Digital Remix: The Art and Craft of Endless Hybridization

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Introduction

By "remix" we mean the practice of taking cultural artefacts and combining and manipulating them into a new kind of creative blend. Until recently this concept was associated almost entirely with recorded music. It referred to using audio editing techniques to produce "an alternative mix of a recorded song that differed from the original, and involved taking apart the various instruments and components that make up a recording and remixing them into something that sounds completely different" (ethnomus.ucr.edu/remix_culture/remix_history.htm). This practice of remixing became very popular during the 1990s across a range of musical genres – notably, in hip hop, house and jungle music, but also in mainstream pop, and rhythm and blues, and even in heavy metal music (ibid.). Remixes sometimes simply provided a speedier version of a song, or a leaner, more stripped back sound, or an elongated song to keep people dancing longer. Once digital sound became the norm, however, all manner of mixing and "sampling" techniques were applied using different kinds of hardware devices or software on a computer (Hawkins 2004).

This remains the dominant conception of remix. Recently, however, the concept has been expanded in important and interesting ways associated with activism contesting copyright and intellectual property legislation. Beginning with music remix, digital remixing has been the object of high profile and punitive legal action based on copyright law. The legal backlash against popular practices of remix has helped fuel an organized oppositional response to what is seen as unacceptable levels of constraint against the public use of cultural material – including a fascinating moment on 2 May, 2007, centering on the dissemination of code integral to overriding digital rights management restrictions on copying certain kinds of DVDs (see, for example, http://everydayliteracies.blogspot.com/2007/05/red-vs-blue-today-surely-goes-down-as.html).

The concept of remix and remixing has become a rallying point for organized response to existing copyright arrangements: namely, within arguments developed by Lawrence Lessig (2004, 2005) for the need to establish a Creative Commons (http://creativecommons.org). Lessig argues that digital remix constitutes a contemporary form of writing that is reaching the stature of a mass everyday cultural practice.

Lawrence Lessig on digital remix as writing

Lessig (2005) claims that at a very general level all of culture can be understood in terms of remix, where someone creates a cultural product by mixing meaningful elements together (e.g., ideas from different people with ideas of one's own), and then someone else comes along and remixes this cultural artefact with others to create yet another artefact. Whenever we comment

on a film or a book and discuss it with others we are taking the original author's creativity and remixing it in our own life, using it to extend our own ideas or to produce a criticism. Lessig (2005) says that every single act of reading and choosing and criticizing and praising culture is in this sense remix, and it is through this general practice that cultures get made. History shows us, for example, that remix isn't specific to digital times but has always been a part of any society's cultural development (see, for example, Pettitt's analysis of remix in Shakespeare's work, 2007). More specifically Lessig refers to a practice of creative writing within the school curriculum in parts of North America whereby students read texts by multiple authors, take bits from each of them, and put them together in a single text. This is a process of taking and remixing "as a way of creating something new" (ibid.: n.p.).

At the broadest level, then, remix is the general condition of cultures: no remix, no culture. We remix language every time we draw on it, and we remix meanings every time we take an idea or an artefact or a word and integrate it into what we are saying and doing at the time. At a more specific level we now have digital remix enabled by computers. This includes, but goes far beyond simply mixing music. It involves mixing digital images, texts, sounds and animation; in short, all manner of found artefacts. Young people are picking this up on a massive scale and it is becoming increasingly central to their practices of making meaning and expressing ideas. Lessig argues that these practices constitute remix as writing for these legions of digital youth:

> When you say the word writing, for those of us over the age of 15, our conception of writing is writing with text . . . But if you think about the ways kids under 15 using digital technology think about writing – you know, writing with text is just one way to write, and not even the most interesting way to write. The more interesting ways are increasingly to use images and sound and video to express ideas (in Koman 2005: n.p.).

Lessig (2005) provides a range of examples of the kinds of digital remix practices that in his view constitute "the more interesting ways [to write]" for young people. These include remixing clips from movies to create "faux" trailers for hypothetical movies; setting remixed movie trailers to remixed music of choice that is synchronized to the visual action; recording a series of anime cartoons and then video-editing them in synchrony with a popular music track; mixing "found" images with original images in order to express a theme or idea (with or without text added); and mixing images, animations and texts to create cartoons or satirical posters (including political cartoons and animations), to name just a few types.

We accept this conceptual extension of "writing" to include practices of producing, exchanging and negotiating digitally remixed texts, which may employ a single medium or may be multimedia remixes. (We also recognize as forms of remix various practices that do not necessarily involve *digitally* remixing sound, image and animation, such as paper-based forms of fanfiction writing and fan-producing manga art and comics, which continue to go on alongside their hugely subscribed digital variants.)

Typical examples of remix practices

As indicated above, types of currently popular remix include:

- Photoshopping remixes (e.g., Lostfrog.org)
- Music and music video remixes (e.g., Danger Mouse's "Grey Album" and the Grey video)
- Machinima remixes (e.g., Machinima.com)
- Moving image remixes (e.g., Animemusicvideos.org)
- Original manga and anime fan art (e.g., DeviantArt.com)
- Television, movie, book remixes (e.g., Fanfiction.net)
- Serviceware mashups (e.g., Twittervision.com)

This list isn't exhaustive. It simply illustrates the range of remix practices possible using digital files, software and online networks and archives.

"Photoshopping" as image remix

Adobe's famous digital image editing software, Photoshop, has been appropriated as a verb for diverse practices of image editing, many of which constitute forms of remix. Affordable image editing software and enhanced online storage capacities, along with image-friendly website hosting services mean that photoshopping has quickly become a popular online practice, engaging a wide range of contributors with diverse levels of artistic and technical proficiency. Image remixing can take various forms. These include adding text to images, creating photo montages that mix elements from two or more images together (including prankster type remixes that place the head of a famous person on, for example, the body of someone caught in a comprising situation), changing the image content itself in some way (e.g., removing someone's hair or body parts, adding a fifth leg to a dog), and changing image properties (e.g., changing the colours or image focus, fiddling with brightness levels or shading, etc.). Some of the most common uses of image remixing include

- for fun (including hoaxes) (e.g., Worth1000.com, SomethingAwful.com),
- for expressing solidarity or affinity (e.g., Lostfrog.org), and
- for making political points (e.g., Antiwarposters.com).

Music and music video remixes

At its most basic level, music remixing comprises taking bits and pieces of existing songs and splicing them together. Originally, this mixing work required two or more vinyl record turntables and a "mixer" (a machine that allowed the artist to alter the tempo, dynamics, pitch and sequencing of songs), or access to music studios to physically splice two-track tapes to create a single multi-track recording (Hawkins 2004). Software like GarageBand and Cakewalk now mean "the tracks from any song, regardless of original tempo, can be digitally altered to work over a huge range of tempos and keys" (ibid.: viii) and can be mixed and remixed in countless ways.

Early music remixes included "scratching" ("manually moving the vinyl record beneath the turntable needle" Wikipedia 2007: 1); sampling, taking snippets from one or more songs and weaving them together to create a changed or entirely new song; and sequencing, the ordering and repetition of samples or added sounds or tracks. A popular example of remixing, as judged

by mainstream music sales, is Danger Mouse's "Grey Album," which was released in 2004. In this work, Danger Mouse mixed together samples of instrumental tracks from the Beatle's "White Album" with rapper Jay-Z's a-cappella "Black Album" to create 12 distinctively different songs. In August, 2004, Laurent Fauchere and Antoine Tinguely – Swiss film directors – mixed archival and commercial footage of the Beatles (e.g., television studio live performances, concert footage, clips from the movie, "A Hard Day's Night") with footage from a Jay-Z performance and computer-generated imagery and live-actor footage made expressly for the music video to create what has come to known as the "Grey Video." This video was made to promote one of the singles from the "Grey Album," but subsequently ran into legal troubles due to its use of unauthorized clips.

Professional dance music DJs and remix musicians tend to have access to vocal and instrumental tracks for songs that greatly facilitate mixing. Computer and software developments in the 1990s saw the rise of Do-It-Yourself underground music remixers. These amateurs did not have studio-approved access to individual tracks within songs and worked instead with entire, intact songs, often splicing together "wildly different" songs in their work (Wikipedia 2007). This in turn shaped a distinctive approach to remixing music that has been taken up by professional remixers, too (see, for example, amateur and professional remixes based on the theme song to "Doctor Who" at http://whomix.trilete.net). A number of singers and bands encourage underground remixing and make mixable versions of their work available online for downloading and tinkering with. It can be argued that developments in video and sound editing software around the same time also saw music fans beginning to make their own music videos as tributes to favourite songs or bands. A search for "fan music videos" on Youtube.com suggests these kinds of music videos are now a popular and well-established practice. These fan videos include sampling clips from movies or television shows, creating movies within video games, using flash animation (or stop motion animation, claymation, etc.), roping friends and family into participating in a live-action video, and so on, all set to a favourite song or used to create a tribute (to a band, a movie, and television series).

AMV

Anime Music Videos (AMV) comprise a distinct branch of fan music clips. These music clips always use anime – animated Japanese cartoons – as their visual resources. The anime can come from anime movies, television series, or be original creations of the AMV maker. AMV are often tribute videos; that is, the clips used within an AMV collectively summarise key aspects of a favourite anime series. AMV can also be conceptual and focus on a particular dimension of a favourite anime series, such as a relationship between two different characters, values such as strength, courage, determination, loyalty, or archetypal themes such as the struggle between good and evil. AMV can also simply be a celebration of anime itself, set to a favourite song. For example, the Newgrounds portal for AMV contains material like Chuck Gaffney's remix of clips from several anime shows like Inuyusha, Dragon Ball-Z, and Sailor Moon, among others, set to the chorus of Alphaville's song "Big in Japan" (newgrounds.com/portal/view/136982); and Brandon Blackburn's "A Place for my Head," set to Linkin Park's song of the same name and featuring what looks like original anime (newgrounds.com/portal/view/34620).

DynamiteBeakdown is a 17-year-old student who spends much of his spare time working on AMV, with some of his projects requiring months of time and hundreds of anime clips to complete. Dynamite's work is well regarded and his AMV, Konoha Memory Book, was registering over 500,0000 views on YouTube in early May, 2007 (see youtube.com/user/maguma for DynamiteBreakdown's account, with drummerjdm's posting of this same AMV attracting the most views). This same AMV won the "popular vote" at the 2006 Japan Expo in Los Angeles. Dynamite tends to focus on the Naruto anime series and create AMV that are largely conceptual in nature. He also uses many of his anime to summarise a complete series, and sometimes includes text or other devices to help viewers interpret his video clips. Referring to one of his favourite personal AMV creations he says:

> Then for 'Before We Were Men', I tried my hardest to make this video stand out above all the other Naruto V. Sasuke AMVs that are out there. I wanted to show all the things that the two had gone through up to the fight that they have near the end of the series. Also I tried to throw in a bit of fan service with the text [i.e., words like "passion", "angst" appearing at specific points in the video] and the ending along with keeping the theme of the Video feed effect at the beginning and end [i.e., quiet introductory and conclusion sequences].

Machinima

"Machinima" – machine + cinema – is the term used to describe the process by which fans use video game animation "engines" to create movies. A game engine is the core software that makes a game run. It provides the various "functionalities" needed in a game, like rendering graphics, scripting, animation, sound, collision detecting, networking, a scene graph, and so on (Kelland, Morris and Lloyd 2005). This includes making the most of the computer-generated imagery (CGI) in the game, as well as the physics of the game world (e.g., who and what can fly, what can and can't be blown up, who can become invisible and how) to create new animated texts. The movie action is generally captured by software that can record onscreen action (e.g., Fraps, Machinimation), although some games and 3D worlds have recording functions built into them (e.g., The Movies, Second Life). In the recent past this kind of animation work demanded extremely expensive, high-end 3D graphics and animation engines, and was found mostly within the realm of professional animators.

Creating machinima involves telling a story using tools found within the game engine such as camera angle options, script editors, level editors, and the like, along with resources, such as characters, backgrounds, themes, characters and character movement ranges, settings, lighting, game world physics, etc. available within the game. The resulting clips or "takes" are spliced together using movie editing software (e.g., iMovie, Sony Vegas). Titles and credits can also be added.

Machinima.com, a popular how-to website and archive of machinima animations, claims that

> you don't need any special equipment to make Machinima movies. In fact, if you've got a computer capable of playing Half-Life 2, Unreal Tournament 2004 or even Quake [all three are popular video games],

> you've already got virtually everything you need to set up your own movie studio inside your PC. You can produce films on your own, or you can hook up with a bunch of friends to act out your scripts live over a network. And once you're done, you can upload the films to this site and a potential audience of millions (Machinima.com 2006: 1).

The term "machinima" is also used to describe the genre of animation generated by this process. These animations may be fanfics and extend a game narrative in some way, or the game may simply provide tools and resources for producing an entirely unrelated text. Machinima need not be amateurish in quality, either. Animations like *Hardly Workin'* and *Red vs Blue* have won film festival awards around the world (Kelland, Morris and Lloyd 2005). That being said, increasingly sophisticated video games and the development of user-friendly video-editing software have seen machinima move more towards the everyday. Those new to the machinima creation process can now access online tutorials and interviews with renowned machinima makers for insider tips on how to create one's own high-quality animations. The popularity of this kind of animation remixing has seen the launch of games that directly and openly encourage remixing, like Lionhead Studios' The Movies (themoviesgame.com) or Epic Games' Unreal Tournament. Machinima as a genre has also directly influenced music video production, with MTV making a regular spot available for machinima music videos in 2005. In August 2006, the Coca-Cola company launched a ground-breaking machinima advertisement that used the Unreal Tournament video game to create a "Grand Theft Auto" like setting (with Grand Theft Auto being a highly controversial video game in its own right) to tell a story about the importance of being kind to others. Similarly, game companies themselves, like Blizzard Entertainment, run annual competitions for machinima made using their games.

Fan fiction

Fan fiction – or "fanfic" to its aficionados – is the name given to the practice where devotees of some media or literary phenomenon like a television show, movie, video game, or book write stories based on its characters. Most fanfic is written as narrative, although songfic and poetryfic are also popular forms and some fan fictions are carried as manga drawings and animations. "Costume play" or cosplay – dressing up as favourite manga and anime characters – and live action roleplays based on a favourite popular culture text are also gaining in popularity (see, for example, Cosplay.com).

Fanfic writing can be classified into a number of different types. The most common of these include in-canon writing, alternative universe stories, cross-overs, relationshipper (or shipper) narratives, and self-insert fanfic:

- *In-canon writing* maintains the settings, characters and types of plotlines found in the original media text as far as is possible, and simply adds new "episodes" or events to the original text (e.g., a new "episode" of the television show, "Xena: Warrior Princess, that maintains the characters and setting as faithfully as possible and that builds directly on the narratives and character histories and adventures already developed within the series itself). Pre-sequels and sequels are popular versions of in-canon writing.

- In *alternative universe stories* characters from an original media text are transposed into an entirely new or different "world" (e.g., placing key characters from the Star Wars movies into a Lord of the Rings universe, or an entirely new, invented universe).
- *Cross-overs* bring characters from two different original media texts together in a new story (e.g., Spiderman brought together with the characters from the sci-fi television series, Stargate SG–1).
- *Relationshipper (or "shipper") narratives* focus on establishing an intimate relationship between two (often minor) characters where none existed or was downplayed in the original text. These texts can focus on heterosexual relations (e.g., between Star Trek's Admiral Kathryn Janeway and Chakotay characters), or homoerotic/homosexual relations between characters (e.g., between Star Trek's Captain Kirk and Mr Spock). The latter kind of fanfics are also referred to as "slash fiction."
- In *self-insert fanfic* writers insert themselves as recognizable characters directly into a narrative (e.g., many young female fanfic writers write themselves into the Harry Potter series in place of Hermione, one of Harry's closest friends; many writers invent a character that is a mix of themselves and attributes from popular culture characters and insert this hybrid character into their text).

Fan art

Fan art can take any form and respond to any kind of generative text. Perhaps the most easily found fan art online, however, focuses on manga and anime. Manga (or "Japanese comics") is a stylized graphic genre that itself can be described as a remix of traditional religious scroll illustration style meets 18th century Dutch art meets Disney animation (cf., Lankshear and Knobel 2006, Sanchez 2003). Anime is the animated version of manga. Popular manga include *Fruits Basket* and *Sorcerers and Secretaries*; popular anime television series include *InuYasha*, *Yu-Gi-Oh!* and *Dragonball-Z.* Award-winning anime movies include *Spirited Away* and *Barefoot Gen*. Manga an anime in all its forms can provide material for remixing as fan art.

Fan art can take the form of single images, faithfully copied from the original manga text, to entire manga stories that mix existing characters and storylines from a range of manga and anime worlds along with original work (see, for example, work archived on DeviantArt.com and Toriyamaworld.com). Discussion and email lists abound that are devoted to presenting and reviewing fan art work.

Amateur manga drawing was a popular practice in Japan long before manga crossed into the English-language market, and *otaku* attended manga markets or comics conventions and distributed and discussed their own manga images with other fans. This practice was echoed in English-speaking countries as manga and manga events become more readily available to fans. Many of these face-to-face production and review networks subsequently have moved to online spaces, and have become an important source of feedback on drawing techniques (e.g., fine-tuning perspective, facial expressions, hair etc.) and plot developments for *otaku* manga writers and artists. Manga fans are particularly serious about their artwork and regularly form "circles" or distributed groups (especially online) devoted to constructively critiquing each other's manga drawings. Most highly prized within these circles are *original* drawings, rather than copies of existing manga artwork. Kelly Chandler-Olcott and Donna Mahar provide excellent examples of the kind of art-focussed critique that takes place between manga fans in their case study of Eileen,

a 13-year-old aspiring manga artist. Eileen scans and posts an original drawing she had done to an email discussion list, and receives the following feedback:

> The background is kinda simple, which is actually a pretty good idea. You might want to add something towards the bottom of the picture to balance all the items you have floating around at the top…. Also, his chest is either really small, or really smushed. Either way, it's not a good look with large biceps (those are the ones on the top of the arms, right? I get confused sometimes). Not to be crude, but he needs more shading in the crotch area. It seems there's nothing there from knee to knee. Otherwise I love the expression, specially the grin. It totally sets the mood to scare some people. Or freak them out, whatever. And like usual, nice shiney hair, Very pretty. (Mailing list posting, December 7, 2001) (in Chandler-Olcott and Mahar 2003: 377).

How-to manga drawing and animation courses and tutorials available online (e.g., howtodrawmanga.com), and commercial companies are releasing affordable manga drawing and anime software packages developed especially for fans and hobbyists (e.g., eFrontier's "Manga Studio" and "Anime Studio").

Serviceware mashups

The Grazr mashup of Pandora and Del.icio.us for social networking around music interests is a good example of remix as serviceware mash-ups (see Grazr.com). the term "mashup" has come to be applied to the process of bringing together tow or more applications (e.g., software, online interface serviceware) to create a new application or service. Mashups remix on the principle of leverage to add value to what already exists by bringing components together to create innovative and useful – *purposeful* – process tools. In example of Grazr, a music social networking aficionado created a mashup that would allow individuals who were creating "radio stations" and personal profiles in Pandora.com (an online, customisable radio-type service) to become potentially infinitely more "discoverable," by getting links to their stations onto Del.icio.us such that they could then be picked up via tags by the Grazr aggregator and reach potential like minds via aggregator searches and feeds. Other serviceware mashup examples include Twittervision.com, which mashes together Twitter – an on-the-go personal information service – with Google Maps to show who is "Twittering" and where at any given moment; and Panoramio.com, which takes Flickr-style photo hosting and mashes it with Google Maps so that posted photos are accompanied by a map showing where they were taken.

Remix as endless hybridization

Hybridization

In biology there are two main kinds of hybridization:

- The result of interbreeding between two animals or plants of different "orders": either different species within the same genus (mules, hinnies, ligers, zedonks, in the case of animals), or between different sub species within a species (bengal tiger and siberian tiger).

- Crosses within a single species to get characteristics that are not found at all or are not found consistently in the "parent" populations. The aim is to get desirable characteristics consistently by deliberate re-arrangement of genetic material to create new "breeds".

Some hybrids are infertile, but many are not.

These features can be applied analogously to cases of digital remix. If we claim in this case that "family" within the conventional biological taxonomy encompasses particular types of expressive media and services, then the concepts of "genus" and "species" help us to trace fertile interbreeding at both levels (see Table 1).

Genus	**Species + Species**	**Hybrids**	**Examples**
Movies	Video games + movie editing for advertising purposes	Machinima advertising hybrids	• "Game On" (Volvo commercial) • Coca-Cola's GTA-style "be kind" commercial
	Video games + movie editing for entertainment purposes	Machinima fan hybrids	• *Red vs. Blue* • *Illegal Danish Super Snacks* • *A Few Good G-Men*
	Video games + movie editing for commercial entertainment purposes	Machinima media hybrids	• *Make Love not Warcraft* (a *South Park* episode)
	Movie editing + commercial movies	Movie trailer hybrids	• *Sleepless in Seattle* as a horror movie trailer • *The Shining* as a feel-good movie trailer
Music Video	Popular song + movie editing	Anime Music Videos	• *Konoha Memory Book* • *Narutrix*
	Popular song + movie editing	Machinima music videos	• *Still Seeing Breen*
Storytelling	Popular text + fan spin	Fan fiction	• *Pirates of the Caribbean* in canon fanfics • *InuYasha* alt universe fics • *Game universe* fanfics
Still image	Existing photo + photo editing	Photoshop hybrids	• *LOLtrek* • *Lostfrog.org* • *All Your Base*
Music	Pop rock + rap	Remix hybrid	• *The Grey Album*
	Folk + rap	Remix hybrid	• *The Score*

	Television theme song + other song genre	Remix hybrid	• *Doctor Who remixes*
Serviceware	Existing serviceware (e.g., Pandora.com) + existing serviceware (e.g., Del.icio.us.com)	Customizable service hybrid	• Grazr.com • Twittervision.com

Table 1: Genus and species analysis of some remix hybrids

Endless(ness)

In the sense that each new mix becomes a meaning-making resource (affordance) for subsequent remixes, there is no "end" to remixing. Each remix in principle expands the possibilities for further remix.

In reality, however, many remixes prove to be "infertile." They are not remixed, may not even be viewed, read or listened to more than a few times. This may be completely immaterial to the producers, for whom the full significance of the work might consist merely in bringing a creation to fruition, as an expression of fan appreciation, as self-expression, as another "self-identity constitutive move."

Indeed, there are multiple potential indices of "fertility" or, at least, of non-sterility. Mere total number of "views" per uploaded video comprises a measure of fertility, at least in one sense of "reproduction" – since viewing entails making a copy. And the number of views is certainly one measure recognized by practitioners of remix as evidence of objective (beyond subjective) attainment. AMV videos uploaded to YouTube and viewed more than half a million times can be considered fertile, for example. Longevity is another measure of fertility in the sense that current remixes which reference previous remixes in a layering of significance signal the fertility of an earlier remix. The "All Your Base" set of photoshopped remixes is a good example of long-lived, fertile remix (see allyourbase.planettribes.gamespy.com). This particular set of images grew out of a clip of the opening sequence to the Japanese video game, *Zero Wing*, which had been uploaded to the internet sometime ion 2000 or 2001. The syntactic and semantic hiccups within the English subtitles of this clip tapped deeply into what a *Times Magazine* article identified as "geek kitsch" humour (Taylor 2001). One phrase, uttered by the leader of the invading force – "All your base are belong to us" – especially caught on and resulted in an hilarious set of photoshopped images that reproduced this phrase within a variety of settings (e.g., rewording of the iconic "Hollywood" sign, on billboards and road signs, on food products, as part of television game shows). The phrase and images from this original photoshopped set subsequently have appeared in more recent remixes. For example, providing the syntax for newspaper headlines (e.g., "All your x are belong to us"), as images in other remixed photo sets (e.g., the plane pulling a banner in the Lost Frog remix, the phrase and accompanying image appearing in a copyright resistance movement online), and in the form of remixed photo sets located within new settings (e.g., the Danish production, "All Your Iraq Are Belong to Us") (see Knobel and Lankshear 2007).

As the operating principle of culture, remix is endless. Interesting questions include those about what gets remixed, how items get remixed, when remix begets innovation, and the directions this takes.

Aspects of the "art" of remix

When we talk about the "art" of remix we have generally in mind the aesthetics, appreciation, form and composition dimensions of remix practices. These are centrally concerned with the questions of what makes a remix "good" or of "high quality" and of the kinds of elements or components (including their modes) that go into effective and fertile remixes.

At this level, "art" ranges over the conceptualization of a production (where the concept comes from, how it comes together, what makes it a strong concept, etc.); the design for realizing the concept as elegantly and pleasingly as possible; norms and criteria and other aspects of "a tradition" whose observance is seen as integral to "good" work, and so on. Certainly, trial and error seems to play a role in developing criteria for judging quality. For example, DynamiteBreakdown explains:

> "I started using Naruto Episodes and I would produce like 1 a night, but they weren't amazing. After 'We Will Fight for Her', one of my first major AMV projects, I spent a LOT more time on AMVs."

And

> I use them [opening and closing sequences from original television anime] a lot since the animation in them is superb and sometimes it's perfect for scenes; but the credits are looked down upon just as badly as being able to see subtitles. That [i.e., not using opening and closing sequences and subtitles] would be the only way I could be taken seriously on AMV.org.

A 2002 Guide to making AMV remixes says:

> Before you get started on your own video, you must first figure out what is a good anime music video and what makes it good. Figuring this out isn't some 10 minute revelation. You have to watch many videos over and over again that are considered good. Watch them closely. Watch them several times in a row. Why is the video good? Be sure to view a minimum of Phade's Required Viewing [hyperlink]. Figure it out and then try to do what they did.
>
> Then watch some mediocre videos. Why are they mediocre? What makes them mediocre? What could the creator have done to make the video better? (Now don't get too cocky here about what they could have done better. There are be plenty of legitimate reasons why they didn't make it as good as they could: insufficient equipment, insufficient time, insufficient footage, not enough effort, or they just plain got tired of making the video and just wrapped it up.) At any rate, notice what could have been done better and try to avoid what they did: learn what not to do. I'm not going to give you a list of mediocre videos; I'm sure you've found some on your own. =) (see Animemusicvideos.org/guides/)

A second guide at the same site (http://www.animemusicvideos.org/guides/kalium/index.html) addresses itself to AMV theory. It addresses concepts like "synch" – or, the connection between music and video, without which you have anime and music but no real connection between them – and the musical, lyrical and mood dimensions of synch; like "concept" – or one's vision for the video; what one wants viewers to think and understand, or how one wants them to feel – and the storytelling, exploration and examination dimensions of the concept; and like "effects", in their meaning, composition, appearance, etc. dimensions. It provides examples for the various concepts addressed and, as such, essays some explicit guidelines for expert performance: guidelines that could be built into formal educational considerations of aesthetic creativity.

So far as popular cultural practices of remix are concerned the questions of how aficionados get to know what is good, how to emulate that, and how far they take steps to emulate it are interesting and to date have not been subjected to much inquiry. Various lines are open. For example:

1. Numbers of views and ratings as guides to what are good (i.e., a market appreciation model). What are the views and ratings saying?
2. Hard core aesthetic theory and the like (e.g., film theory, art theory, design theory). This might or might not include trying to apply theories like social semiotics. The "Kalium" guide mentioned above might be seen as a stripped back semi formal version of more traditional kinds of aesthetic theory.
3. Folk/practitioner theory; that is, what do fans and fan practices tell us? For example, what do amateur remixers who create popular AMVs say about what makes a good AMV? What do people's machinima "favourites" lists on YouTube tell us?

Aspects of the "craft" of remix

The "craft" of remix entails knowing the "technical stuff" of remixing.

Photoshopped remixes, for example, have been greatly facilitated by the development of more user-friendly software, but still require a basic set of technical skills that can be honed through trial and practice. These skills include "preparation" know-how, like being able to scan hardcopy images and convert them to digital formats, being able to transfer images from a digital camera or memory card to a computer, knowing how to access free image archives online, knowing how to download images from the internet, knowing, at times, how to convert image files into different or compatible file formats (e.g., *.jpg, *.tff, *.gif). Photoshoppers also need to know how to use digital image software (e.g., Adobe's Photoshop, Jasc's Paintshop Pro). Within digital image software environments, photoshopping craft includes knowing how to use marquee tools and crop functions to select specific sections of an image and transfer them to another; knowing how to use a repertoire of image adjustment tools and functions, like blur, fill, clone stamp, shape selection, and colour matching functions, as well as, magic wands, palettes, and so on. Technical know-how can be gained via tutorials built into the software itself, and beginners have access to a range of online and book-based guides to help with mastering a wide range of tools and functions (see, for example, Corel 2007, Perkins 2006, Worth1000 2007). That being

said, technical competence is not a guarantee of effective image remixing. For example, producing a less-than-proficient yet conceptually clever image remix often wins out over slickly produced but unimaginative image remixes in many online forums (Lankshear and Knobel 2007).

In the case of fanfiction, craft includes a range of technical know-how, along with being able to participate effectively within a fanfic forum or "affinity space" (cf., Black 2007). Technical know-how needed for posting fanfic online includes, as mentioned earlier, working out how to register as a member of the group, how to post stories written either by means of word processing software located on one's computer hard drive or entirely online at, for example, Google Docs (http://docs.google.com). It includes knowing how to rate one's fanfic (e.g., general or mature audience), how to find one's fanfic archive space and the archives of others. It may even include knowing some basic HTML coding language for including hyperlinks within one's profile page or notes to readers. Participating effectively in a fanfic affinity space includes knowing how to review other people's fanfics in constructive and supportive ways; in some cases, it includes knowing how to write collaboratively across distances; posting stories regularly and taking reviewer feedback into account; acknowledging when a character has been borrowed—whether from a commercial source or from a friend's own fanfic writing; among others (see Black 2007; Lankshear and Knobel 2006).

A range of online and offline resources exist for enhancing the craft of other remix practices. These include the FAQs (answers to frequently asked questions) posted on remix community forums or websites, fan art how-tos (e.g., howtodrawmanga.com), detailed walk-throughs for creating short machinima movies (e.g., Hancock nd, Hawkins 2005, Marino 2004), guides to music remixing (e.g., Hawkins 2004), digital video editing handbooks (e.g., Kenworthy 2005, Videomaker 2004), guides to creating AMV (e.g., AMV.org 2007), among others.

Some links to theory and issues pertaining to teaching and learning as *education*

Defining literacies

We define literacies as "socially recognized ways of generating, communicating and negotiating meaningful content through the medium of encoded texts within contexts of participation in Discourses or as members of Discourses" (Lankshear and Knobel 2006: Ch 3).

By "socially recognized ways" we mean something close to the concept of "practice" as it was developed by Scribner and Cole (1981) in relation to literacy. They defined practices as "socially developed and patterned ways of using technology and knowledge to accomplish tasks." That is, when people participate in tasks that direct them "to socially recognized goals and make use of a shared technology and knowledge system, they are engaged in a social practice" (Scribner and Cole 1981: 236). Practices comprise technology, knowledge and skills organized in *ways* that participants recognize, follow, and modify as changes emerge in tasks and purposes as well as technology and knowledge.

This is what we see going on everywhere, and graphically, in today's literacy scene. New socially recognized ways of pursuing familiar and novel tasks are emerging and evolving apace –

and with a good deal of consciousness on the part of people who are building and evolving them as this is going on. Interestingly, much of this conscious building and refining is being done by "tech savvy" people – who are often young. This is why we have appealed to Scribner and Cole's account of practice, rather than some of the more recent accounts within literacy studies. Scribner and Cole put technology right in the foreground of their account of "practice." This visibility often slipped subsequently into the background as conceptions of literacy practices increasingly centered on *texts*, and their linguistic-semiotic dimensions. We want to put the technology squarely back in the frame. Our focus here is on diverse *social practices* of remix.

Encoding involves much more than "letteracy." Encoding means rendering texts in forms that allow them to be retrieved, worked with, and made available independently of the physical presence of an enunciator. The particular kinds of codes employed in literacy practices are varied and contingent. In our view, someone who "freezes" language as a digitally encoded passage of speech and uploads it to the internet as a podcast is engaging in literacy. So, equally, is someone who photoshops an image – whether or not it includes a written text component.

Social practices of literacy are *discursive*. Discourse can be seen as the underlying principle of meaning and meaningfulness. We "do life" as individuals and as members of social and cultural groups – always as what Gee calls "situated selves" – in and through Discourses, which can be understood as meaningful co-ordinations of human and non-human elements. Meaning-making draws on knowledge of Discourses; that is, on insider perspectives – these often go beyond the literal; beyond what is "literally" in the sign. Part of the importance of defining literacies explicitly in relation to Discourses, then, is that it speaks to the meanings that insiders and outsiders to particular practices can and cannot make respectively. It reminds us that texts evoke interpretation on all kinds of levels that may only partially be "tappable" or "accessible" *linguistically*.

Technical-Discourse-Evaluative view of literacy education

Advocates of social practice approaches to literacy and literacy education as against psycholinguistic and skills-based approaches often insist on the multi-dimensional nature of literacy. The various dimensions of mature, rounded literacy practices are identified and named in varying ways by sociocultural theorists. Our preference is for recognizing what might be called "technical," "discourse" and "evaluative" dimensions. Being literate in the sense we think is well exemplified by serious aficionados of popular remix practices entails being proficient within each dimension.

The *technical* dimension involves knowing one's way around the processes and tools for encoding the meaning one seeks to articulate. In fan fiction this might mean literal print encoding, although within online spaces it will also include aspects like setting up an account, logging on, editing online, saving files and so on. In the case of making machinima, the technical dimension can be highly complex and demanding, including knowing how to play a game to high levels in order to have access to sufficiently developed characters, props and settings, but also how to perform myriad operations to change texture, modify a character's features, synchronize gestures and speech, edit and splice video clips, and so on. This overlaps with much of the craft aspect of remix.

The *discourse* dimension involves bringing cultural knowledge to bear on the tasks or purposes of the practice in which one is engaged; how to mobilize and co-ordinate the meaning elements. This overlaps significantly with much of the art aspect of remix, although a good deal of the craft aspect is in here as well. It is about knowing what kind of situated practice we are in, what the rules, norms and criteria are that apply to that practice, what kinds of shared meanings circulate within members of the practice and the kinds of signs, symbols, sounds (meaning tokens) that bespeak these, and how different co-ordinations out of these can convey different meanings. For example, what is mobilized and co-ordinated to make the "Hopkin image on a toasted sandwich for sale on eBay" image work as a remix, or DynamiteBreakdown's *Konoha Memory Book*?

The *evaluative* dimension has to do with knowing how to enhance or improve the practice in order for it to better fulfill the interests of those who engage in it and who are impacted by it. There are internal and external aspects to this evaluative dimension. From an *internal* standpoint the purposes of a literacy practice are taken as given and the evaluative dimension is concerned with realizing these purposes more fully, efficiently, richly, or whatever. This might consist in refining techniques to get a better finish, or simplifying processes to make the practice more inclusive, or developing better guides, and so on. From an *external* standpoint the evaluative dimension may involve revising purposes to make them more responsive to people's needs, more altruistic, more representative and so on. From an internal standpoint remixing elements of Pandora, Del.icio.us and Grazr into a mashup enhanced the dissemination capacity of Pandora users. From an external standpoint, turning remix away from purposes of the kind that turned the ill-fated Star Wars Kid into a psychically injured young person can only enhance remix as a family of social practices.

In the various examples of remix practices and the remix artefacts we have described it is easy to see these three dimensions integrated into what the practitioners have done. They provide good concrete cases of what theoretical concepts and distinctions look like within what are increasingly familiar practices for school-aged learners. Moreover, it would be odd to think of others *teaching* the practitioners to integrate the three dimensions into their work – precisely because the various remix "literacies" have been acquired and refined as situated practices that "come at" novice remixers "whole." Rather, the cases work better in hindsight, as examples of what is already evident to remixers and that, as learners in formal settings, they might be able to relate to other learning contexts when connections are made by a teacher or by peers.

Powerful tools: manipulation and distribution

Gee (2007: 33) observes that humans feel "expanded and empowered when they can manipulate powerful tools in intricate ways that extend their area of effectiveness." He further notes that many of the tools young people increasingly have access to today are "smart tools" that have knowledge built into them in ways that enable them to "collaborate" with the tool users to do complex things that the tool user either could not do alone or could not do as effectively. The tool user and the tool "each have knowledge that must be integrated together" if a purpose is to be achieved (2007: 34). The smart tool permits the user to have experiences of extending themselves into a world and to manipulate aspects of that world in a fine-grained way in

pursuing understanding, mastery, or creative production as a purpose (to have success in one's purpose, in other words).

Gee extends this concept of smart tools beyond material artifacts like smart computer programs to include also intellectual tools (he mentions geometry). When we understand "things" like "concepts" and "bits of theory", and "theorems", "distinctions", "categories" and the like as tools that we can use, and when we get some dexterity in using them, we likewise feel expanded and empowered when going about our worlds of practice, including our educational worlds of practice.

The "Kalium" AMV guide referred to earlier is an example of an abstract "intellectual" smart tool that AMV aficionados can use in conjunction with their computing tools to realize their goals. It tunes the creator into the need to attend simultaneously to "synch", "concept", and "effects" in going about the task. As one becomes increasingly adept at translating these concepts and norms into concrete "moves" in the context of whatever genre one is working in – a process aided by receiving feedback from more experienced peers after posting a creation online – one experiences greater power in taking on more difficult assignments, all the while becoming more knowledgeable about and proficient in the art and craft of remix.

Such smart tools are, however, most readily and effectively acquired and mastered in contexts of situated practice of producing for authentic audiences under conditions where support, expertise and feedback are available just in time and just in place, where this is constructive rather than punitive, and where it is recognized that advancement is by "levels," as in a game, and not all or nothing, as in a pass or fail high stakes test. Classroom pedagogy stands to learn much from remix affinities and how they enable learning and achievement.

Learning to be

Finally, it is instructive to consider the extent to which and ways in which the processes involved in learning to be a proficient remixer enact the requirements for what learning scientists call "deep learning". This is because learning in the context of becoming a remix practitioner is precisely a matter of "learning to be" (a remixer) and not simply "learning about" (remix). Gee (2007: 172) describes deep learning as "learning that can lead to real understanding, the ability to apply one's knowledge, and even to transform that knowledge for innovation." He argues that pursuing deep learning requires moving beyond learning *about* – "what the facts are, where they came from, and who believes them" – to learning *to be* – which involves "design" in the sense of understanding how and when and why knowledge of various kinds is useful for and sufficient for achieving particular purposes and goals. According to Gee (2007: 172)

> Deep learning requires the learner being willing and able to take on a new identity in the world, to see the world and act on it in new ways. Learning a new domain, whether physics or furniture making, requires learners to see and value work and the world in new ways, in the ways in which physicists or furniture makers do. One deep reason this is so is because, in any domain, if knowledge is to be used, the learner must probe the world (act on it with a goal) and then

> evaluate the result. Is it "good" or "bad," "adequate" or "inadequate," "useful" or "not," "improvable" or "not"?
>
> Learners can only do this if they have developed a value system – what Donald Schön calls an "appreciative system" – in terms of which such judgments can be made. Such value systems are embedded in the identities, tools, technologies, and worldviews of distinctive groups of people – who share, sustain, and transform then – groups like doctors, carpenters, physicists, graphic artists, teachers, and so forth through a nearly endless list.

This is precisely what learning to be a remixer, as described above, involves. It is writ large in the social relations of participation in remix affinity spaces, in project collaborations, publication of guides and walkthroughs, the operation of feedback and rating systems, and the attitudes of practitioners like DynamiteBreakdown who quickly understand the need to develop an appreciative system that honours the art and craft of remix.

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