NATURE IN MUSIC, MUSIC IN NATURE:

IMITATION, QUOTATION, AND REPRESENTATION

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INTRODUCTION

The present volume explores the connection between art and nature by juxtaposing two types of artifact (visual art and sonic music) and two types of cultures (British and Japanese). This paper will add to that investigation a historical perspective concerned with how music has found its raw material in, and made commentaries upon, the natural world.

In so doing, it will focus upon 'imitation' as a key concept. This is because traditionally music has been considered not to be imitative while other arts such as painting, sculpture, and drama have been. In the West, 17th- and 18th- century theorists often asserted that the core and ultimate goal of visual arts lay in 'imitating nature', often quoting in support, though not without misunderstanding, the works of classical philosophers such as Plato and Aristotle. I am not going to examine here the validity of their understanding of the writings from the antiquity,[1] but it is certain that music occupies a position rather different from that of the fine arts in terms of its property of 'imitation'. For example, an 18th-century British music-historian John Hawkins (1719-1789) states:

> Painting is professedly an imitative art; for setting aside the harmony of colouring and the delineation of beautiful form, the pleasure we receive from it, great as it is, consists in the truth of the *representation* [my own italics]. But in music there is little beyond itself to which we need, or indeed can, refer to heighten its charms…in short, there are few things in nature which music is capable of imitating and those are of a kind so uninteresting that we may venture to pronounce, that as its principles are founded in geometrical truth and seem to result from some general and universal law of nature, so its excellence is intrinsic, absolute, and inherent, and in

[1] The issues have been discussed, for example in: Francis Wolff, 'The Three Pleasures of Mimêsis According to Aristotle's *Poetics*', in *The Artificial and the Natural: an Evolving Polarity*, ed. Bernadette Bensaude-Vincent and William R. Newman (Cambridge, MA: MIT press, 2007), 51-66.

> short, resolvable only into his will, who has ordered all things in number, weight and measure.[2]

Two issues arise here. The first is: what exactly can music imitate, and why did Hawkins harshly condemn the things imitated as uninteresting? The second is: is it justifiable for us to understand 'imitation' and 'representation' almost synonymously?

I will begin my discussion by first defining what the 'imitation of nature' might mean in musical terms, and by distinguishing it from similar notions such as replication, quotation, and representation. Second, I will trace the actual practices of the musical imitation of nature in the history of Western music. Here I do not intend to produce a comprehensive list of such attempts. Rather, I am going to introduce and examine a few pivotal practices from the history up to the 1950s – the stage where traditional methodologies of 'imitation' were divided in two: one is exemplified by the works of the French composer Olivier Messiaen, the other by the establishment of the *musique concrete* genre.

Messiaen proposed a new sonic paradigm with his musical use of actual birdsong collected during his ornithological fieldwork. However, as we will see, these uses were not so much replication of birdsong as 'translations' fitting the natural phenomena into the field of art.

Musique concrete which involves sculpting environmental soundscapes through recording and editing has great significance for our topic. Raw sounds taken from the sonic environment (which might be urban and industrial as well as 'natural') are arranged and displayed to be heard for their sonic properties alone – that is, not as indications of their origins or causes. In other words, the emphasis has now shifted to our inner experiences of sounds, rather than attempts to categorise them through cognitive or contextual analysis. This 'phenomenological' approach to sound is, as we see elsewhere in this volume, a fundamental starting point for the work of John Drever, though he has now moved beyond any purist application of the idea.

Finally, by referring to some comparable attempts from Japanese traditional music, I am hoping to touch upon whether there is any significant difference aesthetic or otherwise between Western approaches and those Japanese, which may reflect each region's differing cultural views on nature. Since East and West have begun to share many aspects of the perception of nature, and borrowed many artistic methodologies from each other, we conclude

[2] John Hawkins, 'Preliminary Discourse' in *A General History of the Science and Practice of Music* [1776] (New York: Dover, 1963), vol. I, xx.

by asking whether the 'imitation of nature' in both traditions might hold the key to true collaborative work.

MUSICAL IMITATION OF NATURE: THE DEFINITION

Let us begin by thinking about the exact meaning of the 'musical imitation of nature'. In music, the uses of 'imitation' most relevant to this paper are:

1. Imitations of speech intonations
2. Imitations of emotional intensity and character.
3. Imitations of sounds, movements, spaces, and physical attributes.[3]

Historically speaking, musical attempts to imitate speech intonation have been important. For example, the Camerata, an academic group in Florence at the end of the 16th century attempted to imitate the natural intonation and speech patterns of language in music, thinking that by so doing they would revive the manner in which Greek tragedies were performed – an experiment that eventually gave birth to the genre of opera.[4] In reality, however, music cannot 'imitate' any actual language; what it can do is to 'represent' something similar to 'primal language' – in other words, it can create 'stylized' screams or groans, or intensity-patterns suggesting emotional character or rhetorical delivery.[5] The ironic but significant fact here is that the purpose of imitating speech is to express and convey effectively the instigating feelings behind the speech, never to imitate the language itself faithfully. Therefore, this is not imitation of language; it is imitation of utterance.

Quite often, music is credited with the property of 'imitating human emotions'. For example, an 18th-century theorist Charles Batteux (1713-1780) famously argued that the imitation of nature must be the common aim of all the arts,[6] and art was to recreate not nature itself but 'beautified nature' (*belle nature*).[7] Moreover, he asserted that for music in particular its prime function must be imitation of the feelings or passions.[8] However, the word 'imitation' here is misleading. Music does not imitate human feelings but allows the listener

[3] Cf: John Neubauer, *The Emancipation of Music from Language: Departure from Mimesis in Eighteenth-century* (New Haven and London: Yale University Press, 1986), 70-71.
[4] For the Camerata, see, for example: Claude V. Palisca, *The Florentine Camerata: Documentary Studies and Translations* (New Haven and London: Yale University Press, 1989).
[5] Carl Dahlhaus, *Realism in Nineteenth-Century Music* [1982], trans. Mary Whittall (Cambridge: Cambridge University Press, 1985), 18-19.
[6] Peter le Huray and James Day, *Music and Aesthetics in the Eighteenth and Early-Nineteenth Century* [1981], abridge edn. (Cambridge: Cambridge University Press, 1986), 32.
[7] Ibid., 33.
[8] Ibid., 38.

to react to a series of meanings suggested by contexts, titles, intensities and physiologically induced moods. The type of music in question here is expressive music, deliberately designed to evoke a certain emotion in listeners. Listeners, then, perceive it as such and their emotion takes its 'natural' course. Only in a metaphorical sense, then, does music imitate emotions.

The next categories – imitations of sounds, movements, spaces and physical attributes – are also in need of clarification since they take in a diverse range of musical practices. First of all, while music can imitate 'sounds' in a literal sense, it can also 'metaphorically' imitate things beyond. An 18th-century British theorist James Harris argued that the 'fittest subjects' for music to imitate are 'all such things and incidents as are most eminently characterized by motion and sound'. [9] By 'motion', he means things 'slow/swift; even/uneven; broken/continuous'.[10] Those notions may be 'metaphorically depicted' by musical passages with speeds or inflexions appropriate to the types of movement involved. Likewise, pitches are often used to represent spatial movement – the words 'rising' or 'falling' are conventionally reinforced by pitches going high or low. In either case, however, the practice is not direct imitation. Without the aid of text – either lyrics or a programme – it may be difficult for music on its own to convey such specific meanings. Traditionally those techniques were used as stock-in-trade for 'word-painting', found particularly in Renaissance to early Baroque music. But the practice became outdated particularly from the 1750s when the agenda of music shifted from paying 'short-sighted' attention to single words to expressing general emotive characters within larger-scale forms.[11]

The aspect of musical imitation to which I shall now turn is the simplest one in the literal sense: direct imitation of sounds found in nature – for example, the sound of the wind, or waves on a beach or birdsong. These are precisely the kinds of imitation that John Hawkins called 'uninteresting'.

MUSICO-HISTORICAL PRACTICES OF IMITATING NATURAL SOUNDS

The practice of imitating natural sounds has had a long and interesting history, which we can illustrate by taking the musical imitation of birdsong as an example. This choice is relevant

[9] James Harris, 'Three Treatises Concerning Art' [1744], in *Musical Aesthetics: a Historical Reader, from Antiquity to the Eighteenth Century*, ed. Edward A. Lippman (New York: Pendragon Press, 1986), vol. I, 177-184:182.
[10] Ibid.
[11] Neubauer, *The Emancipation of Music from Language*, 72.

not only because birdsong appears in numerous musical works throughout history but also because John Drever himself has been involved in ornithological work. Moreover, there is even a theory, although unproved, that birdsong might have been the origin of music as a whole.[12] However, I will leave this controversial theory to one side.

The practice of imitating birdsong dates back at least to ancient Greece. Aristophanes (c. 446 BC-c. 386BC) wrote a comedy, *The Birds* which contains a scene where the 'flute' (actually an aulos, which is a double-reed instrument) imitates cries of a nightingale.[13] Greek philosophers such as Democritus (c. 460-370BC) and Philodemus (c. 110BC-c. 40 or 35BC) referred to instruments imitating natural sounds like birdsong,[14] although it is possible that the ancient Greek word 'mimesis' actually meant 'representation' rather than pure 'imitation'. Perhaps the earliest notated musical imitation of birdsong can be found in an English composition ('Sumer is icumen in') from the thirteenth century in which the call of the cuckoo provides the material for parts of the melody. From then on, vocal music employing imitations of birdsong appeared frequently – the musicologist Richard Jensen has listed 24 pieces between the 15th and 17th centuries alone including Janequin's well-known 'Chant des oiseaux' (1529).[15]

In parallel with these compositional imitations of birdsong there were attempts to record characteristics of actual birdsong in musical notation. The first comprehensive attempt can be found in Kircher's *Musurgia universalis* (1650), a musical encyclopedia.[16] Kircher's work was not only widely disseminated but also influenced many composers and theorists; for example, the anonymous composer of *Sonata Representativa* for solo violin (1669) (a work attributed traditionally to Biber) adapted Kircher's table of bird calls.[17] Later, in the 18th century, Hawkins, although generally praising Kircher's work for its ingenuity and industry, took the trouble to point out Kircher's error concerning the call of the dunghill cock, thus demonstrating that he too had taken an interest in the exact musical contours of birdsong.[18]

[12] For discussions, see: Mathew Head, 'Birdsong and the Origins of Music', *Journal of the Royal Musical Association* vol. cxxii no. 1 (1997), 1-23.
[13] Maria Anna Harley, "Birdsong", *The New Grove Dictionary of Music and Musicians*, 2nd edition, ed. Stanley Sadie (London: Mcmillan, 2001), vol. III, 607-610: 607.
[14] Stephen Halliwell, *The Aesthetics of Mimesis: Ancient Texts and Modern Problems* (Princeton, N.J.: Princeton University Press, 2002), 19 and 284.
[15] Richard d'A. Jensen, 'Birdsong and the Imitation of Birdsong in the Music of the Middle Ages and the Renaissance', *Current Musicology* vol. xl (1985), 50-65: 64-65.
[16] Athanasius Kircher, *Musurgia universalis* (Rome: Corbelletti, 1650).
[17] Charles E. Brewer, *The Instrumental Music of Schmeltzer, Biber, Muffat and Their Contemporaries* (Farnham: Ashgate, 2011), 111.
[18] Hawkins, *A General History*, vol. I, 2.

Since then, history has produced many instrumental pieces as well as vocal pieces which make use of musical imitations of birdsong: for example, Rameau's *Le rappel des oiseaux* for keyboard;[19] Vivaldi's Violin concert RV 'il cucu' (RV 335, 1719) and his renowned *Four Seasons*; and Beethoven's *Pastoral* Symphony (op. 68, 1808), to name but a few.

Birdsong in reality is, however, an extremely complicated sonic phenomenon, since individual instances are defined by speed, range, melodic pattern, repetition and attack – and other features inaudible to the human ear.[20] As a result, each generation of composers has selected from birdsong aspects that seem best to fit the mould of the prevailing musical style of the era. How faithful the musical imitations of birdsong are to nature no longer matters. What does matter is that the musical effects are perceived by the listener as 'birdsong'. This is precisely because musical imitation is intended for *representational* purposes, not simple imitation. The purpose of imitating birdsong musically is usually to convey to the listener what birdsong signifies in a wider sense: rusticity, tranquility, or perhaps, liberty. Direct imitation of nature forms only one of many tools for musical representation. Therefore, it is not coincidental that, in the field of instrumental music, such imitations can be found often in 'programme' music, where the listener is guided by literary means to be aware of what is intended to be represented.

There have been some attempts in music to present birdsong more realistically. For example, there are many mechanical devices which automatically imitate birdsong. The earliest known attempt dates from the 3rd century BC,[21] and Kircher's encyclopedia also mentions an hydro-'automatic' organ that could produce birdsong. Also, it is well-known that the famous 'Toy' symphony (more correctly known as the *Sinfonia Berchtolsgadensis* (Hob.II 47), once attributed to Haydn but now to Leopold Mozart)[22] employs cuckoo and nightingale whistlers. Following the invention of recording, Respighi in 1924 used alongside the orchestra a gramophone recording of a nightingale for *I pini di Roma*. At one level, those attempts are clearly closer to actual bird calls, and it might be better to call them 'replications' rather than 'imitations'. Even so, their meaning seems more or less the same as that of notated 'imitations', since they are there, as are imitations, to convey what birdsong *in general* might be associated with. That the exact sources of those replications are left unspecified – we are

[19] From Jean-Philippe Rameau, *Pieces de clavessin avec un methods pour la mechanique de doigts* (1724).
[20] Jensen, 'Birdsong', 50-51.
[21] Arthur W.J.G. Ord-Hume, "Bird instruments", *The New Grove Dictionary of Music and Musicians*, 2nd edn, ed. Stanley Sadie (London: Macmillan, 2001), Vol. III, 607-610: 607.
[22] Karl Geiringer, *Haydn: a Creative Life in Music* (Berkeley and Los Angeles: University of California Press, 1982), 292.

invited to hear not the call of a particular bird but *a* generic nightingale sound – indicates that they are not 'quotations'.[23] A rare example of music replicating an actual particular animal occurs in Elgar's *Enigma Variations* no. 11, bar 5 where the composer claimed to have set to music the barking of his friend's dog Dan.[24] The sound is intended to bring to mind not an anonymous 'general' dog but that particular one. Of course, the particularity will be lost on those listeners who do not know the story behind the scene.

A further step in the rigorous portrayal of birdsong was taken by Olivier Messiaen. After immersing himself in ornithology, Messiaen produced a series of pieces imitating birdsong including: *Réveil des oiseaux* (1953); *Oiseaux exotique* (1955-6); and *Catalogue d'Oiseaux* (1956-8). Before Messiaen, detailed incorporation of authentic birdsong was not a serious issue; rather, 'too faithful' musical attempts at imitation were deemed valueless. For example, Haydn, once condemned as 'French trash' the imitation of frogs in a work he was forced to write – the *Seasons*.[25] And he allocated a song fancifully described as 'learnt from a bird' to the Persian princess Rezia in his opera *L'incotro improvviso* (1775) to depict her primitive, uncultivated, foreign and feminine nature.

Messiaen, by contrast, was more convinced of the shared attributes of birdsong and music, claiming that 'there is *nothing but* bird songs' in his works.[26] Despite his claim, Messiaen's uses of birdsong were not so much replications of the natural world as 'translations', complex attempts to adapt the natural phenomena into the field of art. First, it is not possible for any musical instrument to replicate completely the sonic attributes of real birdsong with its complex overtones (thus, there can be no 'verisimilitude'); and secondly, Messiaen cut and juxtaposed the bird songs to fit the formal demands of the musical work derived from the traditions of art music. In other words, Messaien was already listening to nature as if it were music. The birdsong material is, as Deleuze and Guattari might say, a constant state of 'becoming other'. And as they have written, 'becoming is certainly not imitating, or identifying with something'.[27] Messiaen's birdsong provides the basis for Deleuze's proposal

[23] Respighi's work makes use of a recording of *a particular* bird; however, the recording acts as a representative of the spices, rather than refer to the very bird.
[24] According to Rushton, the composer indicated 'Dan' there in the sketch (f. 12^{v}). Julian Rushton, *Elgar: Enigma Variations*, Cambridge Music Handbook Series (Cambridge: Cambridge University Press, 1999), 49.
[25] Richard Will, *The Characteristic Symphony in the Age of Haydn and Beethoven* (Cambridge: Cambridge University Press, 2004), 145.
[26] The composer's own remark on *Réveil des oiseaux*. See: Peter Hill and Nigel Simeone, *Olivier Messiaen: Oiseaux exotique* (Farnham: Ashgate, 2007), 27.
[27] Gilles Deleuze and Félix Guattari, *A Thousand Plateaus* [Mille Plateaux, 1980], trans. Brian Massumi (London: Continum, 2004), 263.

of a new sonic paradigm in keeping with the ever-changing state of the signified. Such a state of 'becoming' is the norm with most transactions between art and nature.

The establishment from the 1940s of what composers call *musique concrete* is another development that has great significance for our topic. Raw sounds taken from the sonic environment (which might be urban and industrial as well as 'natural') are arranged and displayed. Here, verisimilitude is again not of great importance, but this time because advancing technologies have made recorded replications of nature over-familiar. But are *music concrete* and the subsequent 'soundscape' genre that are constructed out of such material intended to preserve environmental sounds from everyday life merely as an exercise in 'sonic museology'? It seems not: in the field of *musique concrete*, the sounds to be heard are presented for their sonic properties alone – we are not supposed to 'read' them as indications of their origins or causes. In other words, the emphasis has now shifted to our inner experiences of sounds, rather than attempts to categorise them through cognitive or contextual analysis. This 'phenomenological' approach to sound is, as we have heard, a fundamental starting point for the work of John Drever, though he has now moved beyond any purist application of the idea – and the details of his practices can be found elsewhere in this volume.

JAPANESE PRACTICES AND AESTHETICS

Before drawing a conclusion, I will refer briefly to comparable examples found in Japanese music history.

Japan has also produced a number of musical works, traditional or otherwise, that 'imitate nature'. In traditional music we find for example: *So-kaku rei-bo* (巣鶴鈴慕) or *Cranes' nesting*, and *Shika-no-toone* (鹿の遠音) or *Deer's calls in the distance* for solo *Shakuhachi*, typical imitations of the cries of animals. Other examples include: *Aki-no-Irokusa* (秋色種) or *Sundry Herbs in the Autumn*, and *Kibun-Daijin* (紀文大尽) for voice and *shamisen*-ensemble where the pieces imitate the calls of insects and the stormy sea respectively. We should note, however, that those practices are employed in order to *represent* a story behind each piece – as we can see with the *So-kaku rei-bo* example.

Featured famously within a Kabuki-theatre work entitled *Chushingura*, *So-kaku rei-bo* belongs to a solo-*Shakuhachi* genre called *Honkyoku*,[28] and is one of the most frequently performed pieces of the concert environment.[29] However, the precise gestational history of the music with nearly 20 regionally-based variants is somewhat obscure. [30] The music is showcases various *Shakuhachi* techniques such as a *tremolo* by a certain manipulations of breathing and a rapid change in pitches by fingering in order to create sound effects imitating the cries of a crane. Although traditionally the performer is instructed by the master to create the sounds of a crane as 'realistically as possible',[31] the music is intended to convey a story: a mother crane's affection towards chicks and her touching lament when the grown chicks fly the nest. In this sense, the music is comparable to Western 'programme music'. In fact, the aesthetics of Japanese traditional music has been developed to find meanings beyond those apparent in sonic architectures by devising many representational tools, including even a way of depicting snowfall by association by a bass-drum roll by sticks with cotton-covered heads in the *kabuki* orchestra.

CONCLUSION

By way of conclusion, I should like to summarise some of the things we have explored in this paper and ponder their meanings. Regardless of the West or the East, at least traditionally, musical imitation of natural sounds is a tool of *representation*. In the end, the dichotomy between imitation and representation is a blurred one, though the notion of re-presentation implies a changed purpose, an opportunity to comment upon the object as well as simply encounter it. A representation of the Buddha is not simply an imitation of his supposed life-like features, but an attempt to conjure up through their re-presentation in a particular medium and context certain spiritual and humane attributes, associated with him.

[28] For an introduction to the instrument and the music in the English language, see: Satoshi Simura, Tuneko Tukitani, et al, 'Simplicity as Complexity – Technicalities and Aesthetics of Japanese Musical Instruments and Music', in *the Proceedings the 1993 International Computer Music Conference*, ed. Sadamu Ohteru (San Francisco: International Computer Music Association, 1993), 10-17.
[29] Mihoko Nogawa, 'A Study of the Meiji Era Sankyoku Concerts: Based Mainly on the Reports in Ongaku-Zasshi', *The Bulletin of the Faculty of Music, Tokyo National University of Fine Arts and Music* xvii (1991): 45-84, p. 56.
[30] One of the earliest versions is found in a collection of music compiled by the renowned *Shakuhachi* master, Kinko Kurosawa I (黒沢琴古), as early as in the mid 18th century (1710-1771).
[31] Simura et al, 'Simplicity as Complexity', 14.

Moreover, if there is any difference between western and eastern practices, it should lie primarily in the motivation behind them: the reasons why the musician wishes to employ such a tool of representation. Here, different cultural views on nature might be in operation. It is traditionally surmised that the Japanese value the closeness between nature and humanity,[32] while the Westerners emphasise the separation between the human subject and the surrounding field of natural objects.[33] And with our tendency to 'hear in' nature things familiar from human culture, the respective audiences tend to seek their culture-specific meaning in artistic uses of nature. Those specific issues are explored in much greater depth in Anthony Pryer's article in this volume.

Moreover, it seems that in modern times East and West are closer. Since environmental awareness is a global issue, the West and the East have begun to share many aspects of their perceptions of nature. Also, as the reception and consumption of artworks expand across the world, they will be received not only by the limited audiences who share a cultural background with the creator but those beyond, who will add new meanings to the work. In such a situation, the traditional value of the 'uniqueness' of a particular culture may be questioned.[34] In such a world, 'Japanese culture' the distinctiveness of which has often been emphasized, may cease to exist except in an 'imagined sense' although that imagined cultural community will continue to acquire new meanings.[35]

Such an interactive situation will not only spawn new meanings for the 'imitation of nature'; it will also reinforce (and at the same time put to test) the value of internationally collaborative work such as evidenced in our project.

[32] John A. Tucker, 'Japanese Views of Nature and the Environment', in *Nature across Culture: Views of Nature and the Environment in Non-Western Cultures*, ed. Helaine Selin (Dordrecht: Klumer Academic, 2003), 161-184.
[33] Peter R. Hay, *Main Currents in Western Environmental Thought* (Bloomington: Indiana University Press, 2002).
[34] For a discussion, see: Bimal K. Matilal, 'Pluralism, Relativism, and Interaction between Cultures', in *Culture and Modernity: East-West Philosophic Perspectives*, ed. Eliot Deutsch (Honolulu: University of Hawaii Press): 141-160.
[35] For a discussion about Japanese cultural 'elitism', Kosaku Yoshino, *Cultural Nationalism in Contemporary Japan: a Sociological Enquiry* (Oxford: Routledge, 1992).