
The Terminology of Borrowing

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This article specifically addresses electroacoustic music compositions that borrow from existing musical and sound resources. Investigating works that borrow and thrive upon existing sound sources presents an array of issues regarding terminology, authorship and creativity. Embedding borrowed elements into new electroacoustic music goes beyond the simplicity of ‘cut and paste’ as composers approach this practice with new and novel techniques. Musical borrowings have been widely studied in fields of popular and classical music, from cover songs to quotations and from pastiches to theme and variations; however, borrowings that take place within the field of electroacoustic music can be less clear or defined, and demand a closer look. Because the components and building blocks of electroacoustic music are often recorded sound, the categories of borrowing become vast; thus incidences of borrowing, in some shape or form, can appear inevitable or unavoidable when composing. The author takes on this issue and proposes a new framework for categorising borrowings as a helpful aid for others looking to sample in new compositional work, as well as for further musicological study. The article will consider the compositional process of integration and reworking of borrowed material, using a repertoire study to showcase the variety of techniques in play when sound materials change hands, composer to composer. Terminology already in use by others to describe sound borrowing in electroacoustic music will be investigated in an effort to show the multitude of considerations and components in action when borrowing takes place. Motivations for borrowing, borrowing types, borrowing durations, copying as imitation, and composers’ reflections upon borrowing will all be considered within the article, along with discussions on programmatic development and embedding techniques. At the heart of this article, the author aims to show how widespread and pervasive borrowing is within the electroacoustic repertoire by drawing attention to varieties of sound transplants, all considered as acts of borrowing.

1. INTRODUCTION

This article is structured around terminology currently used to discuss and describe borrowing activity within electroacoustic music. The terminology has been collated and categorised in an effort to disentangle some of the conflicts and confusion around these words and what they refer to when viewing instances of borrowing within the existing electroacoustic repertoire. The breadth of terms covered here supports the statement that ‘large categories like “borrowing” or “quotation” are not enough. There are many ways of

using existing music [and existing sound], and it is necessary to differentiate among them’ (Burkholder 1994: 855). Grouping certain terms together has been a useful process and as a result has provided the first attempt in marking out the territory and terminology exclusively belonging to electroacoustic music practices regarding sound and music borrowing. It is curious that while much electroacoustic music engages with some form of borrowing, there has never been a systematic study of it. This research has delineated the separate areas belonging to the larger field of borrowing studies,¹ importantly demonstrating the expansive nature of borrowing types, durations, modifications and motivations. The presentation of terminology within this article acts as the groundwork, laying the foundation for composers, including myself, looking to borrow sound resources in new works, providing a framework (curating appropriate terminology) to better understand the practicalities and nuances of this area. Surveying a body of repertoire of fixed media works, instrument and electronic music and even pieces that sit on the periphery of electroacoustic music in the realms of performance art and ambient electronica provides a starting point for this study enabling the discovery of approaches to borrowing. Listening to these works and observing how terminology is, and can be applied within these settings encourages reflection on the breadth of borrowing practices and particular areas of overlap and exclusivity electroacoustic music has. The research has been fuelled by the author’s fascination with the repertoire and its apparent dependency upon sound recycling. My interest in this area has grown out of many years of compositional work using sound sampling and cultural borrowing, and it is my intention to look to existing music in the future, from various genres, to borrow from and place within a new series of electroacoustic works.

2. WHAT CAN BE BORROWED?

Table 1 makes the distinction between sound borrowing and musical borrowing within electroacoustic

¹The author credits Burkholder for providing a starting point to consider musical borrowing as a field. Burkholder’s typology (1994: 867) has provided the basis for my exploration specifically in relation to electroacoustic music composition.

Table 1. What can be borrowed?

Sound recording	From a sound library or archive <ul style="list-style-type: none"> • Raw unprocessed sound • Processed, modified sound From an existing composition <ul style="list-style-type: none"> • Single sounds • Composite sounds constructed from multiple sound materials combined together A copy of a sound that appears in an existing work <ul style="list-style-type: none"> • An imitation sound or very similar sound that appears in an existing work
Existing music (including score-based)	From an existing score <ul style="list-style-type: none"> • A recording realised from a score specifically for use within a new electroacoustic work¹ From an existing composition recording/audio (from a CD, tape, audio file, LP etc.) <ul style="list-style-type: none"> • Taken from the electroacoustic music repertoire • Taken from a different genre of music

¹Lacasse refers to this as ‘allosonic’ where material is borrowed by rerecording or performing it live, rather than sampling from an original recording (2000: 38). This is distinct from ‘autosonic’ quotation, which takes from an existing recording by physically sampling it.

music compositions. Essentially they are both recorded sound material that can find its way into new electroacoustic works, however, breaking this down reveals some subtleties between the two types of materials.

2.1. Methodology

To get a better handle on what borrowing in electroacoustic music may be defined as, along with its associated terminology, I have approached this task using a combination of methods involving the examination of programme notes, listening to repertoire examples and composer conversations. Assigning repertoire examples to support each term appearing in this article has been an essential data collection activity for purposes of illuminating the occurrence and variety of borrowing procedures within electroacoustic music. The repertoire examples appearing in this article are by no means exhaustive; on the contrary, they represent a cross-section of works from different time periods, styles and approaches used to illustrate the separate stages and aspects of borrowing.

3. MOTIVATIONS FOR BORROWING

Borrowing activity within electroacoustic music may occur for a range of reasons as listed in Table 2. Burkholder (2018: 225) states ‘the case for borrowing is stronger when a purpose can be demonstrated, and is considerably weakened if no function for the borrowed material can be established’. Finding a purpose for the inclusion of borrowed elements can play a significant part in both the compositional and the

listening processes, allowing the composer to communicate particular statements based upon the borrowing, and allowing the listener to make sense of its appearance within a new context. Justifications in Table 2 have been drawn primarily from programme notes or via conversations with the composers. In some cases, motivations can be inferred by the sense of narrative, approach or borrowing type observable in the music through listening. As with all terminology sets appearing in this article, the vocabulary is dynamic and it is hoped that with further study in this area, more terms will evolve to account for greater variation in motivation types.

Many of these motivations crossover and overlap. Rather than being isolated justifications, these terms can merge together; for example, a composer can have several motivations for seeking out existing sources for their music-making and likewise their compositions may exude a number of rationales from the listener’s perspective. Motivations might be entirely unrelated to the act of intentional borrowing, yet borrowing happens as a by-product of the creative process as in the cases of serendipity and accidental borrowing. In other cases the motivation to borrow maybe intrinsic to a composer’s style, permeating through as a practice in a whole back catalogue of works (see Landy, ‘Re-composing Sounds ... and Other Things’, in this issue).

3.1. Personal reflections on borrowing

Examining the vocabulary used by composers to describe their own works and personal borrowing activity has further illuminated the breadth of terminology in use. Taking note of how composers

Table 2. Motivations for borrowing

Terminology	Example
Repurpose	Borrowing activity may be fuelled by an interest in giving existing music or sound a new purpose and context. In some cases the borrowed source may be significantly remote in relation to electroacoustic music practices (see section 8 ‘Genre Hopping’). This is the case in Tremblay’s <i>Cowboy Fiction</i> (1998), which uses sound derived from classic Western films. ‘Sound material was provided by the sound tracks of the French version of Howard Hawks’s <i>El Dorado</i> (1966) and John Ford’s <i>The Searchers</i> (1956), by singer Jo New York’s version of the Hank Williams classic, <i>Rambling Man</i> , as well by recordings of a few locomotives and a number of guns.’ ^a
Recycling	In some works, borrowing is the point of departure where a collection of materials all related to the work’s subject are collected and form the basis from which a work is made. This is the foundation of Landy’s Radio Series works: <i>Oh là la radio</i> (2007), <i>To BBC or not</i> (2008), <i>Radio-aktiv</i> (2011), 中国广播之声 – <i>Chinese Radio Sound</i> (2013), <i>Mehzilas-Preshlas-Nahlas</i> (2017) and <i>On the Eire</i> (2018). Here the radio broadcasts from a single country support the works’ dramaturgy related to universals and culture-specific aspects of daily life as found in our mediated world.
Imperative	In some cases, borrowing from existing music is the only option to make a point, statement or emphasis. Schedel’s interactive work <i>After Applebox</i> (2018) includes a performance direction encouraging sampling: ‘think of a person close to you who has passed away . . . Record a sample from a piece of music they loved – not longer than 45 seconds.’ This work aims to create ‘a sonic memory of a loved one who has died’ ^b achieved in part by the musical borrowings taking place in the work. ^c
Programmatic or narrative construction	Borrowing existing music that has a well-known and widely appreciated programme or narrative can help strengthen the narrative in its new electroacoustic context. Its inclusion may help to emphasise a particular message through its integration. For example, Dhomont’s <i>Un autre Printemps</i> (2000) borrows from Vivaldi’s <i>Spring (Largo)</i> from <i>The Four Seasons</i> , transferring the associations this music has with the season ‘spring’ within its new context. ‘ <i>Un autre Printemps</i> (An Other Spring) is of course the echo of Vivaldi’s famous concerto . . . The baroque work then becomes a simple but rich source of sounds, carrying cultural connotations, which, metamorphosed and in association with other referential or metaphoric images, suggest a ‘syn-ponia’ in its first meaning. The importance given to the movements of water and its mutations corresponds to the metaphor of the gushing of spring.’ ^d
Political statements	Stockhausen’s <i>Hymnen</i> (1966–7) uses 40 recorded national anthems ‘to be understood as music with an overriding political message of reflection and reconciliation at a time of student revolution, Vietnam, the Cold War, and other issues of mass protest and mass celebration’ (Maconi 2016: 249).
Referencing, attributing, paying homage	Smalley’s <i>Sommeil de Rameau</i> (2014–15) ‘was composed in homage to Jean-Philippe Rameau (1683–1764), whose music I have long loved and admired . . . I have drawn on characteristics of the sleep scene in French Baroque stage works and cantatas . . . My starting point was a refrain motive adapted from a pair of chords, rocking over a pedal note, which intervenes between the main phrases in the “sommeil” in Act IV of the tragédie en musique <i>Dardanus</i> (1739). Passages derived from Rameau’s music permeate the longer episodes, but these are recomposed and transformed, and are not intended as explicit references. Tonal intervals and harmony prevail, but are expanded through spectral “orchestration”, creating an electroacoustic “spectral tonality”, as if Rameau in his (sometimes disturbed) dreaming were contemplating an imagined musical future.’ ^e
Self-borrowing, efficiency	Xenakis, <i>Hibiki-Hana-Ma</i> (1970). ‘Almost all sounds in <i>Hibiki-Hana-Ma</i> were originated by a normal orchestra playing from scores. The scores had been prepared by Xenakis for the specific purpose of them being recorded on tape. It is reasonable to argue that some were actually drawn from previous scores of his (Harley 2002: 44)’ (Di Scipio 2004: 174).
Humour/wit construction	Dodge, <i>Any Resemblance is Purely Coincidental</i> (1980) for tape and solo piano. ‘The material on the tape consisting of an old recording of Enrico Caruso singing the Aria “Vesti la giubba” from Leoncavallo’s opera <i>I Pagliacci</i> . . . The overall effect is hilarious, especially if one is familiar with Leoncavallo’s well-known opera’ (Franklin 2006: 149). Another take on Dodge’s motivations for borrowing may be alternatively viewed as an extension of emotional impact, since dense choral passages from Caruso’s transformed voice, as an absent performer, appears to compound and expand Canio the clown’s angst (driven by his wife’s unfaithfulness), as expressed in the original aria. ^f

Table 2. (Continued)

Terminology	Example
Serendipity	Commenting on the creation of <i>Bye Bye Butterfly</i> (1960), Oliveros states, ‘I went upstairs to the studio after I left the Buchla demo and made <i>Bye Bye Butterfly</i> ... I wanted to use a record as a sound source in this new piece. I noticed an LP lying on a table in the studio. I patched the phonograph into my performance system and began playing. I dropped the needle on this record without knowing what it was. I wanted to be surprised. The record was an aria (‘Ancora un passo or via’(‘One More Step’) from Act I, part V) from <i>Madama Butterfly</i> by Giacomo Puccini. And I played with it, improvising as the music was processed by my delay configuration’ (Bernstein 2008: 89).
Exploration of influence	Field, <i>Being Dufay</i> (2009). The work ‘offer[s] a striking juxtaposition of Renaissance music and present-day technology: in seven interconnected pieces, vocal fragments from the songs and sacred works by Guillaume Dufay (1397–1474) soar beautifully above Ambrose Field’s vast and multi-faceted soundscapes’. ^e
Extraction of timbral colour	Moore, <i>Strings and Tropes</i> (2012). This work uses ‘a melody from <i>Xiang Shan She Gu</i> (<i>The Temple Fair at the Xiang mountain</i> , 1981) by Qu Yun’, which provides the basis for the processed sound material. The borrowing is not made explicit until the final minutes of the work at 20’24”.
Private programme	Emmerson, <i>Memory Machine</i> (2009–10). ^h In this multi-channel sound installation there are musical borrowings included as personal memories of the composer. Whilst recognisable to audiences, the significance of the borrowings is personal to the composer. ‘There are recordings of soundscapes I have recorded over the past 40 years, also frozen memories of “modern” music that has some significance to me.’ ⁱ
Accidental borrowing	Young’s <i>Allting Runt Omkring</i> (1999) includes ‘field recordings of bells in the old town area of Stockholm, which I later recognised in Bergman’s <i>Smultronstället</i> (<i>Wild Strawberries</i>) – [a] sort of accidental quote!’ ^j A similar process took place in Young’s <i>Five Versions of Reality</i> (2013), which incorporates street recordings from Helsinki. These recordings captured a bass trumpet busker heard at 1’16”. After completion of the composition, Young later discovered (via an audience member) that the busker was playing <i>Donauwellen Walzer</i> (<i>Waves of the Danube</i>) by Iosif Ivanovici. ^k

^aTremblay, *Cowboy Fiction* (1998), CD liner notes.^bSchedel, *After | Applebox* (2018) programme notes, in email correspondence with the composer (2018).^cThis reminds me of a similar borrowing instruction found within Cage’s *Imaginary Landscape no.5* (1952) for any 42 recordings. This work calls for a ‘set of 42 recordings, to be chosen by the producer from any phonographs, preferably jazz records’. Harley, www.allmusic.com/composition/imaginary-landscape-no-5-for-any-42-recordings-to-be-realized-on-tape-mc0002554133 (accessed 4 December 2018). Because the borrowings change with each performance, the work is different every time it is played.^dDhomont, *Un autre Printemps* (2000) CD liner notes.^eSmalley, *Sommeil de Rameau* (2014–15), programme notes.^fThanks go to Kenneth Baird (European Opera Centre) for sharing this perspective with me, 2018.^gField, *Being Dufay* (2009), CD liner notes.^hEmmerson intends that, ‘while they have private significance, the individual recordings elicit more shared – even universal – “resonances” in the listener.’ Email correspondence, 2018.ⁱEmmerson, *Memory Machine*, programme notes in email correspondence with the composer, 2018.^jEmail correspondence with Young, 2018.^kEmail correspondence with Young, 2018. Young credits Visa Kuoppala for identifying this initially unknown borrowing.

discuss their own sound borrowings shows great diversity in the composer’s perspective. Table 3 collates a handful of reflections from composers acknowledging their borrowing activity.

These reflections and descriptions of borrowing have been sourced from programme notes, which deserve a note of credit here. Programme notes have proved to be vital to this research, enabling the discovery of borrowing varieties and providing insight into the composers’ perspective of how and why borrowings have taken place.

By acknowledging their sources many of the composers in this article have facilitated the studying of sound transference from one place to the next and have importantly opened up sources of influence and musical repertoire previously unknown to me. Crediting in programme notes is also connected to legalities and may be a way for the composer to signal the granting of permissions. There has, of course, been works that engage in borrowing without transcribed credit. These works have provided hours of fun in an attempt to identify

Table 3. Personal reflections on borrowing

Terminology	Reference
Musical winks	Turcotte, <i>Delirium</i> (2007–8). ‘Musical winks at Sidney Bechet, Diana Krall, and Harry Belafonte.’ ^a
Rendition	Vasquez, <i>Sibelius Collage</i> . This work is described as ‘an electroacoustic rendition of Jean Sibelius’ <i>Romance, Op. 24 No. 9.</i> ’ (Vasquez 2016: 26)
Musical larceny	Dhomont, <i>Chiaroscuro</i> (1987). ‘[I]n particular to the memory of Claude Vivier – I gave into musical larceny (with the unwary complicity of its victims) which, I hope, creates an iridescence here and there, a voluntarily enigmatic contrivance.’ ^b
Sonic archetypes	Normandeau, <i>Venture</i> (1998). ‘It is exclusively made up of fragments of that music. These are not used as quotations but rather as the sonic archetypes.’ ^c
Historical references	Smith, <i>Continental Rift</i> (1995). ‘The cello section is an introduction of signature moments from the past with musical ideas borrowed from Bach, Beethoven and Kodaly. These historical references were manipulated, producing new themes within the context of their period.’ ^d
Inhabited by these composers	Dufort, <i>Gen_3</i> (2007). ‘Interestingly, <i>Novars</i> contains one sample from Pierre Schaeffer and another from Guillaume de Machaut. I am also using these samples, to carry the “cycle” for a third generation. Not a homage work per se, <i>Gen_3</i> is still inhabited by these composers.’ ^e

^aTurcote, *Delerium* (2007–8), CD liner notes.

^bDhomont, *Chiaroscuro* (1987), CD liner notes.

^cNormandeau, *Venture* (1998), CD liner notes.

^dSmith, *Continental Rift* (1995), CD liner notes.

^eDufort, *Gen_3* (2007), CD liner notes.

borrowings. Parmerud’s *Necropolis: City of the Dead* (2011) lines up a series of musical borrowings without mention of the original sources. By aural means I notice quotes from Wagner (*Ride of the Valkyries*, 1870), Palestrina (Kyrie from *Missa Papae Marcelli*, 1562), Bach (*G Major Cello suite*, 1717–23) and Beethoven (*C Minor Pathétique Sonata*, 1789). No doubt there are more within this work, but these are reliant on the listener’s recognition of the originals. Part of the listening pleasure here is recognising the borrowing and observing its function within a new context.

4. BORROWING TYPES

After seeing what motivates composers to borrow in the first instance, it is important to turn one’s attention to the types of borrowing, which appear in the existing repertoire. A plenitude of words are currently in circulation to describe acts of sound borrowing. Looking more closely at the individual features of each term demonstrates distinct differences between them. These differences are significant enough to demonstrate a wide diversity of approaches taken, which may all constitute a form of borrowing. Table 4 lays out the borrowing types terminology. It should be noted that examples from the electroacoustic repertoire have been used to accompany these terms and definitions as a means of highlighting the borrowing in action. Many of the examples selected have been led by the vocabulary already in use by composers discussing their own work.

Evaluating the terms on offer in Table 4 shows that the boundaries between many of them are fuzzy and far from distinct. Some terms in this table could easily be interchangeable and it is curious to see how composers have opted for more comfortable and acceptable terms for their actions as a safeguard against potential accusation of pilfering. In some cases the terms are mere synonyms for the same action (‘sampling’ and ‘taking’), but others are clearly distinct and defined by their nuances; for example, ‘stealing’ comes hand in hand with its brazen lack of permissions, while ‘copying’ is characterised by its lack of physical sound lifting. The last three entries for this table stray a little off topic, but are still important to consider within this discussion for their reliance on borrowing. These three actions imply borrowing beyond ‘cut and paste’ by going a step further in suggesting the composer’s hand in claiming some level of authorship in working with the borrowing.

4.1. The trail of borrowing

Sound and music borrowings are often not single isolated acts of audio lifting in a given electroacoustic work. Sometimes what is extracted from one place into a new composition is an encapsulation of previous acts of borrowing. Unfolding such lineages can reveal several steps of borrowing, allowing insight into the complexity of referential layers that permeate a given work.

Some examples here highlight this concept in more detail. Dufort’s *Gen_3* (2007) borrows a sample from Dhomont’s *Novars* (1989), a work which itself borrows from Schaeffer’s *Étude aux objets* (1959) and Machaut’s

Table 4. Borrowing types

Term	Definition in relation to sound	Examples in the repertoire
Borrowing	‘A new piece may use or refer to existing music in various ways.’ ^a Borrowing in this article functions as an umbrella term under which subsets of borrowing exist. This may include existing sound and/or music.	All repertoire examples provided in this article.
Quotation ^b	Quotation is commonly used in relation to musical borrowings, and it can be accompanied with score-based evidence. This term can be divided into two types: ‘direct quotes’ by ‘keeping it identical to how it was produced’ (Minsburg and Beltramino 2008: 1) and ‘indirect quotes’ forming ‘a [paraphrase], adapting the original discourse to another communicative situation’ (ibid.).	Salazar, <i>La voz de fuelle</i> (2011). ‘The work presents some unmistakable musical quotations from the Tango tradition in order to evoke the cultural associations which are so closely tied to the bandoneón.’ ^c
Sampling	Taking a sound/recording from an environment/instrument/resource/composition and using it in a new work	Dhomont, <i>Frankenstein Symphony</i> (1997). ‘Armed with a scalpel and a splicing (operational) block, I sampled several morphological organs from the works of 22 composers and friends (many of whom were students of mine), and with their imprudent blessings . . . Never did I use filtering, internal editing, transposition or processing on the sounds . . . with no other goal than to bring to light how astonishingly rich acousmatic music can be. Yet more than recycling it’s first and foremost an homage to the inventiveness of these composers.’ ^d
Appropriation	‘Appropriation with no exchange or understanding – for example, a composer “plundering local colour for sampling”’ (Emmerson 2006).	Dolden, <i>Show Tunes in Samarian Starlight</i> (2012) ‘appropriates a number of ancient scales to create a musical fantasy of show tunes and nightclub music for ancient times’. ^e
Plundering	The act of plundering is attached to the term ‘plunderphonics’, which was coined by Oswald to describe a genre of music defined by being entirely made up of samples. Oswald summarised plunderphonics as ‘audio piracy as compositional prerogative’ (Oswald 1985). Oswald’s work ‘often provide[s] ironic commentary upon familiar fragments of popular music’ (Holm-Hudson 1997: 21).	Oswald, <i>Plunderphonic</i> (1988) containing <i>Pretender</i> (Parton), <i>Don’t</i> (Presley) <i>Spring</i> (Stravinsky) and <i>Pocket</i> (Basie).
Stealing	Musical or sonic plagiarism where permissions are not sought or authorised.	Castelões, <i>Studies in Plagiarism #1: In the limbo of Polymusic</i> (2003). ‘To compose a musical piece made up exclusively of samples of other musical pieces, but in such a way that the samples are impossible to recognize – that’s been our main purpose . . . Recycling or merely fumbling in a waste disposal site? Clearly, an homage to repetition, the phonographic industry, copyright, and the triumph of payola in the mass media.’ ^f
Taking	A version of musical/sonic plagiarism with slightly less negative connotations than ‘stealing’. Permission can be ambiguous.	Wishart, <i>Imago</i> (2002). This work uses the sound of a single ‘clink’ of two whisky glasses; ‘the original source sound was taken from Harrison’s <i>et ainsi de suite</i> .’ ^g
Copying	Analogous to imitation. This may also imply the copying of other features belonging to a work or sound resource.	See Table 7 for repertoire examples
Adaptation	Arranging or interpreting electronic components. ‘At present it is rarely practiced in electroacoustic music, which can partly be explained by the nature of electronic technology and current thinking about authenticity’ (Yong 2006: 243).	Schaeffer’s <i>Bilude</i> for piano and support audio (1979) functions as an adaptation of J.S. Bach’s Prelude no.2 from the <i>Well-Tempered Clavier, Book 1</i> .

Table 4. (Continued)

Term	Definition in relation to sound	Examples in the repertoire
Allusion	‘A reference in a musical work to another work or to a style or convention . . . Allusion to a particular work is generally distinguished from quotation in that material is not quoted directly, but a reference is made through some other similarity between the two works, such as gesture, melodic or rhythmic contour, timbre, texture or form.’ ^h	Daoust, <i>Fantaisie</i> (1986) ^g In addition to having inspired the form of the work, Schubert’s <i>Fantaisie in F minor</i> , op 103, for four-hand piano, is discreetly alluded to throughout the piece and permeates the whole with a certain melancholy. ^g ⁱ

^aBurkholder, Grove Music Online, Entry for ‘Borrowing’, <https://doi-org.ezproxy.hope.ac.uk/10.1093/gmo/9781561592630.article.52918>, 2001 (accessed 06/07/18).

^bQuotation in electroacoustic music may refer to either the use of an existing recording of music from a particular time and context, or a personal recording made of a (score-based) work for recreation purposes. The difference may be significant since some existing recordings have additional data captured such as the recording technology used, ambience and historical performance context, which in some cases can feed into the new compositional setting once borrowed. A bespoke recording of a piece of music intended for use in a new work, with the right conditions, would likely capture the music void of its historical beginnings. This difference can be heard for example in Andean’s *Maledetta* (2011), the source material for which includes both the historical recording of Maria Callas’s performance of Cherubini’s *Medea* and a bespoke recording of the piano transcription of the same opera. Despite quoting the same work, the significant temporal distance between these two sources shines through their various transformations, to become a key sonic element of the piece.

^cSalazar, email correspondence, 2012.

^dDhomont, *Frankenstein Symphony* (1997), CD liner notes.

^eDolden, *Show Tunes in Samarian Starlight* (2012), CD liner notes.

^fCastelões, *Studies in Plagiarism #1: In the limbo of Polymusic* (2003), programme notes, email correspondence with the composer 2018.

^gWishart, *Imago* (2002), CD liner notes.

^hBurkholder, Grove Music Online, entry for ‘Allusion’, <https://doi-org.ezproxy.hope.ac.uk/10.1093/gmo/9781561592630.article.52852>, 2001 (accessed 2 May 2018).

ⁱDaoust, *Fantaisie* (1986), CD liner notes.

Messe de Notre Dame (1364). In Schedel's *After | Applebox* (2018) one sample used in performance was Brahms's Symphony No. 4 in E Minor, Op. 98, fourth movement. Looking more closely at this movement, Brahms also engaged with borrowing by integrating a borrowed chaconne theme from J.S. Bach's Cantata 'Nach dir, Herr, verlanget mich' BWV150. Such trails of borrowing are fascinating within the electroacoustic repertoire, not only for the historical lineages embedded within them like Russian dolls, but also for presenting a challenge to the common notion of the composer as sole 'auteur'. Composers' works are undoubtedly works of multiple influences, ideas and continuations of musical traditions, demonstrating a more communal, referential approach to composition. Furthermore, works that borrow from the past may function as discovery tools pointing to the compositions of others, like cover songs within popular music that often serve as portals for new generations to experience the music of the past. For example, arriving at *Novars* before Schaeffer's *Etudes* might be a seductive first encounter based on Dhomont's historically significant borrowing choices. In this example, there is something symbolic and gratifying about the propagation of electroacoustic music through borrowing. The spawning of whole bodies of new music based around single borrowing procedures demonstrates sound recycling at its best; take for example the works of Wishart (*Imago*, 2002) and Vaggione (*Harrison Variations*, 2002) feeding off Harrison's whisky glass clink from ... *et ainsi de suite* (2002),² and the Luc Ferrari *Presque Rein* archive giving birth to new electroacoustic works (by Jacobs, Andean, Barbato, Umezawa, Palmer and Justel to name a few) in its biennial electroacoustic competition.

5. DURATIONS

When examining borrowed sound and music in electroacoustic music, there appears to be little discussion of how much was borrowed and why or what impact this has on reception. Durations are significant here since they may enable recognition and identification of the original from the listener's perspective. Borrowing a grain, particle or fragment of existing music compared to the entirety of a piece will understandably give vastly differing results. Examining the gradations between these extremes has revealed a variety of durations that can either fully represent or vaguely suggest the presence of audio imports.

Travelling down through the borrowing durations shown in Table 5, it is possible to see the repertoire

²These works were expanded compositions from smaller 60 second contributions to an unpublished collection of works composed for Harrison's 50th birthday in 2002. Vaggione and Wishart were two of many composers contributing to this body of work, many of whom participated in sampling Harrison's music.

examples consuming increasingly more and more of the said original works, also reflected in Figure 1. There may be an appetite amongst listeners to see how composers show their hand, creative interventions or customisations when using larger durations from pre-existing music and sources to warrant new authorship. All works engaging with borrowing have this consideration, however, borrowings of smaller durations, sometimes known as 'partial importations' (Holm-Hudson 1997: 19)³ – such as a grain, fragment, sample, phrase, extract, excerpt, passage and project file – deal more with integration and embedding issues (how they fit with surrounding materials), while longer, more substantial borrowings, verging on 'total importations' (ibid.: 20),⁴ such as majority and entirety durations, exist as adaptations or arrangements of the original work or source. As with the borrowing types terminology (Table 4), some of these duration terms overlap (excerpt, extract, passage) and some have a more flexible duration that should be taken into account. For example, a 'sample' has no fixed duration and will vary from piece to piece. A sample may also be seen as a passage, extract, phrase or fragment, while a 'plunderphone' can also be considered as a phrase, fragment or passage. It is difficult to assign exact timings for these terms or to differentiate between them since they all overlap and are used figuratively by the composers in the table. As the table demonstrates, some composers have assigned durational timings within their descriptions (excerpt = 2½ minutes), but generally these remain adjustable without precise timings. Relativity appears more important here as an increasingly larger extraction of material is borrowed.

A small note is added here about legalities since anyone embarking on borrowing activity should be aware of the law surrounding sampling. There was a time when durations were significant within this discussion, however, this is now a more complex and changing minefield with possible variations from jurisdiction to jurisdiction.

6. MODIFICATIONS AND EMBEDDING TECHNIQUES

Borrowing existing sound and music and embedding it within a new electroacoustic music work often involves some sort of modification via sound transformation tools, editing, or sequencing techniques such as layering or juxtapositions. Providing terminology for modification types can illuminate how the composer has treated the borrowed elements within their works. Here it may

³Works involving partial importation feature a prominent sample around which the rest of the work is composed; a different sample would necessarily result in a different piece.'

⁴'Total importation' pieces involve 're-interpretation or re-hearing of existing recordings.'

Table 5. Borrowing durations

Term	Definition in relation to sound	Examples in the repertoire
Sound particle or grain	A very short duration of sound. In some cases these might be ‘micro sound particles on a time scale that extends down to the threshold of auditor perception (measured in thousandths of a second or milliseconds)’ (Roads: 2001: 2).	The opening minutes of Stone’s <i>Shing Kee</i> (1986), for MIDI-based electronics. ‘A tiny slice of the Japanese pop singer Akiko Yano singing Schubert lied in English’ ^a is borrowed. This is unidentifiable due to the miniature proportions of the borrowing that appears in the opening section, which acts as a loop of this sound particle. This iterative pattern gradually expands in duration to reveal more of the sample over time up until 8’30’’ when the sample of Yano’s singing is more overtly revealed. At this point the work appears to borrow a line from <i>Der Lindenbaum</i> , from the song cycle <i>Winterreise</i> (1828).
Fragment	A small selection of audio material usually long enough to observe a theme, motive or gesture.	Normandeu, <i>Venture</i> (1998). This work uses 228 small fragments ^b (mostly between 1 and 4 seconds in duration, with additional longer fragments) from a variety of popular music from the 1960s including music from the following albums: Jimi Hendrix, <i>Are You Experienced?</i> (1967), The Beatles, <i>Sgt. Pepper’s Lonely Hearts Club Band</i> (1967) and Pink Floyd, <i>Ummagumma</i> (1969). ‘These are used not as quotations but rather as the sonic archetypes that an entire generation of composers, my generation, was listening to as it was growing up.’ ^c
Sample	A selection of audio, often brief in duration.	Verandi, <i>Figuras Flamencas</i> (1997). ‘The source materials for this piece included samples from Spanish flamenco music and spoken texts from the theater play <i>Bodas de Sangre</i> (<i>Blood Wedding</i>) by Federico Garcia Lorca.’ ^d
Plunderphone	‘A plunderphone is a recognizable sonic quote, using the actual sound of something familiar which has already been recorded. Whistling a bar of <i>Density 21.5</i> is a traditional musical quote. Taking Madonna singing <i>Like a Virgin</i> and rerecording it backwards or slower is plunderphonics, as long as you can reasonably recognize the source. The plundering has to be blatant though. There’s a lot of samplepocketing, parroting, plagiarism and tune thievery going on these days which is not what we’re doing.’ ^e	See Plundering in Table 4
Phrase	‘Short section of music of a musical composition into which the music, whether vocal or instrumental, seems naturally to fall. Sometimes this is 4 measures, but shorter and longer phrases occur. It is an inexact term: sometimes a phrase may be contained within one breath, and sometimes sub-divisions may be marked.’ ^f	Daoust, <i>Impromptu</i> (1994). ‘Just a few measures of the adagio part of [Chopin’s] <i>Fantaisie-Impromptu</i> ’ were used in the creation of the new work. Daoust ‘isolated some short motifs that were characteristic of the piece and had interesting potentialities for development . . . each of the motifs were transformed by MIDI techniques, specially by condensation and accumulation. Then they were recorded as sound files.’ ^g
Extract	A short passage from a piece of music.	Lotis, <i>Arioso dolente</i> (2002). This work unveils a passage of music from Beethoven’s Sonata no. 31, third movement (approximately 6–7 bars from the <i>Arioso Dolente</i>), appearing around 3’00’’, halfway through the work.

Table 5. (Continued)

Term	Definition in relation to sound	Examples in the repertoire
Excerpt	A short extract from an existing resource; for example, a film, broadcast, piece of music or writing.	Ussachevsky, <i>Wireless Fantasy</i> (1960), borrows from the orchestral Prelude to Wagner's <i>Parsifal</i> . This borrowing 'comprises a single unedited 2½-minute excerpt from a recording of the Prelude to Wagner's 1882 music-drama. "Unedited" here means that the sound source is unchanged with respect to time' (Beaudoin: 2007: 146).
Passage	'A term used to refer to part of a composition generally characterised by some particular treatment or technique but without implications as to its formal position.' ^h	Dhomont, <i>Forêt profonde, Chambre des ténèbres</i> (room of darkness) (1994–6), features a passage from Schumann's <i>Furchtenmachen</i> (Frightening) from <i>Kinderszenen</i> , Op. 15.
Project file	This might also be known as 'region', 'clip', 'track', or 'audio component' (as found in the language of sequencers) and often refers to a single linear component of a composition, removed from its surrounding vertical context in a sequencer. A characteristic of these sounds is that they have been modified or combined with other sounds to form composites distinguishable from raw, singular unprocessed sound. No specific duration can be assigned here, but it is useful to consider this borrowing as non-holistic (incomplete from its original appearance). See Figure 1 for project file relative positioning.	Blackburn, <i>Spectral Spaces</i> (2008) used project files from Smalley's <i>Wind Chimes</i> (1987). The materials donated by Smalley had been previously subject to audio processing and carried vestiges of the transformations applied.
Majority	Most of the composition.	Applebaum, <i>Variations on Variations on a Theme by Mozart</i> (2006). 'The piece borrows from Mozart—his variations on the French melody <i>Ah! Vous dirai-je, maman</i> [1761]. The new piece is a densely layered barrage of eighteen pianos distributed among four loudspeakers, all playing Mozart's exact pitches and rhythms. As such, this is genuinely a work by Mozart, one that preserves every level of form, from the global sequence of variations down to the note level.' ⁱ
Entirety	All of the composition.	Tomita, <i>Suite Bergamasque, Clair de Lune no.3</i> (1974) from <i>Snowflakes are Dancing</i> . The whole album presents synthesised realisations of Debussy's works utilising the entire musical score in an electronic format using a combination of Moog synthesiser, tape recorders and mixers.

^aOlwnik online review, www.allmusic.com/album/moms-mw0000684529 (accessed 8 May 2018).^bIn email correspondence with the composer (2018).^cNormandean, Venture (1998), CD liner notes.^dVerandi, *Figuras Flamencas*, programme notes, www.marioverandi.de/figuras-flamencas/ (accessed 23 March 2018).^eOswald, in Norma Igamma interview, online resource, www.plunderphonics.com/xhtml/xinterviews.html (accessed 16 April 2018).^f*Grove Music Online*, entry for 'Phrase', <https://doi-org.ezproxy.hope.ac.uk/10.1093/gmo/9781561592630.article.21599>, 2001 (accessed 2 May 2018).^gEmail correspondence with the composer (2018).^hTilmouth, *Grove Music Online*, <https://doi-org.ezproxy.hope.ac.uk/10.1093/gmo/9781561592630.article.21025>, 2001 (accessed 6 July 2018).ⁱApplebaum, programme note for *Variations on Variations on a Theme by Mozart* (2006). Composer's website: <http://web.stanford.edu/~applemk/portfolio-works-variations-on-variations.html> (accessed 22 July 2018).

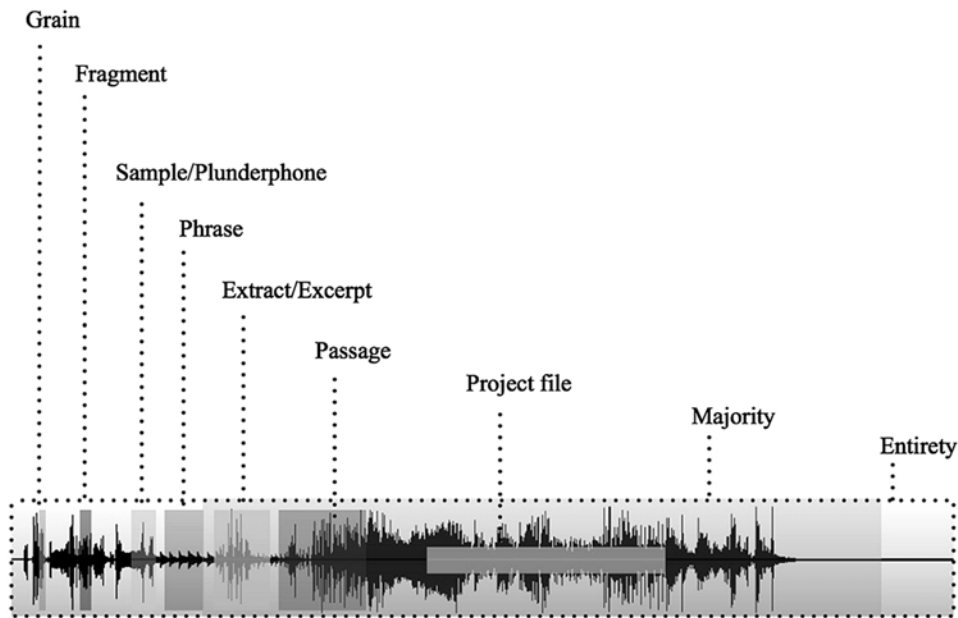


Figure 1. Borrowing durations

be important to consider that ‘the incorporation of borrowed material can take place anywhere along a continuum; at [one] extreme, the original meaning of the quotation can be unimpaired; at the other the quotation can be totally stripped of its original meaning’ (Ballantine 1984: 73). Modification and processing may play a part in this stripping of meaning, and in some cases, at a cost to audiences’ recognition of the borrowing. In some cases, modifications to the borrowed element may enable new statements and commentaries to take place through re-contextualisation. Studying modifications may also contribute to the uncovering of programmatic detail. This can be observed when considering the following examples, where both the choice of existing music and the way in which it is modified and embedded in its new setting are important:

1. An extract from Puccini’s opera *Madama Butterfly* (1904) is placed amidst electronic tones in Oliveros’s tape composition *Bye Bye Butterfly* (1965) to become the narrative that ‘bids farewell not only to the music of the 19th century but also to the system of polite morality of that age and its attendant institutionalized oppression of the female sex’.⁵
2. The use of Wagner’s *Parsifal* (1882), subjected to filtering techniques, within Ussachevsky’s *Wireless Fantasy* (1960) enables the listener to

imagine the sound coming from a ‘short-wave radio broadcast’ (Beaudoin 2007: 146).

3. Musical extracts from Schumann’s *Kinderszenen* (Scenes from Childhood, Op. 15, 1838) sporadically placed, chopped up, hidden and revealed in Dhomont’s acousmatic work *Forêt profonde* (1994), are significant for understanding the work as ‘a guided tour of the childhood soul’.⁶

Further vocabulary describing the types of modification and embedding techniques are collated in Table 6 to demonstrate the variety of options composers have used when integrating borrowings.

Modification and embedding technique classifications are by no means exclusive or discrete within individual works. By and large, most compositions engaging with borrowing adopt a range of methods to accommodate these imports. A composition that starts out with a fragmented splattering of unidentifiable sound grains may progress into a showcase of fairly obvious yet intermittent passages of borrowings. The terms ‘collage’ and ‘mosaic’ imply borrowing procedures on a structural scale. Both these approaches can enable multiple borrowings to come together, through linear juxtaposition. A vertical equivalent here is layered/mixed, where borrowed materials can be stacked upon each other as a means of modifying the original’s appearance. ‘Mash-up’ and ‘remix’ are terms absorbed from popular music, but seem relevant here for providing a viable compositional approach when borrowed materials are used

⁵Notes to *Bye Bye Butterfly* by Pauline Oliveros, in The Transparent Tape Music Festival Program (concert given 11 January 2002), <http://sfsound.org/tape/oliveros.html>.

⁶Dhomont, *Forêt profonde* (1994), CD liner notes.

Table 6. Borrowing modifications and embedding techniques

Term	Definition in relation to sound	Examples in the repertoire
Reconfigured	Changing the shape or formation of the borrowed element.	Dhomont's <i>Novars</i> (1989) borrows from Machaut's <i>Messe de Nostre Dame</i> (1364). This borrowing is reordered from broken fragments first heard at 1'43". 'This family of sounds is based on single, frozen chords taken from the <i>Messe</i> . Often various treatments—most often a shuffling, 'brassage' effect—detach the perceived result from its source, yet a vocal quality is always retained. When the original timbre is more clearly heard, the intervals are usually bare fifths, alluding to the original material through harmonic as well as timbral similarity' (Lewis 1998: 69).
Disintegrated	Fragmented and broken up. Re-organising and separating of the original progression of sounds so they do not occur in the same order as the original appearance. Components of the borrowing appear scattered and dismantled from their original appearance.	Tenney, <i>Collage no.1 (Blue Suede)</i> (1961). This work toys with the threshold of recognition when using a recording of Elvis Presley's <i>Blue Suede Shoes</i> (1956). Heavy modification and fragmentation of the recording breaks the continuity of Presley's voice. The reordering of the lyrics leads to a more scrambled iteration of the original work.
Obliterated	No sense or remnants of the original work is observable in the new work.	Barroso, <i>Charangas Delirantes</i> (1993). 'The sonic material for the piece consists of sampled concrete and FM colors. The former are mostly noises and piano timbres from a Haydn sonata performed by Vladimir Horowitz.'
Veiled	The borrowed element is not immediately explicit upon listening to the work. There may be hints or glimpses suggestive of borrowing activity without certainty.	Emmerson, <i>Resonances</i> (2007). 'We hear glimpses of music we think we know; no melody or rhythm, just an instant of "colour", frozen and moving – eternity in a moment . . . Need the listener know who? Of course not! (If its too obvious I think I have failed).' ¹ Editing and sound transformations have obscured the borrowing activity within this work, presenting a more opaque and distant relationship with the original works.
Grand reveal	Choosing a moment, after some time has elapsed within a composition, to present the borrowing in an obvious way as a means of showcasing its identity.	Gibson, <i>Slumber</i> (2006). This work borrows from Schumann's <i>Kinderszenen</i> , Op. 15 (1838), Movement no. 12 'Kind in Einschlummern' (Child Falling Asleep). 'Almost all the sounds in the piece come from the piano recording'; ² however, the borrowing, with its identity intact, is only revealed at 4'28", allowing the listener to hear the original in the final minute of the work.
Modified (e.g., filtered, pitch-shifted, reversed, granulated, frozen, time-stretched etc.)	Changes to the borrowed material facilitated by studio techniques and processing tools.	Scanner, <i>Sung Back</i> (2006). 'The work uses Bach's Cantata <i>Mein Herze schwimmt im Blut</i> , BMV 199, [1711–14] as its focus. Taking themes and harmonies present in the work, he processes and transforms isolated moments, frozen in time, to create a piece that hovers across the surface of the original.' ³ One of the most prominent sounds in the work is a frozen looped vocal sound that forms a continuous iterative pattern throughout.
Enhanced	The borrowed element is emphasised and/or exaggerated through audio transformation or sequencing techniques.	Copeland's <i>Early Signals</i> (2001) borrows 'the voice recordings of two radio pioneers, Guglielmo Marconi and Peter Eckersly. The entry of the voices is accompanied with heavy granular crackle, further degrading the vocal quality inherent in the radio recordings collected.' ⁴

Table 6. (Continued)

Term	Definition in relation to sound	Examples in the repertoire
Layered/mixed	Layering borrowed sound material to form new relationships with surrounding material. Mixing audio tracks together to achieve an altered sound.	Smalley's <i>Pentes</i> (1974) includes a borrowed traditional melody performed on Northumbrian pipes. This is first recognisable at 9'40" towards the end of the work. The recording of the pipe melody, made by Smalley, is layered in a 'superimposed canon'. ⁵ While unknown to the composer, the melody has been identified as a pipes tune and border ballad titled <i>Johnnie Armstrong</i> . ⁶
Remixed	Producing another version of a musical work, often subjecting the whole work to changes/alterations. 'The activity of taking samples from pre-existing materials to combine them into new forms according to personal taste' (Navas 2010). 'Sampling is the key element that makes the act of remixing possible. In order for Remix to take effect, an originating source must be sampled in part or whole' (Navas 2012: 12).	Vasquez, <i>Collage no. 12, Beethoven Collage</i> (2014). Most of Vasquez's collages (twelve in total) can be viewed as 'remixes' and 'versions', since the original borrowed work stands as a backbone for the new work and in some cases solely provides the sound material for the new composition. No embedding takes place, just modifications and alterations to the original musical material.
Mash-up	A mixture of disparate musical borrowed elements (often two musical works) brought together in a single work.	Ferrari's <i>Strathoven</i> (1985) interpolates sections of Beethoven's Symphony no. 5 (1804–8) and Stravinsky's <i>The Firebird</i> (1910). The juxtapositions of sections cleverly blend to create a continuous work, void of blunt edits. This may be viewed as a precursor to the modern day 'mash-up'.
Collage	Collecting a range of different borrowed elements from a variety of sources together into a single work.	Deschênes, <i>Indigo</i> (2000). This work creates a collage of borrowing, "recomposed" from Fort's <i>L'impatience des limites</i> (1992–93), Gobeil's <i>Derrière la porte la plus éloignée...</i> (1998) and Laporte's <i>Électro-Prana</i> (1998) and other recordings from different genres and time periods ⁷ including Allegri's <i>Miserere</i> (c.1630).
Mosaic	Combining small segments of a piece of music into a new structure.	Alvarez, <i>Mambo à la Braque</i> (1990). 'Like words made out of cutting letters from a newspaper, I have used in <i>Mambo à la Braque</i> (Braque-style Mambo) short musical segments which come from the well known mambo <i>Caballo Negro</i> [1969] by composer Dámaso Perez Prado to whom this short piece pays homage. I have reassembled them into a sound mosaic and used a few other sounds to "glue" them together.' ⁸

¹Emmerson, *Resonances* (2007), programme note, email correspondence with the composer (2018).

²Gibson, *Slumber* (2006), DVD liner notes.

³Scanner, *Sung Back* (2006), DVD liner notes.

⁴Copeland, *Early signals* (2001), CD liner notes.

⁵Email correspondence with Smalley (2018).

⁶Melody identified by Kathryn Tickel and Agustín Fernadez, email correspondence (2018).

⁷Deschênes, *Indigo* (2000), CD liner notes.

⁸Alvarez, *Mambo à la Braque* (1990), CD liner notes.

Table 7. Copying

Term	Definition in relation to sound	Examples in the repertoire
Template	Formats for compositions; for example, etudes, opera or suites.	Katzer, <i>Rondo</i> (1974). This work uses a traditional rondo structure as a means of presenting sound materials. ‘These materials were processed as a classical rondo including three themes which were then interwoven for the needs of the composition.’ ^a
Homage	A work created in honour of another. These works function as tributes and displays of respect. Aspects of pastiche regarding style, sound and characteristics may also be copied in the new work.	Paik, <i>Hommage à John Cage</i> (1959–60). This collage work engages with sampling and acts as tribute to Cage’s musical aesthetics of chance, randomness and the democratisation of sounds.
Imprint	An impression, outline or trace of a musical work or existing schemata used to inform some aspect of a new work.	Verlingieri, <i>Fontana ReMix</i> (2006) uses Cage’s <i>Fontana mix</i> score as an outline to create his new work.
Inspired	Using an existing work, object, or resource to shape or have influence over the creation of a new work.	Daoust, <i>Fantaisie</i> (1986). ‘In addition to having inspired the form of the work, Franz Schubert’s <i>Fantaisie in F minor</i> , op. 103 (1843), for four-hand piano, is discreetly alluded to throughout the piece and permeates the whole with a certain melancholy.’ ^b
Evocation	To recall or bring to mind sound or music from an existing composition.	Bayle, <i>Aux lignes actives</i> from <i>Grande polyphonie</i> (1974). ‘In <i>lignes actives</i> , the clear lines evoke the fluidity and mobility of Pierre Henry’s feedback (<i>Le Voyage</i>).’ ^c
Emulation	Recreation of a sound or sound quality similarity within a new work.	The recreation of the crackling and hissing textures derived from burning charcoal found originally within Xenakis’s <i>Concret PH</i> (1958) appears emulated in several of Xenakis’s subsequent electroacoustic works. This texture emulation appears briefly in <i>Hibiki-Hana-Ma</i> (1970) at 3’09”, in <i>Bohor</i> (1962) which begins with ‘metallic rattlings, finer-grained metallic sounds closely resembling the charcoal crackles of <i>Concret PH</i> ’ (Harley 2002: 39), and in <i>Orient Occident</i> (1960) at 6’36” where ‘the granular texture of burning charcoal from <i>Concret PH</i> makes an appearance in the latter part of the work, this time mixed with water droplets and other sounds’ (Harley 2002: 38).
Meme	‘Memes are neuronally-encoded cultural information and their phenotypic products (behaviour and artefacts) spread through a process of imitation from one individual’s memory to another’ (Adkins 2008). More specifically, ‘Low-level memes – where a short cadential or melodic figuration is replicated from work to work’ (ibid.).	Dhomont, <i>Forêt profonde, Chambre interdite</i> (1994–6). The use of the door sound is used throughout this movement and features as a traditional cadence bringing the movement to an end, signifying the movement from one room/space to the next. Door sounds behaving in this way are explored in ‘ <i>Rumeurs (Place de Ransbeck)</i> ’ (1987), by Robert Normandeau, <i>Novars</i> (1988) by Francis Dhomont, <i>Unsound Objects</i> (1995), by Jonty Harrison, and <i>Environs</i> (1996) by Robert Mackey. In these, and other electroacoustic works, the sound of a door opening into a new spatial location, or the sound of a closing door abruptly cutting off a musical texture has a similar formal function’ (Adkins 2008).
Acoustic chain	‘Referring to a composer not by means of compositional style or direct quotation but by a concrete object’ previously used by a composer (Adkins 1999).	Parmerud, <i>Crystal Counterpoint</i> (2009). This work uses the sound of glasses clinking while being fully aware that ‘making a composition based on glass sounds is far from original, composers such as Harrison, Wishart and Vaggione, amongst others have already done that.’

^aKatzer, *Rondo* (1974), CD liner notes.^bDaoust, *Fantaisie* (1986), CD liner notes.^cBayle, *Grande polyphonie* (1974), CD liner notes.

for highly recognisable effect and when longer durations are being considered. Reconfigured, disintegrated and obliterated could all be subsumed under the term 'modified', but these have been unpacked for purposes of showing subtle variations within commonplace modifications. Enhanced is also a modification technique employed to retain the original features of the borrowing, in opposition to obliterated. When a borrowing is enhanced this may confirm a motivation on the part of the composer to celebrate, showcase or bring to light the qualities, associations and meanings of the original borrowed material. Overall, it is apparent that many of the terms presented in Table 6 may be interpreted in different ways – their flexibility and fuzziness are attributes useful for composers looking at the possibilities for customising, altering and embedding borrowed material. A small side note here acknowledges that embedding techniques in electroacoustic music can often prevent the isolation of the borrowing due to problems with segmenting. Fixed media works culminate in a single audio track (stereo works) and if borrowing takes place, these imports are embedded within the mix. If buried amidst other material, it might not be possible to locate, with certainty, the instance of borrowing.

7. COPYING AS BORROWING

A further collection of terms has been included to address the issue of copying as an area of sound borrowing. So far my discussion has dealt with aspects of digital data transfer: a physical lifting of audio from one piece to the next, however, some borrowing activity belongs to the realm of reproduction and recreation. It might be useful to think of the analogy of instrumental 'style composition'; for example, 'composing a string quartet in the style of Haydn'. No physical borrowing may take place in these types of borrowing, just the style, traits or essence of the composer's original work. Copying as borrowing might take the form of a trace, structure or sound quality similarity found within a new work. This type of borrowing is less overt than all previous examples and many of the terms belonging to copying function through sound approximation from sharing certain sonic attributes. Table 7 presents some of these copying possibilities in more detail.

8. GENRE HOPPING

The repertoire covered in this article has presented some interesting examples of genre hopping. The receptivity of electroacoustic music to other musical styles, sound resources and inspirations demonstrates its openness and its suitability as a canvas for borrowing to take place

within. Its acceptance of these seemingly wayward, distant and unrelated sound sources is a significant advantage. The repertoire study in this research has included instrumental and vocal music from as early as medieval times all the way to contemporary music, making the leap and transition into electroacoustic music. Opera, Westerns, commercial music and national anthems have also made appearances within electroacoustic music creations, further demonstrating flexibility in accommodating borrowings within a hybrid fashion. Burkholder reminds us that:

There is much to be gained by approaching the uses of existing music as a field that crosses periods and traditions. Encountering research in other repertoires can raise important issues that we might otherwise never consider for the music we study . . . Knowing the variety of ways a composer or improviser can use ideas taken from another may alert us to kinds of borrowing we might otherwise overlook and can sharpen our ability to distinguish between practices we might otherwise confuse. (Burkholder 1994: 851)

9. LOOKING FORWARD

The data collation appearing in this article was undertaken for the purposes of better understanding the landscape of borrowing practices within electroacoustic music. What has been provided here is a framework potentially useful for composers interested in involving sampling within their own music-making. This framework may also find use in accompanying the experiences of listeners who may hear and appreciate borrowing activity in the repertoire covered in the tables. It is my hope that further investigations will take place based upon this presentation of terminology and repertoire; for example, in musicological study, audience reception analysis and new compositional work that may emerge in response to the tables.

10. CONCLUSION

Studying electroacoustic music repertoire that incorporates existing sounds and music has enabled a wider identification of components, types and motivations associated with borrowing. Collating available terminology reveals differences in compositional approach and demonstrates many potential paths to involving existing sources in new works. Tracing how sound sources change hands, composer to composer, provides a rich avenue for continued exploration into the field. I hope that with this initial starting point and collection of repertoire, further research can continue into the intricacies and nuances of borrowing techniques exclusively occurring within the area of electroacoustic music. It is also intended that the list of terms and works might grow and

expand with input and knowledge from the electroacoustic music community.

The works appearing in this article share a common thread, uniting them together. Within their interiors and ‘genetic’ makeup there exists components from past times, moulded into new shapes and forms. These electroacoustic works deserve their own unique investigation and exclusive framework within the larger field of borrowing studies, given the nature of the language and stark differences between borrowing in electroacoustic music and within the world of instrumental music. Saying this, however, the author observes that this exclusivity is not prohibitive; there is enough flexibility, variety and scope within the terminology to be applied outwardly to works beyond the traditional electroacoustic field. Just think of the works of Schaefer (*What Light There Is Tells Us Nothing*, 2018), Jeck (*Surf*, 1999), Marclay (*Jukebox Capriccio*, 1997) and Yakota (*Griming Cat*, 2001), who have created a multitude of works in this vein. Applying this framework back onto instrumental music would not be off limits either, since this system offers a new way to assess musical borrowing, separate from Burkholder’s typology.

My study of repertoire has intriguingly demanded consideration of the original musics, existing sounds and histories imported into these compositions. Initially considered as a dual-faced practice (the ‘original’ and the new work), this research has encouraged me to revise this into a more multiplicitous practice due to the trails of borrowing often embedded in this process of composing.

This research has demonstrated that borrowing activity is not confined to a handful of electroacoustic works; on the contrary, much electroacoustic repertoire partakes in some sort of borrowing from external sources, whether it is an unconscious external influence or a blatant direct quotation. Including the concept of copying within this discussion also demonstrates the expansion of our understanding of borrowing, not just to sound and musical sources, but also to timbres, formats, traces, essences, schemes and systems.

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