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On Disintermediated Culture, Education, and Craft

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Abstract

Consumer technologies and web 2.0 networks bring liberating potentials to music-making while simultaneously challenging recent conceptions of professional practice. These effects are felt strongly in Western tertiary education institutions, now increasingly held accountable to a central responsibility for an expanded role in the cultural and commercial innovation environment. This article examines this convergence in order to better understand the imperatives for the education of next generation professional musicians. It does so by arguing an interdisciplinary approach to span preconceived assumptions about music genres, technology and specialised curricula. A wider investigation of 'music 2.0' is positioned as an endpoint for the article and as an invitation for further collaborative research in this field.

1 Explanations and Observations

'Disintermediation' is a term borrowed from the banking industry used to describe the security investment practices of 'cutting out the middleman' (Wikipedia 2008), but now more widely understood in terms of globalized commerce since the turn of millennia and rise of the internet. Theoretically, this allows for reduced production costs, increased profits and greater specialisation in niche 'long tail' markets (Anderson, 2006). Recent advances in personal technology networks have propelled this further in that not only can the middleman be removed, but also the 'top-man', that is, the corporate entities themselves. 'Prod-user' culture (Lessig 2001) now interacts directly in user-led web 2.0 networks (O'Reilly 2005) where value systems have blurred and twentieth century industrial revenue systems and authority are challenged. Nowhere has this been more evident than in the music recording industry which became the canary in the coalmine for copyright law (Carroll 2005) via a furore around the illegal file sharing of MP3s – a container technology as Jonathan Sterne (2006) puts it, "perfectly designed for promiscuity" (p.836) but as more relevant to this discussion: as a "cultural artifact [sic]" (p.828) and signifier of the times.

To place this in a context, many readers of this article will be centrally involved in aspects of music education: as a student, a teacher, some in positions of leadership or hybrid professional practice. Ideas of music-making will vary enormously according to departmental boundaries, learning environments and funding arrangements, together with our own life experiences, working dynamics and sub-disciplinary assumptions about performance, composition, production, dissemination and audiences (Draper 2005). Yet in one way or another, part of our work focuses on the skills and attributes of graduates who seek to engage in a landscape where traditional notions of career, specialisation and production chain are dramatically transforming before our eyes. It would be fair to say there is much that niggles in the mind about professional practice, values and craft.

Some commentators have offered 'music 2.0' as a way of describing these changes, yet to date this has been largely discussed in terms of web 2.0 commercialization models (for example, Eckstein 2007, Leonhard 2007, Music 2.0 2008). However, as many music educators would agree, next generation musicianship will require more than a singular focus on recent shifts in the recording industry and its insistent doxa of music as commodity. Music is practice-based and therefore research in this field must include a examination of the converging practices and interrelationships of artists, audiences, technologies and their effects on music craft itself. This article examines these ideas and proposes some ways forward by firstly re-examining the idea of music-making, then reviewing recent literature which argues alternative approaches to educational models. Finally, it draws on this material to frame an interdisciplinary curriculum model, in turn suggesting further collaborative research in related fields.

2 Music in Operation

In the northern hemisphere's Spring of 2008, British Music Rights (BMR) published what it claimed to be the largest UK academic survey of its kind. Undertaken by the University of Hertfordshire, the *Music Experience and Behaviour in Young People* report opens with the inclusive position that

> "[w]hen it comes to music and young people, everything is different, and yet everything is still the same. Like generations before them, young people today are passionate about music." (BMR 2008, p.2)

The report then moves on to argue its policy

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recommendations following the underlying assumption that the music industry *is* the recording industry and that 'music' in fact means 'sound recordings', for example:

> "Previous generations *swapped music* by lending each other their records, tapes and then CDs . . For today's youth, *access to music* has been blown open . . They can copy thousands of music tracks and share them with others . . And they can do all this . . for free. *Music is now global and plentiful*. This astonishing *availability of music* has arguably stimulated the passions of even more young people more fervently than ever before." [Italics, mine] (Ibid)

This perspective is perhaps unsurprising because BMR is an umbrella organisation serving the vested interests of a number of UK collection societies.[i] Yet until only recently such representation has been widespread in Western popular culture, propelled and marketed throughout the twentieth century since the invention of the phonograph and the massification of recordings for commercial consumption. Yokai Benkler (1996) elaborates,

> "Music in the nineteenth century was largely a relational good. It was something people did in the physical presence of each other . . a new, more passive relationship to played music was made possible in reliance on the high-capital requirements of recording, copying, and distributing specific instantiations of recorded music – records." (pp.51–52)

Responding to this modernity, Christopher Small's *Musicking: The Meanings of Performing and Listening* (1998) reminds us that music is not a thing, but rather an activity. Here he outlines a theory of what he terms 'musicking', a verb to encompass all musical practices including composing, performing, listening, even singing in the shower (and now, playing with GarageBand and downloading on cell-phones). Jacques Attali widens this in *Noise: The Political Economy of Music* (1985) by asserting that music is both a mirror and a prophecy, where he doesn't theorize *about* music so much as *through* it. In this, he presents a vision of the future in the form of what he calls 'composing' but uses this word with a special meaning – like Small's musicking, Attali presents music as action:

> "Composition thus appears as a negation of the division of roles and labor [sic] as constructed by the old codes . . to listen to music in the network of composition is to rewrite it: 'to put music into operation, to draw it toward an unknown praxis,' . . The listener is the operator . . to compose is to take pleasure in the instruments, the tools of communication, in use-time and exchange-time as lived and no longer as stockpiled." (Ibid, p.135)

> "Music gives an image: globalisation leads to the creation of a lot of new musics. And, simultaneously, to the destruction of the economy by the promotion of playing music instead of listening to it. If music is a prophecy, globalisation will work, because people will use it to create more differences on the fringes of market uniformity." (Cited in Simmons 2002, para.18)

3   Back to the Future

Edison's phonograph was never envisioned as a 'music machine', but rather, to preserve and curate voice notes, historical records and educational materials (Read & Welch 1976). And perhaps this idea has come to pass in the intervening century or so because now via the web, people have remarkable options to independently collect, analyse, remix, share and comment on cultural artefacts globally. Musicians access the means and evolving techniques to create, reflect and instantly evaluate recordings of themselves across networks of re-composition (Attali 1985) – something never available before in all of the history of music. Here we see the re-emergence of highly active, relationship-based models of music-making, but now empowered by digital multimedia technologies and cultural mash-ups in open and informal learning networks (Salavuo 2006).

Independent social networking makes it clear that music practice cannot be understood purely through the simplistic stardom/failure, pro/amateur spin propagated by big media's need for investment returns against lagging production paradigms, or the ivory towers of high art and philanthropic/state dependencies. Nor can Western education remain static, now increasingly massified, digitised and held accountable to a central role in nurturing/delivering creativity, knowledge transfer and innovation outcomes (for example, Cutler 2008, DIUS 2008). The conundrum is that while '2.0' opportunity and means allow for the development of important personal attributes, DIY culture may lack artistic depth and that expanded access to production and exhibition is only one in a set of necessary conditions for success (Juhasz 2008). Consumer technologies promise much in upgrades, and while the web may allow everyone to become 'famous for 15 minutes' (Wharhol 1992) there are complex matters of ever-converging expertise which will apply to preparing and sustaining a career. From a business perspective, Bill Thompson (2006) writes,

> ". . this will not happen if we follow the Web 2.0 fantasy and put our trust in cool but ultimately shallow tricks with the presentation of data. The time has come to stand up and be counted, and we need people who can count in hex and see beyond the Web 2.0 hype." (para.19)

We still need people who can continue to create and prosper from great music. Given these transforming musical workspaces and value systems, what then is a 2.0 career musician and what craft skills might they possess? What should 21st century music education begin to look like? – assuming that this not only recognises popular musics, but also includes virtuoso musicianship, classical, jazz and indigenous traditions and experimental art-forms. Can or should this be enabled across a range of pedagogies and practices that are well established but somewhat isolated in their various histories of specialisation?

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4   Toward an Unknown Praxis

This brief, sole-authored article can only offer introductory suggestions on ways to approach these very broad questions. For now then, I suggest commonalties for consideration as an underpinning framework. Therefore a wider investigation of 'the field' is positioned as an endpoint for this piece and as a staging post for a project which invites others who may wish to contribute to investigating these ideas more deeply.

In the context of this article's immediate audience in the record production communities, most, if not all of us have come to this field as a musician, that is, we come to sound technologies, industry and education from a background of musicianship in one form or another and usually not from a science/technical/engineering perspective (as might be often imagined or commissioned by many of our collaborators). As we know, record producers require a highly developed sense of empathy and capacity for diverse considerations about artists, stylistic genres, budget limitations, audiences, notions of excellence and intended outcomes. This truly interdisciplinary art-form is informed by musicianship, interpretation, technological expertise and a good dose of amateur psychology (Moylan 2002). Therefore, if any of the various music subsdicipines were best equipped to understand musicianship in the widest sense, one might logically deduce that this would be within these recording fields. Yet more widely, such collaborative production practices remain bound up in the generic idea of 'music technology' and as such, appears to be all things, to all people.

Carla Boehm (2007) explores this in a PALATINE UK-funded project to better understand training in 'the discipline that never was':

". . the multiplicity of what exactly is understood by 'music technology' is an indication of the fragmentation of commonalities at large and their emerging cultural boundaries, be it sound engineering, electro-acoustic music, music informatics, or music education technology. It also represents a fragmentation of our formerly holistically concept of knowledge and the delivery of knowledge." (p.7)

Boehm goes on to present a range of data about music technology offerings in some 351 degrees across the United Kingdom and arrives at an interesting set of conclusions about how three primary forms of music technology are 'disintegrating' along the disciplinary power boundaries of various educational institutions. That is: i) as 'technology' in conservatoriums and colleges (sound recording, Tonmeister, record production etc.); ii) as 'science' in computing science and electronic engineering faculties (computational musicology, informatics, soft/hardware development etc.); and iii), as 'art' in university music departments (creative music technology, popular music, electro-acoustic composition, etc.). The upshot is that this separation along distinct lines – and by implication I suggest, for *all* music subdisciplines – has more to do with *how* something is done (theorizing about) rather than with *what* musicians do (theorizing through), for example:

". . the reason for . . electro-acoustic composition to be more accepted in music departments, is not because it is 'more musical', nor because it is 'less technical'. It is because the methodologies for working, teaching and researching in this sub-discipline are more similar to the ones used in departments of music across the country . . Music informatics has as much to do with music, as with informatics. But its methodologies just simply do not seem to fit into traditional music departments. It seems we haven't learned much: the classical divide between the arts and the sciences is still there." (Ibid, p.18)

A similar set of conclusions is arrived at via a very different trajectory in Dawn Bennett's research (2007) into the education of classical music performance students, set in the heart of conservatoire traditions in Australia, the UK and the US. The data reveals disappointing statistics in poor levels of graduate activity, replicated in even the most prestigious schools, for example, while at least 27% of the 1994 Julliard graduates had left music altogether, they continue to "[pour] out of Julliard into a very small funnel en route to the classical music stream" (Sand 2000, p.135). In the UK, while many schools are rightfully proud of their students' musical prowess, some Principals are less than pleased with the graduate profile, describing overall performance outside of the concert hall as 'second rate' (Gregory 2002). Overall, Bennett's study confirms that the majority of professional performing musicians finance themselves through a range of practices that constitute portfolio careers. This includes teaching, composition, artistic direction and other interdisciplinary activity, and "success as a professional artist in Australia involves at least the same suite of skills expected of any person who chooses to set up a small business" (Constantoura 2001, p.65). This includes the imperative that "globalisation has had a profound influence on the level of interaction between the music industry and the wider cultural sphere" (Bennett, 2007, p.185) and that musicians need to be conversant in multiple musical genres (and skills).

While some of this work has been continued in the UK and Europe,ⁱⁱ the convention remains that many institutions enable their arrangements along disciplinary/economic lines where the funding follows a 'student body' down to the smallest academic unit. The undergraduate is left to accumulate interdisciplinarity and at best we see majors, electives, matrix/dual-degrees, or the US-styled generic modelⁱⁱⁱ which work out of the business ethos of University Inc. rather than be informed by the authentic musicking of students, professionals and their peak bodies. There remains a crisis of interpretation which continues to urge a shift of responsibility from representing music, its education and research less by how it is constructed to more about what it aims to represent in a viral web of 'structure, sign and play' (Derrida 1967), as Boehm (2007) elaborates,

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". . a postmodern approach would be to accept and accommodate these new concepts of fragmentational knowledge and self-organizing areas of interdisciplinary domains of knowledge; it would present an environment in which learning is driven by a process of inquiry, for foundations of a subject area to be created where needed in the inquiry and out of the inquiry, rather that pre-ordained and culturally engrained in specific disciplines." (p.19)

And as Bennett (2007) offers more pragmatically,

"Of particular importance to the proficient delivery of music curricula is the effectiveness of learning transfer through investigative and reflective practices . . to consider the collaborative delivery of programmes across art forms . . It may be possible to turn the existing degree structure inside out – placing a core of generic skills at the centre of a collaborative delivery model." (p.187)

5   Music Education Inside-out

To consolidate these ideas further, music-in-action would become the centrepiece of the curriculum, as Attali (1985) says, "to put music into operation" (p.135) in working compositions which negate disciplinary divisions and where the creation of musical life itself becomes the art project (Focault 2003). I will now examine a common model used in Western conservatoria then ague how this might be reconceptualised in this light.

My home faculty, the Queensland Conservatorium delivers a number of undergraduate degree specialisations including classical music, composition, jazz, music technology, musicology and popular music.[iv] Typically, these specialisations are managed through departmental arrangements and fit the profile for separation along disciplinary lines of 'how it is done'. This orients around the delivery of a music 'major study', for example: in performance degrees this is through a dedicated subject central to every semester of a three year degree which teaches the student how to play a particular instrument; in the case of composition, the development of a portfolio of scores in collaboration with a master teacher; in music technology, though dedicated recording studio operational training. Around these major study activities are positioned 'core' degree materials including music theory, aural, historical and literary studies, together with a range of elective subjects including music business, technology and other areas of 'generic' skill development.

As shown in Figure 1, teaching focuses on what is argued as core craft. These 'pure' subjects sit at the centre of the curriculum while collaborative activities circle around this within various assessment activities or informal projects. In sound recording projects, like as in many other conservatoires (see Boehme, above) music technology essentially functions as a recording department for classical, jazz and composition areas where each discipline focuses in

relative isolation on its own major study skill development (Draper 2005). Throughout, students are encouraged to develop their own original projects but these usually remain limited along departmental boundaries. Another salient feature is that within the Australian university framework, such subjects and degrees are delivered according to a standardised format: atypically, four subjects are delivered as two hours per week, for 13 weeks per academic semester, in two semesters per calendar year. In other words, very unlike professional practice where short-timeframe, intensive projects and multi-skilling may be the norm.
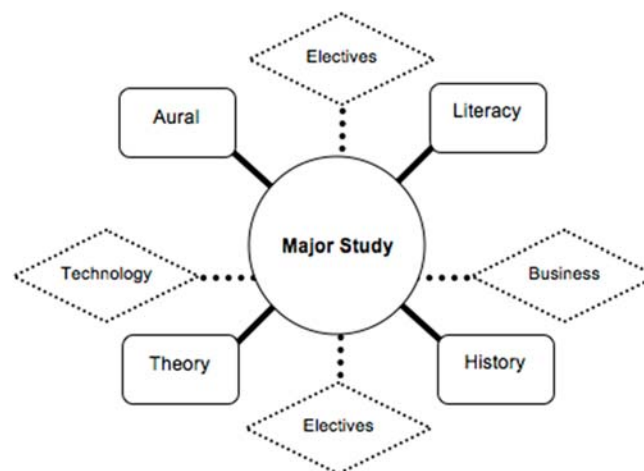

Figure 1. 'How it is done' at the centre of the curriculum.

A number of approaches have arisen in response to these one-size-fits-all environmental shortcomings and while innovative in intent, they primarily tinker at the edges of the original model. For example, a tradition arising out of the opera department provides a dedicated 'project week' per semester where students do not attend formal class timetables and are meant to engage in collaborative activities around an opera production, but also often in relation to special masterclasses, visiting artists and other one-off projects.[v] In the online environment, the music technology department has developed a strong community of practice utilising a cohort-wide discussion board, external podcasting and internet radio station[vi] (Draper & Hitchcock 2008). Elsewhere, what are seen as common core subjects are shared between disciplines and importantly, deliver economies of scale. Yet while music-making itself often occurs across class timetables and out of hours, most attention gravitates to mid/end-semester examination periods as per the various individual subject requirements.

Perhaps unsurprisingly then, Figure 2 (below) bears a resemblance to what was understood as music-making in the past, that is, various specialisations work to deliver supervised outputs in a twentieth century Fordist production chain paradigm (albeit, driven by two hour, weekly classes).

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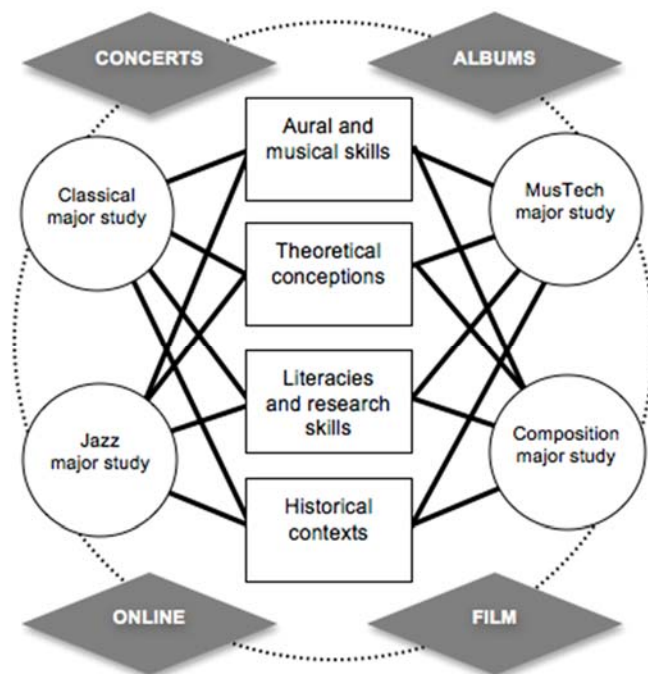University of Massachusetts Lowell. 14th – 16th November 2008

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Figure 2. 'What we do' around the curriculum.

One exception to this is the conservatorium's Bachelor of Popular Music (BPM) programme. Located on a remote campus, it remains self-contained and has restructured its major study by borrowing on aspects of social networking and instilling a program-wide ethos of student review. Recorded works are evaluated by student and staff teams at the centre of the BPM curriculum as 'Popular Music Production' (Lebler 2007).[vii] If the major study is indicative of the essence of the discipline then BPM understand this as peer-driven learning through collaborative assessment (while other programs deploy this as lessons in technique). This essential shift in socially-constructed ways of knowing undermines the traditional Cartesian premise of knowledge bytes as objects that are sequentially transferred to the student via various well-worn pedagogical strategies. A 'learning 2.0' perspective of knowing indicates, "we participate, therefore we are" (Brown & Adler 2008, p.18) and shifts the teaching focus from content delivery to facilitating interactions around the content.

However, many performance-based academics still question/reject this placement of peer-learning at the centre. Further, while BPM's culture demonstrates depth in its group reflection on the creation and analysis of sound recordings, its expanded access to production and exhibition (Juhasz 2008) remains one step away from an approach that prioritises music practice itself. Music-in-action would relocate the creative project activity to the centre of the curriculum as shown in Figure 3, utilising collaborative delivery across art forms (Bennett 2007). The foundations of a given project would arise as applicable to these self-composing areas of interdisciplinary knowledge (Bohem

2007), that is, through concert performances and installations, record productions, film sound and web-based initiatives.
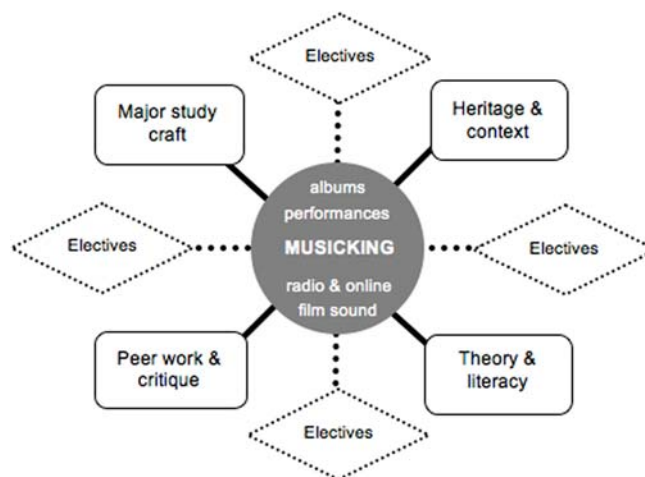

Figure 2. 'What we do' at the centre of the curriculum.

In this case, 'pure' courses such as craft training remain in place, but in a supporting role to the central musicking activities by assisting in the understanding and development of key skills as required for the project in play at any given time. To better mirror 21st century practice, these projects would run in a format closer to that of a contemporary performing arts organisation, that is, they would take place in short intensive periods, some simultaneously or overlapping. A 'block plan' model[viii] would be implemented as a 3–4 week course/semester and focus on a particular theme before moving on to another, for example, one block might orient around the theory, history and form of a particular music through a concert event, the next around a film, web or record outcome and so on. BPM's peer learning and assessment model would have a core role in this by leveraging student social networking into planning, evaluation and knowledge transfer and in this way, all participants become 'composers' of putting music into operation (Attali 1985).

6   Discussion

In practice such a 'musoptupian' model (Bennett 2007) would require a significant reconsideration of the music provider's administration systems, its pedagogy, its staffing and its research into these processes. But essentially, this should be a model that would aim to closely align as a place where musical ambitions can be realised not only within '2.0' contexts, but beyond this where interdisciplinary craft, intellectual capacity and lifelong learning stand as the essential attributes of career success. If web 2.0 is part of any answer (Thompson 2006), then in moving forward, we should ask better questions about this how this will be achieved. In the first instance, simply forcing existing departments together in teaching teams will unlikely

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produce useful results, as Giselle Ferreira (2007) notes,

". . the coming together of specialists in different areas does not guarantee the existence of a common language for the negotiations involved: the ability to identify (or, perhaps, construe) links across disciplinary borders does not pertain to a multidisciplinary encounter, a mere conflation of methods, approaches and languages . . perhaps, the main question that should be considered by teaching teams is not how students with different backgrounds will be able to cope with skills across the border, but how team members themselves can do so in the first place." (p.33)

While elements of music culture are remarkably persistent in the current reproduction of values in Western schools, conservatories and concert halls, we also continue to see an influx of younger teaching staff that are flexible in their thinking and approaches to 21st century music-making. Increasingly 'digital native', these people are beginning to reconceptualise music education in the context of interdisciplinary ensembles, multiculturalism and ever-advancing 'new' technology according to surprisingly longstanding principles:

". . within musical culture the relationship between producers and users of new, machine-like instruments has been extremely close. Instrument makers often were (amateur) musicians, composers, or artists themselves, whether or not they also worked with engineers. Because of this, values central to musical culture have helped inform the production, acceptance, and transformation of new technologies. Within the context of musical culture, especially the world of composing and live, onstage performance, personal achievement has been of enduring importance: machines or machine-like instruments have been incorporated in ways that permit personal achievement to remain visible and audible." (Pinch & Bijsterveld 2003, p.558)

Not only will technology continue to provide a central role in music making, so too will developing aspects of industry, particularly in terms of new relationships with sound recording, its representation, 'ownership' and intellectual property. There is a need here then for the use of music recordings to be better integrated in the modern curricula as a key resource for the development of new artists and new art forms. At present, while text-based resources are managed well by university libraries for the creation of new knowledge and rewarding of the 'remix' though essays, theses and academic research, commercial music recordings remain off-limits where licensing arrangements are applied to higher degree institutions in much the same way as night clubs, radio stations and bars (Draper 2008).

The idea of audiences/consumers continues to evolve, as do the models for engaging and sustaining a music career given the blurring of lines between professional and empowered amateur. We also see a growing emphasis on performance and the composition of new interactions around the music-making, that is, where audiences are prepared to interact with artists in direct ways that reject the pricing and spin regimes of big media (for example, Duckworth 2005). At the same time, while these transformations occur, older star-driven paradigms continue to evolve and re-configure in response. "Recorded music has been assaulted by wave after wave of discontinuous technologies over very short time periods" (Coles 2006, p.4) and ultimately, professional music-making will not end because of cultural or technological convergence.

7   Concluding Remarks

In this article I began with the position that the education of 21st century musicians is in need of substantial revision given the effects on professional music-making by technology, globalisation and disintermediation. Subsequently, I proposed a model to re-locate interdisciplinary craft-in-action at the centre of a curriculum informed by recent research and other frameworks arising in Western higher education. Such an outcome will not be a matter of one discipline privileging another. If web 2.0 is anything to learn from, this will be enabled through a hybridisation where a range of musical approaches, technologies and multiculturalism will extend traditional value systems and practices. This process will necessarily require an interdisciplinary leap of faith, given that we all imagine so many parallel musical worlds (Eisenburg 2005). In the art of record production, for example, practitioners might consider that state-of the-art sound engineering and interpretation could become an extension of consumer technologies and song writing, as part of the 2.0 craft of 'empowered artists'. Similarly, that the classically-trained violinist might be able to take the leap to web metrics, new audiences and ways of sustaining a career outside the confines of the orchestra. That the jazz improviser or sound artist will care for and sustain their social networks as part of core career artistry, and that while world music 2.0 emerges, current university massified conceptions of music training might be able to respond.

Can a musician be all these things at once? Some traditionalists may loudly proclaim 'no', but like Ferreira (2007), I suspect that new generations of young people may be well able to cope with such multi-tasking/multi-skilling given an appropriate learning framework in which to prosper. For the future then, I suggest that responses to these ideas be informed by collaborative research and consideration, as Patti Lather (1986) argues,

"Epistemological assumptions which underpin the work demand that attention be directed to the nature and identities of the authorities influencing research-on-praxis – a strategy of turning text into display and interaction among perspectives . . . [in order to present] material rich enough to bear re-analysis in different ways." (p. 15)

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This is perhaps best served in the first instance by inviting an edited collection of works from across music academic subdisciplines – in a book/wiki/website – seeking to investigate and understand music through 'what we do' now in the disintermediated music environment and thereby able to offer informed and innovative insights into this currently under-researched domain. That is: through an examination of contemporary workplaces, artists, audiences and education as 'music 2.0: toward a new praxis'.

8   Notes

i   Specifically, the British Academy of Composers & Songwriters, the Mechanical-Copyright Protection Society, the Music Publishers Association and the Performing Right Society.

ii   For example, the Joint European Master – Music Masters for New Audiences and Innovative Practice. Funded by the European Commission, the project partners include the Prince Claus Conservatoire (NL), Royal Conservatoire (NL), Jyväskylä University of Applied Sciences / School of Music (FI), Guildhall School of Music & Drama (UK), and the Iceland Academy of the Arts (IS). (available at http://www.jointmusicmasters.org)

iii   Now implemented for the first time in Australia by University of Melbourne as 'The Melbourne model 2008 – the future of Australian education'. (available at http://uninews.unimelb.edu.au/news/4155)

iv   Set up in 1999, the Bachelor of Popular Music is hosted at a remote, self-contained campus. Subsequently, this has been able to develop a innovative perspective on 'how it is done' through a cross year, student-led assessment of music through recorded portfolios.

v   An example of this was the iOrpheus project developed by New York composer and internet music pioneer William Duckworth, a visiting scholar on a Fulbright Senior Specialist grant awarded for iOrpheus. (available at http://www.iorpheus.com)

vi   Radio IMERSD is an open-access publication vehicle, developed by the Queensland Conservatorium's music technology department and later expanded as part of Griffith iTunes U. (available at http://www29.griffith.edu.au/radioimersd)

vii   To put this in perspective in terms of a single semester, program-wide activity, ". . [f]orty-nine recorded songs were presented over a three-week period, representing 58 students . . 287 responses posted, an average of six per song . . [f]orty-two students provided a total of 16,878 words of feedback . . with 90 percent of responses longer than 20 words and almost 70 percent longer than 40 words.' (Lebler 2007, p.212)

viii   US Colorado College and Canada's Quest University provide examples of 'block plans' in action. In the case of Colorado, the year is divided into eight academic terms and a single class is taken in each term. (available at http://en.wikipedia.org/wiki/Colorado_College and http://www.questu.ca/prospective_students/the_block_plan.php)

References

Anderson, Chris. 2006. *The long tail: Why the future of business is selling less of more.* New York: Hyperion.

Attali, Jacques. 1985. *Noise: The political economy of music (theory and history of literature, vol. 16).* Originally published in 1977 as *Bruits: essai sur l'economie politique de la musique* (Trans. Brian Massumi). Minneapolis, MN: University of Minnesota Press.

Benkler, Yokai. 2006. *The wealth of networks: How social production transforms markets and freedom.* New Haven and London: Yale University Press.

BMR (British Music Rights). 2008. *Music experience and behaviour in young people.* Survey and report undertaken by the University Of Hertfordshire, Feb–Mar 2008. (available at http://www.bmr.org/page/press-release-29)

Bennett, Dawn. 2007. Utopia for music performance graduates. Is it achievable, and how should it be defined? *British Journal of Music Education,* 24(2), 179–189. (available at http://journals.cambridge.org/action/displayAbstract?fromPage=online&aid=1033140)

Boehm, Carla. 2007. The discipline that never was: Current developments in music technology in higher education in Britain. J*ournal of Music, Technology and Education,* 1(1), 7–21. (available at http://www.atypon-link.com/INT/doi/pdf/10.1386/jmte.1.1.7_1)

Brown, J. S. and Adler, R. P. 2008. Minds on fire: Open education, the long tail and learning 2.0. *EDUCAUSE Review,* 43(1), 16–32. (available at http://www.educause.edu/ir/library/pdf/ERM0811.pdf)

Carroll, Michael W. 2005. *Keeping score: The struggle for music copyright.* Villanova University School of Law: bepress Legal Series. Working Paper 470. (available at http://law.bepress.com/expresso/eps/470/)

Coles, Anne-Marie. 2006. *Copying, copyright and creative destruction: The impact of digital file sharing on the recorded music industry.* Brunel University, BRESE Working Paper No. 19. (available at http://www.brunel.ac.uk/2146/brese/docs/w19musiccopyingfin.pdf)

Costantoura, Paul. 2001. *Australians and the arts.* Sydney, NSW: Australia Council. (available at http://www.australiacouncil.gov.au/__data/assets/pdf_file/0020/32771/02_report.pdf)

Cutler, Terry. 2008. *Venturous Australia: Building strength in innovation.* Green paper commissioned by the Australian federal government. Canberra: AGPS.

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(available at
http://www.innovation.gov.au/innovationreview/Pages/home.aspx)

Derrida, Jacques. 1967. Structure, sign, and play in the discourse of the human sciences. In *Writing and Difference* (trans. Alan Bass), pp.278–294. London: Routledge.

DIUS (Department for Innovation, Universities and Skills). 2008. *Innovation nation: Unlocking talent.* London: British Government. (available at http://www.dius.gov.uk/publications/scienceinnovation.pdf)

Draper, Paul. 2008. Who's really doing the stealing? How the music industry's pathological pursuit of profit and power robs us of innovation. In proceedings of *Creating Value Between Commerce and Commons* conference, 25–27 June 2008, Brisbane, Australia. (available at http://www.cci.edu.au/publications/who's-really-doing-stealing)

Draper, Paul. 2005. Encounters: Subdisciplinary dynamics in Australian music-making and recording. In proceedings of the *Art of Record Production Conference,* 17–18 September. London: University of Westminster. (available at http://www.artofrecordproduction.com/content/view/26/52)

Draper, P. and Hitchcock, M. 2008. The hidden music curriculum: Utilising blended learning to enable a participatory culture. In proceedings of *The 28th International Society for Music Education (ISME) World Conference, 2*0–25 July, Bologna, Italy. (available at http://www29.griffith.edu.au/imersd/draper/publications/research/draper-hitchcock_hidden_music_curriculum.pdf)

Duckworth, William. 2005. *Virtual music: How the web got wired for sound.* New York: Routledge.

Eckstein, Guy. 2007. Music 2.0: The evolution continues; a meeting of minds in the music 2.0 community. *Digital Hollywood* symposium, 29 October – 1 November, Los Angeles: Hollywood & Hyland Center. (available at http://www.digitalhollywood.com/DH07FL-MusicCon.html)

Eisenburg, Evan. 2005. *The recording angel* (2nd ed.). London: Yale University Press.

Ferreira, Giselle M. d. S. 2007. Crossing borders: Issues in music technology education. *Journal of Music, Technology and Education,* 1(1), 23–35. (available at http://www.atypon-link.com/INT/doi/pdf/10.1386/jmte.1.1.23_1)

Foucault, Michel. 2003. On the genealogy of ethics: An overview of work in progress. In Paul Rabinow and Nikolas Rose (Eds.), *The essential Foucault: Selections from essential works of Foucault, 1954-1984*, pp.102–125). New York: The New Press.

Gregory, Sean. 2002. Collaborative approaches: Putting colour in a grey area. Paper presented at the *CONNECTing With Conference*, 26–28 April 2002. Brisbane, Australia. (available at http://www.worldmusiccentre.com/uploads/cma/gregory.pdf)

Juhasz Alex. 2008. Learning from YouTube: An interview with Alex Juhasz (part one). In *Confessions of an Aca-Fan, The Official Weblog of Henry Jenkins.* (available at http://www.henryjenkins.org/2008/02/learning_from_youtube_an_inter.html)

Lather, Patti. 1986. *Methodology as subversive repetition.* New York: AERA.

Lebler, Don. 2007. Student-as-master? Reflections on a learning innovation in popular music. *International Journal of Music Education*, 25(3), 205–221. (available at http://ijm.sagepub.com/cgi/content/abstract/25/3/205)

Leonhard, Gerd. 2007. Music 2.0: Essays by Gerd Leonhard. [Website]. (available at http://www.music20book.com)

Lessig, Lawrence. 2001. *The future of ideas: The fate of the commons in a connected world.* New York: Random House.

Moylan, William. 2002. *The art of recording: Understanding and crafting the mix.* Boston, MA: Focal Press.

Music 2.0. 2008. Music 2.0: Exploring chaos in digital music. (available at http://www.music2dot0.com)

O'Reilly, Terry. 2005. What Is web 2.0: Design patterns and business models for the next generation of software. Sebastopol, CA: O'Reilly Media. (available at http://www.oreilly.com/pub/a/oreilly/tim/news/2005/09/30/what-is-web-20.html)

Pinch, T. J. and Bijsterveld, K. 2003. Should one applaud? Breaches and boundaries in the reception of new technology in music. *Technology and Culture* (44), 536–559. (available at http://muse.jhu.edu/login?uri=/journals/technology_and_culture/v044/44.3pinch.html)

Read, O. and Welch, W. L. 1976. *From tin foil to stereo: Evolution of the phonograph* (2nd ed.). Indianapolis: H. W. Sams.

Salavuo, Miika. 2006. Open and informal online communities as forums of collaborative musical activities and learning. *British Journal of Music Education*, 23(3), 253–271. (available at http://journals.cambridge.org/action/displayAbstract?fromPage=online&aid=547304)

Sand, Barabara. L. 2000. *Teaching genius: Dorothy delay and the making of a musician.* Portland, OR: Amadeus Press.

Simmons, Ian. 2002. Making sense of noise. Interview with Jacques Attali. (available at http://www.nthposition.com/makingsenseofnoise.php)

Proceedings of the 4th Art of Record Production Conference
University of Massachusetts Lowell. 14th – 16th November 2008

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Small, Christopher. 1998. *Musicking: The meanings of performing and listening*. Hanover, NH: Wesleyan University Press.

Sterne, Jonathan. 2006. The mp3 as cultural artifact. *New Media & Society,* 8(5), 825–842. (available at http://nms.sagepub.com/cgi/content/abstract/8/5/825)

Thompson, Bill. 2006. Web 2.0 and Tim O'Reilly as Marshal Tito. *Reg Developer*, 25 November. (available at http://www.theregister.co.uk/2006/11/25/forward_to_the_distributed_revolution)

Warhol, Andy. 1992. Warhol photo exhibition, Stockholm, 1968. In Justin Kaplan, ed., *Bartlett's Familiar Quotations,* 16th Ed., p. 758. New York: Little, Brown & Co.

Wikipedia. 2008. Disintermediation. (available at http://en.wikipedia.org/wiki/Disintermediation)