place and what tools, pedagogy and organisation systems do we set up to support it?
2. How do we shift from a model of teaching a pre-existing body of knowledge to facilitating the discovery of knowledge not yet formed?

I now wish to attempt a partial response to these questions by briefly outlining two recent projects at the Queensland Conservatorium Griffith University (QCGU).

1. Infrastructure, Pedagogy and Organisational Systems: Radio IMERSD

[Radio IMERSD](#)¹⁴ began its life in QCGU's music technology department in response to a range of contemporary imperatives: compartmentalisation of student cohorts and courses (as identified earlier in this paper), a perception of inauthentic assessment regimes, and a general confusion about the notion of IP rights. Indeed, because of IP restrictions the Radio IMERSD site presents two mutually exclusive publication areas – NetRadio and Podcasts.

The [NetRadio](#)¹⁵ area hosts copyright-protected materials for distribution on the university intranet. Until 2006, most of these recordings could not be legally duplicated or distributed at QCGU, but the recent signing of the AVCC-Music Societies agreement ([Griffith University 2006b](#)) now allows this, albeit, given licencing fees and restricted conditions which limit material to audio streaming (that is, no downloads) within the Griffith University domain. To highlight the copyright complexities enforced herein: Radio IMERSD provides conservatorium cohorts with intranet playlists of *original sound productions, of original staff and student concert performances*, of only those approved *non-original compositions* controlled by [Australian collection societies](#)¹⁶. Despite common music licencing fees across the Australian university sector, QCGU is still unable to share such material. However, the upside has been that the site now archives approximately 1,200 high quality, fully meta-tagged concert recordings of student, alumni, staff and works by distinguished visitors. Not only does this build a cultural record for future generations of QCGU musicians, in the present, the music also proves invaluable for review and reflection by the staff and student body, both at QCGU and across the university.

The [Podcasts](#)¹⁷ area is modelled on an e-journal approach by providing [guidelines](#)¹⁸ which invite original digital contributions. Submissions are peer-reviewed and utilise [Creative Commons Australia](#)¹⁹ (CCau) licences for publications as on-demand audio streams, RSS feeds and podcasts utilising iTunes Store's 'one-click subscribe'. These publications provide a democratic range of content from visitors, teaching staff and students alike, in categories including original live music, public lectures, recording studio productions, portfolios and reviews. The podcasting area develops and responds to matters of pedagogy and related organisation systems.

To elaborate further: standardised university assessment requires copious amounts of written documentation which can serve for ease of mass processing, but often provides limited fitness for purpose. Academics began to do the math and enquire: 'Should a graduate recall from her university days that she produced comparatively few creative products while co-delivering some 40-plus written assignments across the degree program?' In an effort to provide a greater range of literacy opportunities, students were offered the option to develop podcasts as reflective reviews and analyses of the creative works in question. These works are shared by others across the cohort, thus nurturing a collective understanding of cultural value and quality through exemplars, peer critique and discussion similar to the external web 2.0 social networking setting.

Because IP and the idea of 'contracts' were an oft-cited area of confusion ([Draper and Hitchcock 2006](#)) this became another target for development, launched in May 2006 through a pilot CCau project entitled *Concert Stream*. A [handbook of materials](#)²⁰ was devised and published to discuss, teach and embed basic IP understanding within final year undergraduate music-making projects – in this case, through



original musical compositions, live concert performances and Internet streaming, recording studio post-production and podcasting. Workshops were prepared and delivered by music technology and jazz department staff with the assistance of a leading Australian digital IP attorney. The process utilised a CCau Attribution-NonCommercial-NoDerivatives Licence, where IP was positioned as a licencing agreement from the students to the university. Since this pilot, Radio IMERSD material utilises CCau licencing.

In sum, Radio IMERSD has grown to represent a successful online experiment as evidenced by the metrics gathered from [Google Analytics](#)²¹ tools established at the outset of the project in mid-2006. After a six-month trial, by December 2006 the site was ranked at number 14 in education podcasting on the [Australian iTunes Store](#)²² and continues an extensive worldwide reach in attracting up to 850,000 visits per month ([Braue 2006](#)). Ranking systems and e-research around these metrics are planned for the near future. Initial research ([Draper 2007a](#); [2007b](#)) indicates promising engagement and an overall strengthening of an established community of practice. CCau licencing continues to unpack new meaning for students and staff in recognising their rights and those of others, in understanding more about the often multiple-owner nature of the music business, and in preparing such discussion as an integral part of the creative process. As public broadcasts, student surveys reveal that these original creations invoke a greater sense of professionalism, innovation and personal independence.

2. Facilitating the Discovery of New Knowledge: *iOrpheus – Art Among Us*

2007 was the Queensland Conservatorium's 50th anniversary, with feature performances undertaken throughout the year. One theme was that of Orpheus, the mythical Greek musician, and it was celebrated through four operatic events:

- In June, Offenbach's parody of the legend [Orpheus in the Underworld](#)²³ was performed in the Conservatorium theatre.
- In July, on the occasion of its 400th anniversary, Monteverdi's original version of [L'Orfeo](#)²⁴ was performed in the Masonic Temple in Brisbane as part of the [Queensland Music Festival](#)²⁵.
- In September, QCGU's major theatre production for 2007 was Gluck's famous opera, [Orfeo ed Euridice](#)²⁶.


In other words, as per Su Baker's earlier provocation, a 'pre-existing body of knowledge', was preserved and re-cast to new audiences as befitting a conservatorium celebrating an important birthday. But the shift in modelling such a work to facilitate a deeper understanding of the Orpheus legend came in the form of a fourth project entitled [iOrpheus: Art Among Us](#)²⁷. An experimental work, this was a new kind of opera spanning time and space(s), using contemporary technology to open the famous mythical themes to interpretation and contemporary 'echo' ([iOrpheus – The Movie 2007](#)), and led by US Internet music pioneers Nora Farrell and William Duckworth through a Senior Fulbright Specialists Award awarded for the *iOrpheus* project.

iOrpheus was a public opera written for and with the South Bank precinct in Brisbane, Australia. From June through August 2007, Duckworth and Farrell worked with Conservatorium staff, undergraduates, technicians and research higher degree students to come to a different understanding of the art, to inject their improvisations in a new kind of fluid opera and to take this out into the parklands and the local communities. Also known locally as 'The iPod Opera', *iOrpheus* was performed on iPods, mobile phones, and laptops, along with interactive installations and live performers on Friday, 31 August 2007 in the streets, parks, and promenades of South Bank.

One outcome was that of a 10-minute film documentary *iOrpheus – The Movie* ([ibid.](#)), produced and directed by Griffith Film School masters honours candidate Paul Davidson, who led student film crews as part of a community engagement project. Surround sound for the movie was post-produced in the Conservatorium's [IMERSD recording studios](#)²⁸ by this author as part of music technology honours research-training classes. A broadcast-ready DVD was produced for the South Bank Corporation and the Queensland Conservatorium Research Centre, while an online version of the film is available as a vodcast on [Radio IMERSD 'Concerts'](#)²⁹ and on YouTube as shown in Video 4.

Later from New York, William Duckworth and Nora Farrell took part in a live video interview as part of the Apple University Consortium's CreateWorld 2007 conference ([Draper 2007c](#)) in Brisbane. In this they provided insights into the project and into how they saw the future of music-making:



Video 4 (36MB): *iOrpheus –The Movie* (2007) 



... one of the things we found out is that people are willing to organise themselves into communities – look at flickr, look at facebook – and, for creative artists, what that gives us is the ability then to blur the distinction between the amateur and the professional. And it allows for elements of chance because the collective contributions of people ... always have uncertain outcomes ... So, when Nora and I look at the future, what we're seeing is an entirely new landscape made possible by music 2.0 that involves availability, portability, collectivity, and communications ([Duckworth 2007a](#)).

Duckworth and Farrell believe that affordability and increasingly ubiquitous high speed Wi-Fi transmission speeds are allowing the laptop and palmtop to become 'the portable music making machine of the age, much like the guitar in the 1960s, or the parlour piano in the early twentieth century' ([Duckworth 2007b](#)). As creative artists, their future interests lie in exploring how new forms of musical interactivity affect the idea of musical communication (a function largely covered until now by the score, an improvisation chart, or a commonly understood set of oral instructions coming from tradition) and in how new ways might develop to allow amateur and professional musicians, not only to coexist, but to enjoy the shared experience of creating art ([ibid.](#)). Or, as philosopher Pierre Lévy ([1994](#)) puts it in his concept of Collective Intelligence,


Rather than distribute a message to recipients who are outside the process of creation and invited to give meaning to a work of art belatedly, the artist now attempts to construct an environment, a system of communication and production, a collective event that implies its recipients, transforms interpreters into actors, enables interpretation to enter the loop with collective action ([123](#)).

A full text transcription and vodcast of the Duckworth and Farrell interviews may be accessed at [Radio IMERSD 'Public Lectures'](#)³⁰, while an extract of the keynote is available at Google Video shown in Video 5.

iOrpheus demonstrates the kind of work that extends the concept of music-making beyond consumption, distribution or even what might be regarded as 'vocationally relevant', yet artistically vital in the music 2.0 environment. Social networking in music began well before the internet and was very much about experimenting and hacking, as evidenced in the early work of groups like The League of Automatic Music and The Hub in the late 1970s ([Bischoff and Brown 2001](#)) and like others (for example, [Sonic Connections](#)³¹). This project continues this tradition while allowing students to expand their conceptions of music-making beyond popular media marketing and commercial technological hyperbole.

Concluding Remarks

Vivian Reding is the European Commission member responsible for Information Society and Media. In a recent speech to a major youth forum in China, he saw the post dot-com bubble landscape as essentially connected to the development of culture, value, production, education and future knowledge economies:

Video 5 (63MB): Music 2.0: Examining Next-generation Digital Arts Environments ([2007](#)) 



A new paradigm in which users are co-producers: of content (blog, wiki, Flickr), of taste/emotion (Amazon, de.li.cious), of goods (eBay), of contacts (MySpace), of relevance (Google pagerank), of reputation/feedback (eBay, TripAdvisor), of storage/server capacity (Peer-2-Peer), of connectivity (wifi sharing, networks) or of intelligence (business web2.0) ([2006: para. 6](#)).

The higher education sector now attracts many students eager to learn, create and prosper through such increasingly familiar technologies. Degree offerings have expanded in response to such digital demand. For example, the UK's University and Colleges Admissions Services ([2006](#)) recently indicated that some 298 music technology specialisations now exist across Britain's colleges and universities. In Australia, Edith Cowan's West Australian Academy of the Performing Arts (WAAPA), Griffith University, Queensland University of Technology (QUT), the Royal Melbourne Institute of Technology (RMIT), University of Melbourne's Victorian College of the Arts and Music (VCAM) and others continue to attract and graduate significant numbers of artists, and according to DEST statistics ([2007](#)) are steadily growing at the rate of some 2–3% per year. Meanwhile, from MySpace to YouTube, Flickr and Last.FM, an online participatory culture is transforming value systems and creating new pathways for autonomous innovation. In the web 2.0 phenomenon, social networks continue to define the information society and in turn, redefine artistic career opportunities quite different from traditional training preconceptions of a former era. Yet in music, although the romanticised 70s styled, star-driven model is in the process of significant transformation, classroom practice reveals that many students maintain outmoded ideas of just what career musicians do and how they make a living. Inexperience, together with the folklore of the trade magazines and mass media, continue to assert this. Similarly, faculty staff and administrators may remain decades out of touch with contemporary, perhaps puzzling, new viral practices, as argued by MIT researchers:

Our schools are still focused on generating autonomous learners; to seek information from others is classified as cheating. Yet, in our adult lives, we are depending more on others to provide information we cannot process ourselves. Our workplaces have become more collaborative; our political process has become more decentered; we are living more and more within knowledge cultures based on collective intelligence. Our schools are not teaching what it means to live and work in such knowledge communities, but popular culture may be doing so ([Jenkins 2006: 129](#)).

University-based music faculties rightly argue to be places of higher learning: art for art's sake, not necessarily connected to commercial outcomes, but rather, to promote creativity and excellence in craft. Still, neither can music educators afford to ignore the fact that many students desire vocational success and to be able to work rewardingly as professional artists. Responsive training does not mean a shift away from core skills; it does however, speak directly to the imperative to acknowledge authentic contexts for artistic and intellectual craft. Graduate success will continue to demand high calibre artistry, but also fluid abilities and the technological imagination ([Balsamo 2005](#)) with which to respond to transformed music 2.0 opportunities.



ENDNOTES

- ¹ Theme music from the television series, CSI Miami, “Won’t Get Fooled Again”. Los Angeles, CA: CBS Broadcasting. Audio excerpt available at http://ejmnrn.imeem.com/music/Ldx6Dxo9/cbs_csi_miami_theme
- ² Simple Spark is a web site to find, rank and share web 2.0 applications. <http://simplespark.com/about/>
- ³ See SourceForge.net, for open source sound/audio applications. http://sourceforge.net/softwaremap/trove_list.php?form_cat=113
- ⁴ Classroom 2.0 is a Ning-based social networking site for educators interested in web 2.0 and collaborative technologies. <http://classroom20.ning.com>
- ⁵ iTunes-U from Apple Inc. provides higher education institutions with a way to distribute presentations, performances, lectures, demonstrations, debates, tours and archival footage. <http://www.apple.com/education/itunesu>
- ⁶ Stanford on iTunes is a Stanford University-hosted site dedicated to providing iTunes content for Stanford students and alumni. <http://itunes.stanford.edu>
- ⁷ MIT Open Courseware (OCW) shares free lecture notes, exams, and other resources from more than 1,700 courses spanning MIT’s entire curriculum. <http://ocw.mit.edu/OcwWeb/web/home/home/index.htm>
- ⁸ See Collusion official website. <http://www.collusion.com.au/>
- ⁹ Musica Viva is an Australian-based promoter and entrepreneur of classical ensemble music. <http://musicaviva.com.au>
- ¹⁰ Brisbane Artists Directory is a free resource for Brisbane musicians, artists, galleries and collectors to utilise as they choose. <http://www.brisbaneartistsdirectory.com>
- ¹¹ See Melissa Forbes’s official website. <http://www.melissaforges.com>
- ¹² See FourPlay’s official website. <http://www.fourplay.com.au>
- ¹³ CreateWorld 2007 was a three-day presentation and technical development event, specifically for academic and higher-education technical staff in the digital arts disciplines. Apple University Consortium. <http://auc.uow.edu.au/tiki-index.php?page=Create+World+2007>
- ¹⁴ Radio IMERSD. Online music technology podcasting and net radio resources, available at <http://www29.griffith.edu.au/radioimersd>
- ¹⁵ NetRadio 2006. Web-based streaming audio component of the Radio IMERSD platform, available at <http://www29.griffith.edu.au/radioimersd/content/view/31/35/>
- ¹⁶ APRA/AMCOS. Australasian Performing Right Association and the Australasian Mechanical Copyright Owners’ Society. <http://www.amcos.com.au/general/aboutUs.asp>
- ¹⁷ Podcasts. Web-based audio and video subscription service, part of the Radio IMERSD platform, available at <http://www29.griffith.edu.au/radioimersd/content/view/13/36/>
- ¹⁸ Radio IMERSD contribution guidelines and creative commons licence, available at <http://www29.griffith.edu.au/radioimersd/index>



<http://www.griffith.edu.au/immersd/content/view/full/74&Itemid=83>

¹⁹ Creative Commons Australia (CCau) <http://creativecommons.org.au/licences>

²⁰ Concert Stream: Project Week 2–5 May 2006. Project handbook and teaching materials, available at http://www29.griffith.edu.au/immersd/stream/concerts/projectweek_040506

²¹ Google Analytics, an open resource dedicated to measuring and tracking web traffic through a nominated site, available at <http://www.google.com/analytics>

²² iTunes Store Australia. Podcasts/education <http://www.apple.com/au/itunes/store>

²³ QCGU Events. *Orpheus in the Underworld*. Performed in the QCGU Theatre, 1 June 2007. <http://www3.griffith.edu.au/03/eventcal/eventdetail.php?epk=3081>

²⁴ QCGU Events. *L'Orfeo*. Performed at the Brisbane Masonic Temple, 23 July, 25 July and 27 July 2007. <http://www3.griffith.edu.au/03/eventcal/eventdetail.php?epk=3241>

²⁵ Queensland Music Festival. “Our State of Play”, 13–29 July 2007. http://www.qmf.org.au/02_cal/details.asp?ID=17

²⁶ QCGU Events. *Orfeo ed Euridice*. Performed in the QCGU Theatre, 9–15 September 2007. <http://www3.griffith.edu.au/03/eventcal/eventdetail.php?epk=3301>

²⁷ *iOrpheus: Art Among Us*. A public opera, featuring the work of US Internet pioneers William Duckworth and Nora Farrell and hosted by the Queensland Conservatorium Research Centre on Brisbane’s South Bank on 31 August 2007. <http://www.iorpheus.com/>

²⁸ IMERSD (Intermedia, Music Education and Research Design). Launched by the Queensland State Government in 2004, IMERSD is a 5.1 surround sound multimedia production facility and practice-based research unit of the Queensland Conservatorium Research Centre. <http://www.griffith.edu.au/immersd>

²⁹ Radio IMERSD Concerts. Concert podcast series, available at <http://www29.griffith.edu.au/radioimmersd/content/blogcategory/17/27/>

³⁰ Radio IMERSD Public Lectures. Lecture podcast series, available at <http://www29.griffith.edu.au/radioimmersd/content/blogcategory/16/28/>

³¹ Sonic Connections. A music conference hosted by the University of Wollongong as a celebration of new music, new musical instrument design and new tuning systems. Sonic Connections is a member of the international Sonic Arts Network. <http://sonicconnections.uow.edu.au>

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ABSTRACT

In the course of the last decade or so, the Internet has served to enable the global practice of social networking. From MySpace to YouTube and Google, the term 'web 2.0' is now used to describe a participatory culture which is transforming value systems, undermining notions of authority and power, and enabling new pathways for autonomous creativity and innovation in music-making. This paper examines these phenomena and outlines an agenda which aims to support and develop what might be considered as 'Music 2.0', that is, independent musical craft set in authentic contexts which continue to redefine 21st century artistry and its training.

Received by the editors 16 Dec, 2007; accepted for publication (in revised form) 22 May, 2009.

Keywords: music 2.0, web 2.0, participatory culture, music technology, higher education

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