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CULTURAL APPROPRIATION IN MESSIAEN'S RHYTHMIC
LANGUAGE

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ABSTRACT

Bruhn (2008) and Griffiths (1978) have referred in passing to Messiaen's use of non-Western content as an appropriation, but a consideration of its potential moral and aesthetic failings within the scope of modern literature on artistic cultural appropriation is an underexplored topic. Messiaen's first encounter with India came during his student years, by way of a Sanskrit version of *Saṅgītaratnākara* (c. 1240 CE) written by the thirteenth-century Hindu musicologist Śārṅgadeva. I examine Messiaen's use of Indian *deśitālas* within a cultural appropriation context. Non-Western music provided a safe space for him to explore the familiar, and served as validation for previously held creative interests, prompting the expansion and development of rhythmic techniques from the unfamiliar.

Chapter 1 examines the different forms of artistic cultural appropriation, drawing on the ideas of James O. Young and Conrad G. Brunk (2012) and Bruce H. Ziff and Pratima V. Rao (1997). I consider the impact of power dynamic inequality between 'insider' and 'outsider' cultures. I evaluate the relation between aesthetic errors and authenticity. Chapter 2 considers the internal and external factors and that prompted Messiaen to draw on non-Western rhythm. I examine Messiaen's appropriation of Indian rhythm in relation to Bloomian poetic misreading, and whether his appropriation of Indian rhythm reveals an authentic intention. Chapter 3 analyses Messiaen's interpretation of Śārṅgadeva's 120 *deśitālas* and its underlying Hindu symbolism. Chapter 4 contextualises Messiaen's Japanese poem *Sept haïkai* (1962) in relation to other European Orientalist artworks of the late-nineteenth and early-twentieth centuries, and also in relation to Michael Sullivan's (1987: 209) three-tiered definitions of japonism.

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In memory of Michael Baxter

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List of Abbreviations, Acronyms and other Miscellaneous Details

Ms(s)= Manuscript(s)

TLM = *Technique de mon langage musical* (Messiaen, 1944)

TRCO = *Traité de rythme, de couleur, et d'ornithologie*

(Messiaen, 1994)

EMDC = *Encyclopédie de la musique et dictionnaire du Conservatoire*

(La Laurencie and Lavignac, 1913)

Tr.= Translation

M(s)LT=Mode(s) of Limited Transposition

Translations: All translations are mine, unless otherwise stated.

Introduction

There are parallels between Olivier Messiaen's appropriation of Indian rhythm and the creative and intellectual needs of the early-twentieth-century French musical Orientalists, namely, that appropriation of the exotic served to satisfy Western society's curiosity of the 'other', and to ameliorate artists' anxieties of a perceived climate of creative and cultural disintegration. Artistic cultural appropriation fuels the imagination and is a vehicle for individualistic self-expression. For Messiaen, non-Western music provided a safe space to explore the familiar, often serving as validation for previously held creative interests, prompting the expansion and development of rhythmic techniques *from* the unfamiliar. His intensive study of Indian musical theory, detailed in Book 1 of his enormous treaty, *Traité de rythme, de couleur et d'ornithologie* (1949–92), typifies the process through which the composer imprints himself upon the material he is appropriating.

In her discussion of the Scholastic and Modernist streams of French Orientalism, musicologist Jann Pasler (2008) points to several composers, notably Albert Roussel (1869–1937) and Maurice Delage (1879–1961), who were motivated by a desire to move away from major and minor tonalities of Europe and were intrigued by the melodic characteristics of Indian music and drawn to its modal scales. However, both Roussel and Delage were even more intrigued by the *idea* of Indian melody than the thing itself, neither one willing to accurately transcribe and include the intricate ornamentation of Indian melody, or microtones (*śrutis*), into their music (Pasler, 2000: 88, 93).

In Messiaen's case, Indian modes were not a primary concern, nor do they form a substantive part of his pedagogical writing, beyond a brief explanation and listing of raga construction in *TRCO*. Pasler (2008) notes several crucial differences in the appropriative praxes of Delage and Roussel. However, these are in stark contrast to Messiaen's, whose research show a serious concern for technical aspects of North Indian—Hindustānī— and South Indian—Karnāṭak—rhythm. In his interview with Claude Samuel, Messiaen declared with pride that he was 'absolutely' the only Western composer to have knowledge of Indian rhythms, which goes to show how important the material was to him (Messiaen and Samuel, 1994: 78).

However, there are some key points regarding each composer's positional relation to the Orient that are worth a brief mention here: For Messiaen and Roussel, the 'other' serves as a means to express the divine through nature, although in Messiaen's case, this is achieved less through musical depictions of imagined, dreamlike landscapes and more through his encounters with real ones, such as *Sept haïkai* (1962), as well his scrupulous transcriptions of exotic birdsong that helped provide a more 'authentic' portrayal of his subjects. Both sought to consolidate their experiences of India with aspects of their Catholic faith. For Roussel, this was through the mandate of the Schola Cantorum, which was affiliated with the Institute Catholique at the turn of the twentieth century (Pasler, 2008: 91). For Messiaen, this was achieved by finding aspects of *les vérités catholiques* in the music and symbolism of the 'other'. Both also sought to reconcile new ideas with past ones. For Roussel, this was influenced by the Schola Cantorum's anti-republican, nationalist stance (Pasler, 2008); while

Messiaen's desire for musical integration was motivated by an inherent universality.

For Delage and Messiaen, the allure of the exotic promised to satiate the Western appetite for new sounds and timbres prevalent in early-twentieth-century French music. However, neither were fully formed composers at the time they first came into contact with Indian music. Messiaen's first encounter with India came during his student years, by way of a Sanskrit version of *Saṅgītaratnākara* (c. 1240 CE) written by the thirteenth-century Hindu musicologist Śārṅgadeva, and a chapter on ancient Indian music by Joanny Grosset (1913) in Lavinac's *Encyclopédie de la musique et dictionnaire du Conservatoire*, which contained Western transcriptions of Śārṅgadeva's 120 *deśītālas* (Johnson and Rae, 2008: 10). Both composers visited Japan, although Messiaen was far more inspired by Japanese culture and landscapes than he was by the subject of India (Messiaen and Samuel, 1994). However, Delage and Roussel both travelled to India and were exposed to Indian classical performances in a way Messiaen was not (Pasler, 2008: 87). Messiaen expressed regret at never having visited India; his contact was principally limited to the study of its ancient texts (Messiaen and Samuel, 1994: 99, 107).

Messiaen's use of *deśītālas* has been discussed by several scholars: Johnson and Rae (2008) and Halbreich (1980) have referred to their underlying symbolism; Andrew Shenton (2008) during his semiotic deliberations considers their signification within the wider scope of Messiaen's musical language; Šimundža (1987) provides a comparative analysis showing the relationship between Messiaen's rhythmic organisation and Śārṅgadeva's *deśītālas* in *Quatuor pour la fin du temps* (1941) and *Turangalīla-Symphonie* (1946–48).

However, very few scholars have discussed the subject of Messiaen's cultural appropriation from an ethical standpoint. Bruhn (2008) and Griffiths (1978), for instance, have referred to Messiaen's use of non-Western materials *as* an appropriation in passing, but a consideration of its potential moral and aesthetic failings within the scope of modern literature on artistic cultural appropriation is still an underexplored topic.

I consider the purpose(s) served by Messiaen's artistic cultural appropriation. What motivated him to use Indian rhythms in the first place? Can his appropriative acts be characterised as, to use George Lipsitz's (1994) term, strategic anti-essentialism? What do Indian rhythms provide that Western rhythms do not? How does Messiaen consolidate distant, sometimes unrelated materials, ideas, and symbols with Western ones in a single work, and is Messiaen making some wider statement when he does this?

It is evident from Messiaen's discussion in *Music and Color* that he considered artistic identity to be intrinsically linked to a sense of national identity, believing that it was important for artists not to stray too far from their culture, whether Western or Eastern, in their exploration of foreign materials (Messiaen and Samuel, 1994: 102). However, in spite of Messiaen's concern for cultural preservation, there is little evidence of '*le péril jaune*' running through Messiaen's brand of nationalism, although he was not altogether immune from its influence. Nor are there a plethora of racist pronouncements on record; he did, on occasion, adopt a stance that could be characterised as anti-Semitic, if not anti-Judaistic, i.e. a position that reasserts the superiority of Christianity through the outward expression of sympathy for the Jews in light of their unwitting role in the Crucifixion of Christ:

What I'm going to say is horrible, but by sentencing Christ to death, the Jews committed deicide. (Messiaen and Samuel, 1994: 105)

Messiaen expressed admiration towards the cultures of the Orient, particularly the Japanese, as I show in my fourth and final chapter (Messiaen and Samuel, 1994: 99). Nevertheless, I will argue, a well-intentioned appropriator is not immune from engaging in unethical, offensive, or harmful acts.

Chapter 1 focuses on several pieces of scholarship: predominantly on the ideas of James O. Young and Conrad G. Brunk (2012) and Bruce H. Ziff and Pratima V. Rao (1997), but also on the work of Susan Scafidi (2005), Denise Cuthbert (1998), and David Hesmondhalgh (2006). I also, briefly, venture into areas of post-colonial discourse by way of Edward Said (1978). This chapter is by no means intended to be an exhaustive study of cultural appropriation, which could very easily form the basis of an entire thesis itself, but merely to provide a backdrop and set the parameters for the central figure of my subject in subsequent chapters—Messiaen.

In Chapter 1 I discuss some of the central themes of cultural appropriation. I examine the difference between appropriative and assimilative acts, and consider to what degree, if any, a power disparity between cultures impacts on the ethical dimension of an act of cultural transmission. I examine how and why certain types of cultural appropriation can be considered potentially damaging. The chapter describes the different kinds of artistic appropriation, with a focus on Young's (2010) subcategories of content appropriation, as well as distinguishing content from subject. I outline what I consider to be the primary artistic objections to concerns of cultural appropriation, and discuss the different kinds of content appropriation in relation to Young and Brunk's (2012) three-

tiered classification. Artistic works created by outsiders who borrow from insiders may give rise to aesthetic objections. I suggest that these are often centred on questions of authenticity. I argue that the appropriation of subject should similarly be broken into sub-categories.

My second chapter identifies the primary influences on Messiaen's rhythmic language. I examine his use of Greek and Indian rhythm, and compare and contrast how they are used in his music. I discuss the influence of Śārṅgadeva's *deśitālas* on Messiaen's techniques, as well as the later influence of Karṇāṭak techniques on his process music, introduced to him by Turan Kumar Ghosal. I consider the influence and correlation between features of Greek metrics, with a focus on Aristoxenian theories, and the degree to which *rhythmicization*, *rhythmopœia*, and *arses* and *theses* are also concerns for Messiaen. I reflect on Messiaen's interaction with Indian music generally, and consider if his engagement can be deemed 'authentic' with respect to cultural appropriation. I also consider the extent to which exotic rhythms were a conduit for Messiaen to further explore his own ideas about religion and nature.

The central theme of Chapter 2, however, is an examination of the external and internal factors that prompted Messiaen to seek inspiration in the development of his rhythmical language. Here I draw on the ideas of Harold Bloom (1997), and his 'influence-anxiety' concept. Bloom's *The Anxiety of Influence* refers to masterworks acting as anxiety-agitators that have a polarising and transformative effect on the young artist. The artist seeks to overcome their influence-anxiety through poetic misreading of the material, which Bloom terms 'poetic misprision' (1997: 14). Bloom's six revisionary ratios serve as the means through which the young artist escapes and achieves an artistic 'voice' of his

own. Bloom postulates that artists escape influence-anxiety through a misreading of the predecessor work: it is the misreading of the material that separates the artist from the influencer, not always making the young artist better, only more original.

Bloom's concept addresses the influence of a masterwork on a young artist; he never intended it to be used in relation to the influence of a specific style or culture. My recontextualisation of his revisionary ratios as an analytical tool—to ascertain the nature of relationship between the appropriator and the material being appropriated—is in itself a misreading, a tesserae no less, of Bloom's original influence-anxiety concept. However, it is my contention that analytical insight can be derived from the nature of misreading in general; a study on the artistic influence of exotic materials without the need for a single influencer yields rewards. In Messiaen's case, his eclectic use of material potentially results in a series of varied influence-relationships with each subject, worthy of investigation irrespective of my misreading of Bloom's original concept.

Although Bloom (1997: 11) concedes that the association between harbinger—Bloom's term for the masterwork or anxiety-agitator—and ephebe—the 'influenced' young artist—is typically characterised as the dialectic between 'strong equals' or 'mighty opposites', there seem to be few examples in Bloom's world where the ephebus is considered qualitatively vastly superior to the precursor. The harbinger-ephebus relationship denotes a dependency similar to that found in Hegel's (1977) master-slave dialectic. Both situations are contingent upon a conflict whose resolution results in the formation of self-consciousness. In the *Phenomenology of Spirit*, the slave's redemption was achieved not through seeking freedom from his slaver, but via the creation of

products—an act that ultimately enslaves the master. Similarly, the ephebe’s only means of liberation from Bloom’s poetic-misprision is through the creation of works. While Bloom (1997), in his preface, acknowledges the existence of peripheral and multiple influences, he rejects the Freudian notion of substitution. The abandonment of the poet’s first love does not guarantee the ephebe will ever achieve originality; but abandoning them by way of the exotic is almost certainly a bona fide means of escape.

In spite of Messiaen’s relentless dedication to the study of Hindustānī and Karṇāṭak techniques in his treatise *TRCO*, Messiaen’s appropriation cannot be considered an example of what George Lipsitz (1994) refers to as ‘discursive transcoding’; there is little evidence, and of the required levels, of alienation from his French, Western cultural surroundings to warrant Lipsitz’s definition, especially given the composers assertion of a French cultural identity. However, as I show in my examination of Messiaen’s influence-anxiety, his motive for the appropriation of non-Western materials can almost certainly be considered, in Lipsitz’s (1994) terms, a form of strategic anti-essentialism.

My third and longest chapter requires the shortest explanation. It is entitled ‘Gauging Authentic Intention in Messiaen’s Excavation of Hindu Symbolism from Śārṅgadeva’s 120 Deśītālas’ and examines the extent to which his research into Indian music shows authentic intention. I analyse Messiaen’s interpretation of Indian notation and exegesis of Hindu symbolism embedded in Śārṅgadeva’s 120 deśītālas. I also compare the names and notation of the *deśītālas* in several sources—including Nijenhuis’s (1992) translation of the *Saṅgītaśiromaṇi* (1428 CE), and a version of *Saṅgītaratnākara* by Śārṅgadeva and Krishnamacharya (1943) written in Sanskrit—against Messiaen’s own

interpretation in *TRCO*. I explore Messiaen's understanding of the symbolism of animals and Hindu numerology, as well as the conceptual differences revealed by his use of palindromic rhythms. I reflect on Messiaen's application of Indian rhythm in his music, and to what extent he adheres to the conventions of Indian performance practice.

My final chapter is a detailed analysis of Messiaen's Japanese poem *Sept haïkai* (1962). I consider this piece in relation to other European Orientalist artworks of the late-nineteenth and early-twentieth centuries, and also in relation to Michael Sullivan's (1987: 209) three-tiered definitions of japonism—*Japonerie*, *Japonaiserie*, and *Japonisme*. I consider the extent to which Messiaen's work is an appropriation, both in terms of its subject and content, of Japanese Imperial Court music, and which aspects, if any, can be considered ethically or aesthetically problematic. I reflect on the appropriateness of using Hindu *deśī* *tāla* symbolism in a work depicting Japanese Buddhist temples, and identify different forms of content and subject appropriation previously discussed in Chapter 1. My analysis explores various aspects of Messiaen's rhythmic language, including his use of Greek metre in *Le Parc de Nara et les lanterns de pierre* and the religious symbolism of Messiaen's 'shakti' rhythms throughout the *Introduction* and *Coda* movements, as well as his use of percussion, process and permutation, and deployment of birdsong.

Orientalism provided French artists with several incentives: a source for their imagination, a means of escapism, and the opportunity to distinguish oneself from one's peers (Pasler, 2000). In this regard, Japan afforded Messiaen with the same incentives as the Orient gave French music at the turn of the century. There is a complexity to Messiaen's Orientalism because it draws from

numerous cultures, and often in slightly different ways. The Japanese scenes of *Sept haïkai* (1962) are as much a depiction of his summer visit in 1962 with Yvonne Loriod—its birds, nature, landscapes and so on—as they are of his encounters with its ancient gagaku music. His interest in the music of the Japanese Imperial Court culminates in a work that is both an appropriation of subject and content, potentially making it one of Messiaen's most problematic acts of appropriation.

I conclude by touching briefly upon the subject of composer as musicologist. I have tried to be fair in my account of Messiaen's music; but as a composer, I am not a disinterested party. My exploration of Messiaen's techniques in my own music, thus far, has been predominantly by way of expanding on, or replicating, his symmetrical processes. The subject of Messiaen's appropriation has prompted me to consider the implications of utilising, assimilating—taking—the music of others. Can artists ever really explore anything without ulterior motives? I have no more moral authority as a composer to speak on this issue than anyone else. My exploration of Olivier Messiaen's assimilation of ancient Indian and Japanese music reveals an artist with seemingly unending levels of child-like curiosity, care, and love towards the objects and subjects that warranted his admiration, which will certainly give me pause for thought the next time I decide to 'lift' music from the styles of others.

Chapter 1

Cultural Appropriation

1.1 Introduction

In this Chapter I will (1) define cultural appropriation, assimilation and cultural transaction; (2) consider the criteria under which act of cultural transmission should be regarded as appropriation; (3) discuss the types of tangible and non-tangible forms of artistic cultural appropriation defined by James O. Young; (4) discuss the difficulties of identifying appropriative acts with respect to definitions of culture; (5) examine the relationship between authenticity and an artwork failing on aesthetic grounds; (6) and consider these ideas in relation to Messiaen's praxis and authenticity of intention.

1.2 Cultural Appropriation

Cultural appropriation tends to have negative connotations in Western popular culture, considered by some to be a practice best avoided. Egregious cases of cultural appropriation, usually involving the theft of a valuable, tangible artefact (object appropriation), can be described as 'misappropriation' (Young and Brunk, 2012: 7). However, most acts involving the appropriation of artistic content, or partial content in the form of themes, motives and subjects, are much harder to evaluate from an ethical standpoint.

Musicians frequently engage in the exchange of materials, through collaboration, constituting a form of cross-cultural transaction, for example, Ravi Shankar's *Symphony* (2012) with the London Philharmonic Orchestra; Nitin

Sawhney's *My Soul* (2008) and *Nadia* (1999) in collaboration with Paul McCartney and Swati Natekar; and *Strumming* (2001) by classical pianist Joanna Macgregor and South African jazz-pianist, Moses Molelekwa. Cultural transaction can also result from an extended period of cross-cultural influence between societies, such as the centuries of cross-cultural pollination of French, German, and Italian Opera.

Young and Brunk, (2012) adopt the definition from the *Oxford English Dictionary*, as a means of setting the parameters for what can and cannot be regarded as 'appropriation'. They define the term as the act of 'taking as one's own or [to put] to one's own use' (Young and Brunk, 2012: 2). They claim that for an act of cultural appropriation to be deemed morally wrong, several factors should be considered, these include:

1. If the act is deemed, or later revealed to be, harmful to the 'insider culture' e.g. environmentally, economically, or the act itself gives rise to a series of harmful cultural stereotypes (Young and et al., 2012: 5, 274)
2. If the act is deemed morally offensive, usually but not exclusively, by the insider culture e.g. religiously offensive (Young and Brunk, 2012: 5-7)

Susan Scafidi (2005) points to a third criterion that, she argues, is especially important in cases of egregious misappropriation:

3. If the object in question is taken without the express permission of the insider culture or the 'outsider' has not sought permission from an internally authorised representative (Scafidi, 2005: 124).

Bruce Ziff and Pratima V. Rao (1997: 1) offer a broader definition of cultural appropriation that encompasses 'artefacts', 'history', 'expressions' and also 'ways of knowing', the latter extending to language, intuition, reason and sense perception. They assert that the most problematic cases of cultural appropriation occur when dominant cultures take from minorities (Ziff and Rao, 1997: 6-7).

Conversely, Denise Cuthbert (1998) claims there are examples of reverse cultural appropriation, where minority cultures have taken from dominant ones. She considers cultural appropriation to be a multi-directional phenomenon and warns against viewing every act of cultural exchange in terms of dominant-submissive, colonial appropriation which she characterises as the appropriative-expropriative paradigm (Cuthbert, 1998: 257). If cultural exchange is only considered in this context, the result is an oversimplification of the complex nature of cultural interaction, which, she believes, affirms stereotypes that paint minorities as victims:

It can occur both in the form of dominant cultural groups taking from marginal, minority and colonised cultures and in the reverse direction, with members of minority or colonised cultures 'appropriating' elements of the dominant culture. (Cuthbert, 1998: 257)

George Lipsitz (1994) concurs with Cuthbert (1998), asserting that cultural appropriation is not confined to the use of the other, and is seen in both majority and minority cultures. In his examination of the novel *My Antonia*, Lipsitz (1994) notes that that author Willa Cather resorts to using the protagonist's voice, Jim Burden, to conceal her own desire for ethnic working-class women: 'Cather's

oppression as a sexual minority does not make her immune from tendencies within Euro-American culture encouraging vicarious pleasure from the suffering of the other' (Lipsitz, 1994: 53). However, Lipsitz suggests that when majority cultures appropriate from minority ones, special care should be given to consider the historic and socio-economic circumstances. Cuthbert (1998) and Ziff and Rao (1997) claim that the interaction between 'marginal' and 'colonial' societies creates a cultural overlap that can be transformative to both groups. Cuthbert (1998: 257-8) believes it is possible for cultural appropriation to be 'non-rivalrous' and 'non-exclusive', in which case, insiders can still benefit from their property, even after it has been altered.

Ziff and Rao (1997) concur with Cuthbert's (1998) depiction of the multi-directionality of cultural appropriation, but regard most forms of 'reverse appropriation'—i.e. when insiders appropriate the works of outsiders—an act of 'assimilation'. They believe that addressing the issue of power dynamic inequality between two cultures is essential to understanding the politics of appropriation. It also permits a clear distinction between 'cultural appropriation' and assimilation through 'cultural transaction' (Ziff and Rao, 1997: 5-7).

Ziff and Rao's model, entitled *A Structural Representation of Virtual Transmission* (1997: 6) (see Appendix A), shows the criteria under which act of cultural transmission should be regarded as an 'assimilative practice' or as an 'appropriative practice'. According to their model, assimilative practice occurs when minority cultures 'adapt or assimilate the cultural forms and practices of the dominant group' (Ziff and Rao 1997: 5-7); while appropriative practice occurs when dominant groups take materials from minority ones.

The 'Site of Contestation and Mediation', at the centre of Ziff and Rao's (1997: 6) model, is a list of criteria on which objections of cultural appropriation are often based, these include, music, art, literature, and religious symbols. The sources of power describe areas most likely to give rise to a disparity of power dynamic between minority and majority societies. The 'agents of culture' refer to the dynamic relationship between cultures, i.e. the nature of their cross-cultural relationship, which determines how an act of cultural transmission may be regarded. For instance, if the agents of culture may indicate that the minority group has been colonized, then the act of cultural transmission can be considered assimilative rather than appropriative. Ziff and Rao (1997) suggest that other factors, such as State's role in aiding or preventing the act of transmission, should also be taken into account. They declare that an act of appropriation, or assimilation, whether transformative or regressive, is likely to result in change to both cultures. The effect of an appropriative act on a subordinate society could be its cultural erosion, e.g. through economic or educational deprivation, whereas the dominant society is likely to benefit in some way e.g. by financial gain through the commercialisation of goods. The act may also result in the emergence of a new cultural movement, subcultures or countercultures, which may themselves become the new dominant culture.

Cuthbert (1998) critiques Ziff and Rao's (1997: 6) map of the multi-directionality of cultural appropriation for its inability to distinguish assimilation from post-colonial resistance. Cuthbert (1998: 259) cites the assimilation of new media by Australian aboriginal communities as an example of post-colonial resistance (or resistance counter-hegemony). She claims the absence of a

distinction leads to difficulties in understanding the phenomenon of reverse cultural appropriation.

Cuthbert's (1998) resistance model could simply be put down to the accumulation of large-scale cultural appropriation resulting from Australia's colonisation and gradual expansion into Aboriginal territories. Although the change in Aboriginal culture could be interpreted as a counter-measure against further cultural erosion, the assimilation of electronic media could also be viewed as symptomatic of the cultural damage to the indigenous population's traditional way of life, and therefore viewed as 'harmful'. In any case, Ziff and Rao's (1997: 6) model does not allow for the possibility of a beneficial transformation resulting from dominant-subordinate cultural appropriation, only the emergence of a new culture or preservation through resistance to the dominant culture is seen to be permissible. In other words, there seems to be no possibility in Ziff and Rao's (1997: 6) model for an act of cultural appropriation to be simultaneously beneficial and immoral.

1.3 Forms and Objections to Content and Subject Appropriation

Young (2010: 4-5) identifies several varieties of artistic appropriation: three primary forms, two of which are interconnected. The primary forms consist of content appropriation, i.e. the taking of artistic content in the form of stories or songs etc., subject (or voice) appropriation, the use of artistic subject matter and, lastly, the appropriation of 'tangible works of arts' (object appropriation) (Young and Brunk, 2012: 3). The terminology used to define the latter form of appropriation might be taken to refer only to complete artworks that are perceptible by touch, such as the theft of a physical painting, making the latter

category inadequate for dealing with non-tangible forms of art. However, Ziff and Rao (1997:2) believe that when 'creative products' are taken, they are still considered 'objects of appropriation', irrespective of their tangibility. The category, 'appropriation of complete artworks' would be a more apt description for this form of appropriation, then, because it would also include, for example, the reproduction (or theft) of a piece of music in its entirety. The important aspect of this definition is not the distinction between intangibility and tangibility, but the 'completeness' or 'incompleteness' of its subject matter. The key question here is whether a separate category for tangible and intangible art works is needed. According to Cuthbert (1998: 258), acts of cultural appropriation are harder to determine when they involve non-tangible items such as music. However, in no way does she preclude the possibility of harm arising from the appropriation of non-tangible artworks.

Henry Self (2002) highlights some of these difficulties in his examination of the cultural roots of digital sampling. Self (2002: 359) suggests the disparity between copyright law and the practice of digital sampling by African American hip-hop artists, is indicative of two distinct cultural viewpoints on creativity, a print culture based on self-autonomy and capitalism, and a folk culture concerned with 'intergenerational discourse'. David Hesmondhalgh (2006: 54) suggests the copyright laws intended to promote the arts, have the adverse effect of stifling the creativity of minority cultures. Conversely, he also warns of potential cultural harm of digital sampling, pointing to the 1966 ethno-musicological recording by Geneviève Taurelle and Simha Arom, which found its way onto Herbie Hancock's *Watermelon Man* (1973).

The distinction between object and content appropriation lie in the tangible artwork's additional attributes, such as being of monetary or historical value. It may be of religious significance, such as a symbol or relic that has meaning above and beyond its artistic merit. Alternatively, the value of an object may be considered separate from its worth as a work of art, such as the value attached to a composer's original manuscript. However, this does not preclude the possibility of a non-tangible form of artwork exhibiting similar attributes, and being valued in more than one respect. For example, the theft of a piece of sacred music could similarly be regarded a theft in religious terms, beyond its worth as a piece of art.

Young (2010: 6-7) divides content appropriation into three sub-categories: first, 'content appropriation proper', whereby the outsider artist borrows significantly from the insider culture; second, 'style appropriation', where the artist's appropriation is undeniable but takes less than a 'complete expression' of a culture's material; third, 'motif appropriation', whereby the artist borrows some elements from the insider culture, but not enough to constitute the appropriation of a style. The latter form is often applied to material that has been removed from its stylistic context (Young 2010: 7).

Although Young's (2010) definitions are relatively clear, it is not always easy to distinguish where a specific work should be placed in relation to his sub-categories. For example, deciding whether a work should fall under style appropriation as opposed to content appropriation requires a judgement to be made as to the quantity of material used, and whether it is possible for items to be entirely removed from their stylistic context to warrant the label 'motif appropriation' especially when motifs may occur in more than one stylistic

context. For example, the ancient Indian tāla *dvitīya* is proportionally indistinguishable from the Greek anapæst.

The musical examples cited by Young (2010: 7)— Stravinsky's *Piano-Rag-Music* (1919) and the jazz fugue in Milhaud's *La Création du monde* (1922-23)—illustrate these difficulties. These works were influenced by African-American jazz but are not jazz works in and of themselves. However, Young's (2010) analogy fails to distinguish between the reception of (or opposition to) works intended to be in a jazz style but fall short due to aesthetic inadequacies, and hybrid works that borrow heavily from the stylistic elements of the former, ultimately failing to remove itself from the precursor style, so that they are ultimately mistaken for a failed attempt of it.

Young (2010: 7) argues that the aforementioned works constitute style appropriation on the grounds they are 'not *in* a jazz style', the implication being that the artist's intention has as much a role in determining the style of the piece, as does its reception. Perry A. Hall (1997: 34-5) asserts that in spite of its initial rejection from polite society, by 1918 the 'sinful' ragtime had revolutionised American popular music, and was influential in Stravinsky's work, as well as that of many other American and European composers. In the case of Stravinsky's *Piano-Rag-Music*, as the title implies, the Russian born composer clearly intended to create a piano rag of his own.

However, a musical style is not defined by the title of a work alone, but is a combination of composer or performer intentions, the type of musical elements employed, the treatment of materials, and how the audience perceives the work itself. For instance, whether intended as a jazz fugue or not, at least part of Milhaud's *Le chaos avant la creation* is received as such. As the title of the scene

suggests, it is intended to signify a departure from simplicity, embracing a 'chaos' of complexity; the style of the jazz fugue becomes the means through which its listeners can experience licentiousness. Hall (1997: 34) notes that due to the growing popularity of ragtime and jazz by the 1920s, white listeners often associated 'black' music with gambling establishments, bars and and brothels, which Hall euphemistically calls 'sporting life'. Ragtime presented an opportunity for members of polite society (i.e. white society) to experience aspects of black culture, and allowed them to engage with 'sinful' notions vicariously—through the music (Hall, 1997: 34). Converse to the potential cultural benefits of outsider miscomprehension and misreading outlined by Lipsitz (1994), Hall's description highlights the potential harm of cultural misreading. Namely, that the erotic associations that outsiders attached to black music become indistinguishable from their perception of African-American culture in general.

A final form of cultural appropriation, called subject appropriation, describes an outsider's appropriation through the representation of an insider society (Young and Haley, 2012: 268). The term outsider refers to those engaged in cultural appropriation, whereas insider refers to those who are native to the culture.

This form, referred to as voice appropriation by John Edwards (2012), refers to the portrayal of certain expressions of outsider culture, whether in full or in part. Examples of voice appropriation are to be found in a good deal of 18th and 19th century American literature depicting African-American slavery, and most famously by the character Tom Travers from Harriet Beecher Stowe's novel *Uncle Tom's Cabin* (1852). In painting, the portrayal of North African concubines

in *The Women of Algiers* (1834) by Eugène Delacroix is another example of this form of appropriation. In music, we see such appropriation in the symphonic poem *Scheherazade, Op.35* (1888), providing a window into Rimsky-Korsakov's view of the Middle East and all things Persian, and in the exotic depiction of the Moor in Stravinsky's *Petrushka* (1910-11): far away lands, exotic fruits, coconuts, palm trees, deserts, wild animals, and the Moor himself, his sexual prowess and desirability, his physical strength, enough to seduce the Ballerina and warrant the envy of our hero.

Young (2010: 8) identifies subject appropriation as distinct from the other forms, in that it is not the taking of an actual product, made by insiders, but an outsider's portrayal of insider culture.¹ Fictional representation of the insider is conveyed through the experiences of an outside creator, and no item of value, tangible or otherwise, has been taken (Young 2010: 8-9). Young insists that outsiders do not have exclusivity in the context of subject appropriation, and that the outsider's artwork can always be denied as non-representative of the insiders' culture (Young 2010: 9). In other words, the insiders are still able to freely engage with the object or content being depicted.

Cuthbert (1998: 258), however, observes that subject appropriation becomes particularly problematic in cases where there is an inability to counter harmful depictions of insiders by outsiders. Further, Young's (2010) response ignores the historical evidence of harm caused by the misrepresentation of minorities either through overt propaganda designed to turn a dominant society against a minority group or the portrayal of subjects, either through a distortion of the culture itself, or by caricatures and stereotypes of its people. Churchill

¹ An exception to this is in the form of secret religious ceremonies (Young, 2008: 9).

(1994) observes a similar phenomenon during the government sanctioned massacres of Native Americans from the 18th century till the turn of the 20th:

Through it all, hundreds of dime novels—each competing with the next to make Indians appear more grotesque, menacing and inhuman—were sold in the tens of millions of copies. Plainly, the Euroamerican public was being conditioned to see Indians in such a way as to allow their eradication to continue (Churchill, 1998: 75-6).

Subject appropriation can be particularly damaging because of the absence of any authentic materials against which the artwork can be contrasted. Insiders are portrayed entirely through the eyes of the outsider and their voices, attributes and attitudes are a fabrication, an invention entirely of the outsider's making. Edward Said (1979: 27-8) observes the parallels between the evolution of Orientalism and the emergence of anti-Semitism. He explains that the final product of an outsider artist may be the first, or only, opportunity for an outsider audience to experience the insider culture. Said (1979) suggests that misrepresentation may not be evident in the stylistic authenticity of the work, but in what the author says about the insider society through the work:

The things to look at are style, figures of speech, setting, narrative devices, historical and social circumstances, *not* the correctness of the representation nor its fidelity to some great original. (Said, 1998: 21)

However, Said (1979: 322) was sceptical of the notion of cultural essentialism, describing Robert K Merton's distinction between outsiders and insiders as 'highly debatable'. 'I certainly do not believe the limited proposition that only a black can write about blacks, a Muslim about Muslims, and so forth' (1979: 322). Said (1979: 273) considered the trend of Oriental representations in Europe as 'a discursive consistency', as multi-purposed in their benefits to European society (e.g. intellectual, economic) as they were to the Orientalist. Said (1979: 273)

acknowledges that depictions of the Orient in Europe gradually led to a sensitivity and specificity of representation, but dismisses the idea of a truthful representation that is unfettered by the culture, upbringing, or political surroundings of the representor.

Turner (2000) asserts that such misrepresentations can aid in the reinforcement of previously held notions of a minority:

If Caliban represents one formative figure in the evolution of European notions of Otherness, Shylock represents another. The merchant of Venice [...] has some parallel with Marlow's Jew of Malta and expresses the anti-Semitism of Elizabethan England. (Turner, 2000: 12)

Churchill (1994) calls for another category that describes the egregious misappropriation of subject, i.e. one that is coequal to object misappropriation. Although the various types of content appropriation do not automatically speak to how immoral or problematic a specific act is, the various sub-categories are, nevertheless, useful and necessary for the understanding the ethics of a specific act of appropriation.

There is no guarantee that motif expressions are, in of themselves, any less damaging to the culture they represent than the complete expression of a culture's work. Furthermore, style appropriation through the representation of characters, such as in *The Jew of Malta* (c. 1589), are no more damaging than the subversive images intended as a passing reference or nod to Jews, without directly naming them. The depiction of Golliwogs in Debussy's *Children's Corner* (1908) or Stravinsky's Moor-puppet may be just as problematic, if not more so, than the style appropriation of Milhaud's *Le chaos avant la creation*. A similar spectrum of sub-categories should be applied to the appropriation of voice.

1.4 Cultural Boundaries and Possession

Culture is a highly controversial, disputed term in anthropology and sociology. Cuthbert (1998: 258) suggests that an understanding of the complexities of cultural appropriation is contingent upon defining what is meant by 'appropriation' and 'culture'. Only then can a determination be made as to whether an act of cultural appropriation has occurred and if the act itself should be characterised 'unethical'. Young (2010: 10) is content for the definition of culture to remain open-ended, on the basis that certain characteristics that may define one particular culture may be altogether absent in another. It is the distinctive characteristics of each that allows one to distinguish between divergent cultural groups. Young (2010: 10) believes that the only necessary condition for culture is that it should be defined by the actions of the group, and also by how the group regards itself.

Ziff and Rao (1997: 2-3) consider culture to be somewhat nebulous and, as such, the task of defining the boundaries for what may, or may not, constitutes a culture, is made all the more difficult. They do, however, concur with the conditions laid down by (Young, 2010: 10): whether in relation to religious belief, rituals, customs, etc., culture should be defined both in terms of the group's shared values—or in the very least, the shared values of some of its members—as well as by their actions and behaviours (Ziff and Rao, 1997: 2).

The definition of culture can also be defined by additional boundaries, beyond those traits, customs and behaviours already mentioned. Young (2010: 12) claims that these additional boundaries help to demarcate what can and cannot be considered a culture. For instance, time periods are also an important

factor in defining what is meant by culture; Young points to the changes in culture between Ancient and modern-day Greece as an example of this, and claims that many aspects of Ancient Greece have been influential in the formation of present day Greece, but the same cannot be said of the latter influencing the former—the arrow of time moves in one direction only.

To an extent, Young's (2010) acknowledgement of change over time concurs with Coombe's (1997) ideas about cultural mutability, in the sense that change is a necessary, inevitable part of culture. However, if the cultural change is too rapid, it can result in negative consequences for those who may be ill equipped to offer necessary resistance (2010: 12).

The absence of boundaries makes distinguishing one group from another all the more difficult. Furthermore, the task of addressing the ethics of a particular case of appropriation is obscured by additional factors such as cultural overlap, sub-cultures, emergent cultures, cultural hybridity and liminality, and cases where individuals simultaneously belong to both dominant and submissive cultures simultaneously (Young, 2010: 13).

However, a better delineation of a culture is one defined by those belonging to it and not by those who stand outside of it, even though this may not be the most accurate way to define it. A portrayal of the basic qualities or characteristics associated with an insider culture, which has been created by outsiders, almost always results in its misrepresentation. However, there is a degree of circularity in this approach towards: If we are to define a culture by what those in a culture define it as, who are those people we ask? We first need a definition of that culture in order to find people who belong to it.

Young (2010: 8) extricates subject appropriation from ‘appropriation proper’, on the grounds that no material (tangible or otherwise) has been taken from the insider culture. Unlike the power differential highlighted in Ziff and Rao’s (1997) structural representation diagram, Young’s (2010) argument downplays the potential harm caused to minorities via the misrepresentation of insider subjects by outsiders, especially when there is a significant power differential between the groups. The acts of artistic appropriation that lead to unjustifiable offence or harm often take the form of subjects that constitute an aesthetic failure, often centred around the degree to which an artwork can be considered authentic. In the case of artistic appropriation, the aesthetic failure itself is, more often than not, is at the very heart of the objection. However, Goodman (1976: 121-122) and Hick (2010) argue that the importance placed on authenticity varies, between different artistic disciplines and also from culture to culture.

Young’s (2010) defence is based on the premise that misrepresentation (through subject appropriation) can always be negated or rejected by the insider culture. However, if a power disparity exists between the two, it may be difficult for insiders to project an image of themselves in a way that is not drowned out by the one put forward by the dominant culture (Churchill, 1994: 74-82). Young (2010) assumes that reputation, self-image, and authentic representation—how a culture is perceived by outsiders—are not aspects that can be ‘taken’, and that insiders can deny any misrepresentations. However, there are good reasons to think that this is not always possible. Moreover, the consequences assigned to harmful acts of content appropriation—e.g. deprived economic, political, educational, artistic opportunities—can similarly be applied to the appropriation

of a culture's 'voice'. Lipsitz (1994: 57) notes that Paul Simon's *Graceland* was criticised by prominent liberation organisations in South Africa for providing the pro-apartheid government with positive propaganda about 'alleged black-white cooperation in South Africa' and claims that the subsequent Western demand for music à la Ladysmith Black Mambazo, resulted in an artistic stagnation for musicians. Citing the literary scholar Neil Lazarus, Lipsitz notes:

The success of *Graceland* made recording executives eager for more music that sounded like it, cause them to encourage musicians to shun innovation and return to styles of music they had abandoned twenty years ago (Lipsitz, 1994: 59).

Again, in light of the Ziff and Rao's (1997) model, the success of minority resistance seems less likely.

1.5 Cultural Objections, Offence, Harm and Censorship

Young and Brunk (2012) posit that for any act of appropriation to be considered wrongful or morally problematic, there needs to be evidence that the act has resulted in 'unjustifiable harm' or caused 'profound offence', either directly or indirectly (Young and Brunk, 2012: 5). They also contend that there is a distinction between morally objectionable cases of cultural appropriation (such as a negative stereotypical representation of an insider culture by an outside one), and acts that are considered relatively benign (Young and Brunk, 2012: 4).

The idea of freedom of belief is premised upon a judgement that the typical offences and harms caused by such freedom are vastly outweighed by the benefits of its exercise. Or, put conversely, the value lost by the suppression of free conscience is far greater than the values lost by its exercise. (Young and Brunk, 2012: 101)

There is room to debate whether or not a specific act of cultural appropriation is in fact 'harmful' or 'profoundly offensive' to an insider culture, in addition to the question of whether or not the act itself is justifiable. Young (2010: 26) looks to the philosopher Joel Feinberg for his definition of both terms. According to Feinberg (1987), the combination of acts as setbacks, and acts of harm result in 'the harm principle', defined as 'setbacks to others' interests that are also wrongs' (Feinberg 1987: 1). The definition of profound offence, known as the 'offence principle' is distinct from 'personal hatred' or 'resentment' towards the offending act. Feinberg (1988) claims that in order for an act to result in legitimate profound offence, the insider outrage has to be on grounds 'quite independent of its effect on oneself' (Feinberg 1988: 57).

Under Feinberg's (1988) definition, there is a clear distinction between 'profound offensive' and 'unjustifiable harm'. However, Young and Brunk (2012: 108-9) argue that acts that give rise to profound offence or that result in a conflict between cultures are, in of themselves, a form of unjustifiable harm. For instance, the illustrations of the Prophet Mohammed over the course of a decade by the satirical newspaper *Charlie Hebdo* are an especially prominent example of Feinberg's (1988) offence principle.

There are a number of reasons why an act of appropriation may be considered harmful or offensive, and these reasons may vary depending on the type of cultural appropriation. In the case of artistic appropriation, Young (2010: 26) identifies three primary reasons why an act may give rise to offence: if the work is considered an act of desecration or sacrilege, if the work is misrepresentative of an inside culture, or if the work is considered inauthentic in some way. Furthermore, he contends that an act is only considered morally

objectionable when it occurs without the consent of a 'competent authority'. This raises the question of who is the authority in matters of artistic appropriation, particularly subject appropriation?

Young (2010: 23) points to examples in several of the Australian aboriginal communities, where 'styles and designs are considered the property of a clan'. Coombe (1997:78-9) notes similar claims made by First Nation communities in Canada, and that objections to the subject appropriation are often rejected because the current legal system only recognises the collective ownership of artefacts and objects. The notion of cultural 'collectivism' (Clifford 1988: 217), whereby an artefact standing for or signifying the group as a whole, is not acknowledged by the 'possessive individualism' of the Western legal system. This is especially the case when the 'materials' take the form of creative expressions. From a legal standpoint, objections such as these tend to fall somewhere between cultural property rights, which only apply to physical objects, and copyright laws, that recognise the individual's creation as a 'discrete possession' (Scafidi 2005: 88-9).

The consequences of an act of cultural appropriation can result in unjustifiable harm, or unjustifiable offence, for the insider culture. According to Young (2010:18), examples of harm include: the perpetuation of stereotypes, ridicule, discrimination, loss of income, educational disadvantages, and restrictions on the ability of insiders to preserve their own culture. In turn, the various kinds of harm will inevitably give rise to certain objections. Young (2010:18, 22-3) notes that these objections will likely be based on either moral or aesthetic grounds. Ziff and Rao (1997), on the other hand, identify four categories of harm resulting from appropriation: harm to the community (e.g. its

identity), cultural damage, the act is considered rivalrous (e.g. creates competition that results in economic loss to the appropriated culture), and failure by the legal authority to recognise the object as property. Although most appropriative practices that cause harm or offence are, on the whole, unjustified, Young (2010:136) asserts that there are exceptions where appropriation may be permissible, if, for instance, the work can be shown to have some greater social good, or demonstrates 'artistic inquiry'. However, appropriation involving the latter is difficult to justify without the former.

In the Western societies, reactions against concerns of artistic (cultural) appropriation generally fall into three categories:

1. A rejection of the idea that we ought to be sensitive to worries about appropriation, motivated by concern for the preservation of freedom of expression.
2. Denial of appropriation, or avowal of appreciation, through the assertion of sameness.
3. Condemnation of the idea of cultural appropriation, on the grounds that it is racist.

A major opponent to the subject appropriation argument comes in the form of concern about censorship and freedom of expression. Coombe (1997: 78) argues that these anxieties often take the form of a 'romantic individualism' that fails to acknowledge social and historical inequalities: 'Such a position purports to be apolitical but manages only to be a historical and blind to relations of power' (Coombe, 1997: 78). Criticising the 'censorship' of Canadian-based publisher Orca Books for their 1993 guidelines to children's authors, Henighan (2002: 64-65) notes:

Appropriation of 'voice' serves to conceal, rather than lay bare, the sources of literary authority (...) The nervous wish not to offend (...) epitomizes the well-meaning way in which the creative imagination is stifled in contemporary Canada.

Henighan (2002) also dismisses the idea of 'voice' for its presumption of cultural essentialism. He argues that yielding to objections of appropriation, particularly in a multicultural society, would require an abandonment of '40 years' of 'modern philosophy and literary theory' (Henighan, 2002: 66):

From (...) Derridean deconstructionism to Cixous's efforts to 'write the body' to Bloom's descriptions of the 'Anxiety of Influence' (...) has developed, in different ways, from the notion that literary language is a hybrid. (Henighan, 2002: 66-7)

Henighan asserts 'sameness' by highlighting the shared history of literary influence while, at the same time, emphasising the infringement on creative freedoms.

NourbeSe Philip (1997: 97) notes that freedom of speech is perceived as a core component of Western identity. It is also, she suggests, a sign of its privilege. She argues that the Western debate on artistic freedom is a 'privileged discourse' often understood in terms of censorship: 'It is the cultural and political barometer, which these societies use to measure their freedoms' (Philip, 1997: 97-8).

The third category dismisses concerns about cultural appropriation on the basis that it asserts an anti-multicultural stance. In *The Spectator*, Editor and Columnist Brendan O'Neill writes: 'The idea of "cultural appropriation" sums up everything rotten in today's intensifying politics of identity. It's fuelled by the borderline racist idea that to mix cultures is bad' (O'Neil, 2015).

In all three cases, the basis for objecting to concerns of appropriation fail to address the existence of social inequality, nor do they consider the impact of a differential power dynamic between cultures and its effect on cultural transmission described by Ziff and Rao (1997: 5-7).

1.6 Aesthetics and Authenticity

Nelson Goodman (1976: 111-2) claims that a work of art can fail on aesthetic grounds in one of two ways: first, it immediately fails without any contextual benefit, i.e. the work is deemed to have failed in some way without knowing whom it was created by or in what context it was made; and, second, aesthetic errors are revealed following some form of contextualisation.² The inevitability of aesthetic failure in the face of appropriating artistic styles from a foreign culture was behind Renoir's strong criticism of Japonisme in French art at the end of the 19th century, and was based on the notion that aesthetic failures, resulting from cultural appropriation were inevitable (Lambourne, 2005: 118)

Goodman (1976) argues that the outsider lacks the cultural experience to fully understand the content they are appropriating. This is a problem for the artist, as cultural experience is essential in order to produce a work that is indistinguishable from the work of insiders. Young (2010) notes several cases of aboriginal art that were later revealed to be made by non-aboriginal Australian artists. In these instances, audience members on both sides were unable to tell whether or not a work was authentic. With enough practice, it is possible for

² This is also referred to as 'the handicap thesis' (Young, 2008: 32-4)

outsiders to learn the craft of insiders (Young, 2010: 40).³ Thus, though the creation of a work by an outsider is likely to result in aesthetic errors, the inevitability of aesthetic failure is by no means a certainty: 'It does not follow that they [the artists] are condemned to aesthetic failure when they engage in cultural appropriation' (Young, 2010: 36).

Young (2010: 35-6) contends that the method of appropriation employed determines the likelihood of an aesthetic failure occurring. If the artist aims to create a work that is authentic, she is engaged in a form of appropriation that aims to conform to standards set by the insider culture. Because a comparison with the authentic, 'insider' work is inevitable, the work either fails or succeeds based on those standards. Young (2010: 47) defines this as 'non-innovative content appropriation'. Conversely, when an artist employs styles and motifs in a way that is entirely distinct from the practices of the insider culture, she has engaged in a form of 'innovative content appropriation'.

Young's suggests that artists who engage in content appropriation while striving for authenticity are those most likely to fail on an aesthetic level, whereas an artist with little concern for treating style or motif in the manner that was originally intended is more likely to produce something that is aesthetically successful, or less likely to fail.

The question of authenticity is contingent upon uncovering its numerous definitions. In music, the term is multifaceted, and seemingly contronymic. For example, an authentic performance can be qualified as: one that is historically informed as a result of research into performance practices; faithful to the

³ Young (2008: 40) refers to the work of artist Elizabeth Durak, who worked under the name Eddie Burrup, and was nominated by the Telstra National Aboriginal Award.

composer's intentions; achieved through the employment of period instruments, e.g. the use gut strings or baroque bows, with the express intention of producing an 'authentic' sound. Authenticity can also refer to the use of first edition manuscripts, facsimile or Urtext editions used to aid in the rendering of an authentic performance (although often the latter has many more edits than publishers would like to admit). In addition, the term 'authentic' is used to refer to performances that are 'soulful', 'passionate', 'genuine' and considered 'real' in some way. From the vehicle of performance, 'authenticity' is revealed through those genuine moments of expressiveness that simultaneously convey a performer's ingenuity and distinctiveness. In a sense, the term is comparable to the word 'original', for example, 'She has an original sound' implies that the sound is distinctively new, yet the word is often used to describe something primordial.

As an example of the double and contronymic allusions of the term 'authentic', Andrew Mellor describes the use of period instruments by the Orchestra of the Age of Enlightenment as 'just one element of its authenticity', citing their 'experimentalism' and 'throwing out the rule book' as further examples of their authentic qualities (Mellor, 2011). Nigel Kennedy has been vocal in his condemnation of authenticity claims from period specialists. In the programme notes of his late-night BBC Prom entitled 'Bach: a personal view', Kennedy (2011) argues that a preoccupation with period instrument and technical virtuosity is antithetical to an authentic rendering of Bach's music.

Even the description of oneself as being 'authentic' is unbelievably arrogant – and, in the case of so-called 'period' performances, misguided. How can music, or any art, be authentic if it is stripped of

passion and is made instead into an exercise of painfully self-conscious technique? (Kennedy, 2011)

A performance that aims to be expressive in Kennedy's sense and one that yearns for the type of historical exactitude described in Mellor (2011) both have laudable goals, neither one necessarily precludes the other. The term is simply being used in two different contexts. Mellor (2011) is referring to two contexts simultaneously: the personal authenticity of the artist (or in this case, group of artists) implied by the orchestra's cutting-edge ethos; and a 'provenance authenticity' meaning faithfulness to the material's original cultural context (Young, 2010: 46). In this case, provenance authenticity occurs through the care and consideration given to the rendering of a historically informed performance.

The kind of provenance authenticity alluded to by Mellor (2011), and disputed by Kennedy (2011), is centred on claims of accuracy in the approximation of early music performance. Such claims are based on a belief that a historically informed interpretation of a work is therefore authentic. In this case, the kind of authenticity in question is authenticity of style. Kennedy (2011) is sceptical of the claims by period specialists because he believes a technical performance is also a soulless performance, and thus is not in fact faithful to the style of the Baroque era. Young (2010: 54) observes that performers who aim for 'style authentic performances' of early music are, to a degree, similar to those outsiders who are engaged in non-innovative content appropriation and, as such, are prone to aesthetic failure.

Kivy (1997) concurs with the sentiments expressed by Kennedy (2011), that a historically authentic performance by an early music practitioner is no guarantee of a good performance: 'The so-called early music movement do not

by any means always produce consistently satisfying, convincing, pleasurable, satisfactory—in a word, “good”—performances’ (Kivy, 1997: 2). Kivy leans towards a definition of the term ‘authenticity’ that favours historical authority through provenance over a personal authenticity that is non-derivative in its treatment and/or performance of materials. However, he condemns the current group of early music practitioners for their failure to justify why historical authenticity is needed in the first place. The author notes that, increasingly, the word is used to justify one’s belief in the quality of a performance rather than in praise of its sensitivity to historical accuracy (Kivy, 1997: 5-7). Taruskin (2002), on the other hand, is sceptical of historical (or contextual) authenticity because of its potential to mislead audiences into believing that an original performance will automatically result in the ‘recreation of the composer’s inner experiences’ (Taruskin 2002: 140). In addition, he considers the authenticity argument unpersuasive, because it ignores the impact of the performer’s subjectivity.

Kivy (1997) and Young (2010) touch upon a third category of authenticity that deals primarily with factors external to the act of non-innovative content appropriation. Kivy (1997: 9) refers to this as ‘authenticity as intention’, while Young (2010) discusses both the concept and act of ‘existential authenticity’.

Both of these ideas involve consideration of the following:

1. The reason(s) for provenance authenticity.
2. The intention(s) of the artistic appropriator with respect to the insider culture.

Authenticity as intention and existential authenticity both contain a moral dimension and involve justification for an act of interpretation. Kivy’s (1997) ‘authenticity as intention’ requires knowledge claims about the creator’s

intentions as evidence of authenticity. Kivy (1997: 146) suggests that the performer's obligation to remain faithful to a composer's work is akin to the act of trying to be a moral person: 'But one may *not* then go on to ask why she should follow, realize the composer's intentions, any more than we can ask why someone should do the right thing' (Kivy, 1997: 146). Although Kivy's (1997) descriptions are limited to period performance practice, they could easily be expanded to encompass culture more broadly. A composer could as easily justify an act of artistic cultural appropriation by claiming her intentions were authentic in exactly the same way a performing musician does.

Existential authenticity is, similarly, concerned with an artist's relationship to the broader aspects of insider culture. Even if the interpretation or reproduction of specific technical aspects is correct, the artist's personal engagement with the values, beliefs or customs may be seen as more significant than the understanding of its styles and motifs (Young, 2010: 50-1).

There is a plethora of instances whereby objections to the 'existential authenticity' of a work by an outside artist have been raised. Concerns of this nature have often formed the grounds of objection to a specific (or general) case of artistic cultural appropriation; the three centuries of cultural appropriation of African-American musical styles is a noteworthy example.

Rodriguez (2006: 465) notes a trend of denial by young white American hip-hop audiences of the social inequalities experienced by blacks due to 'institutional arrangements'. Rodriguez argues that this denial comes via an assertion of 'sameness' and insistence of 'colour-blindness'. This, in turn, acts as both vehicle and shield for the artistic appropriation of hip-hop by white, middle-class Americans. This disengagement with black culture beyond its

musical forms is itself an inauthenticity that ignores the historical and societal inequalities on which the music was founded.

European Orientalism, represents yet another form of ‘existential inauthenticity’. During the late 19th century, many French composers explored exotic concepts through subject appropriation. More often than not, this was achieved without direct experience of the insider culture and with a complete disregard for its musical content (Pasler, 2000: 86). Similarly, Helen Myers points to the inauthentic methods of 19th century German comparative musicologists and asserts that while the early studies were important, particularly those by Carl Stumpf and Eric M. von Hornbostel, this work was evidently Euro-centric (Myers, 1992: 6). Many of the early ethno-musicological approaches had a Western cultural bias and mainly focused on the scientific and psychological aspects of the music rather than on the culture itself:

Although scholars of music have long been aware that China, Korea, India, and Japan had distinguished traditions of music theory, some dating back 5000 years, the study of these historical documents was not originally considered by European comparative musicologists to be part of what they regarded as their essentially scientific, psychological research. (Myers, 1992: 4)

Both Pasler (2000) and Myers (1992) suggest that authenticity of intention is vital to the genuine representation of an insider culture, regardless of whether an act of cultural appropriation has taken place.

1.7 Messiaen’s Authenticity of Intention

Messiaen was a devout Roman Catholic, whose religious beliefs were central to the creation of his music. He claimed that ‘the existence of the theological truths’ was ‘the first idea’ he wanted to express (Messiaen and

Samuel 1994: 20). A lifelong study of Catholic doctrine exemplifies his authenticity of intention with respect to his religion. Thus, a familiarity with the tenets of Christian theology is needed if one is to fully comprehend Messiaen's works (Shenton 2008: 17).

Evidence of authentic intention can be found in Messiaen's dedication to finding authentic texts for his opera *Saint François d'Assise* (1975–83); it was important for Messiaen that the *Canticle of the Creatures* used were the 'absolutely authentic' texts of Saint Francis (Messiaen and Samuel 1994: 20).

It may be important to some of Messiaen's Christian listeners that his motivation for creating works that imposed 'the truths of the faith on the concert hall was indeed sincere (Messiaen and Samuel 1994: 22). *Et exspecto resurrectionem mortuorum* (1964) or *La Transfiguration de Notre Seigneur Jésus-Christ* (1965-69) are both filled with Christian symbolism. If Messiaen had converted to Shaivism or was an atheist, for example, some of his Christian audience would, most likely, have called into question his motives. Furthermore, creative licence in the treatment of religious materials is often extended to those whose intentions are deemed 'genuinely authentic'.

Nonetheless, authentic intentions are no guarantee of obviating profound offence. Boswell-Kurc (2001) notes the controversy after the premier of *Trois petites liturgies de la Présence divine* in 1945 (known as 'La Cas Messiaen') was not limited to the performance itself, but was centered around objections to the religious descriptions in several of his programme notes. The scandal took the form of a year-and-a-half long exchange, through a series of newspaper articles, between ardent defenders of Messiaen (including his friend Guy Bernard-Delapierre) and those who were heavily critical of his extra-musical narrative

(such as the journalist Fred Goldbeck). A pro-Messiaen defender, Roland-Manuel, described Messiaen's religious expression 'irresistibly authentic' (Boswell-Kurc 2001:2-3). On the other hand, Schoessler *et al.* (2010) called the composer's text 'nearly pantheistic' in its religious expression: 'Even in the best of times, such claims might have been expected to have had a difficult reception. These were not the best of times' (Schoessler *et al.*, 2010: 163).

Messiaen's 'authenticity of intention' is brought further into question when the source material falls outside the realm of (or is in direct conflict with) the basic tenants of his Catholic faith. A case in point is the inclusion of Indian *deśī tālas* in a number of his sacred works, for example, *Messe de la Pentecôte* (1949–50). The 13th century rhythms, compiled by the Hindu theorist Śārṅgadeva in his *Saṅgītaratnākara* (Ocean of Music), are intrinsically immersed in Medieval mysticism and Hindu polytheism and distinct from Messiaen's own monotheistic beliefs.

There is a distinction between the accurate portrayal of an insider culture by authentically depicting the cultural experience (as seen through the eyes of the insider), and believing or sharing in the values of that culture. Although it is highly unlikely that an outsider would succeed in creating a work that is successful in both of these respects, one type of 'authenticity' does not preclude the other. It is by no means certain that an outside act of artistic appropriation will result in a work that is existentially inauthentic, such as the work by a non-Aboriginal artist 'passing' as Aboriginal. It is also possible for innovative content appropriation to bring forth a piece that is existentially authentic, even though it bears little resemblance to the original (Young, 2010: 52).

Existential authenticity requires that the artist be fully committed to the subject matter they are exploring, as there is an increased danger of inauthenticity if the artist does not personally share in the culture they are appropriating. This kind of inauthenticity manifests itself in one of two ways: though ignorance of the existential elements (e.g. being unaware of the material's religious connotations), or through a full understanding of the cultural significance, but without sharing in its aesthetic or cultural values (Young, 2010: 52). The dilemma of existential authenticity can be most keenly observed when dissecting claims of appreciation. For example, to declare, 'I don't like Messiaen's music, but I appreciate it' presumes that something authentic *can* be gleaned from his music without ever really having enjoyed it. The latter part of the statement ameliorates the former, and is perhaps a prevarication in anticipation of scornful gazes, imagined slights and looks of sheer horror from those who might consider this a shameful admission! On the other hand, few who claim to adore Messiaen's music would also attest to fully comprehending it; nonetheless, enjoyment of his music is central to being able to understand it.

If we understand 'appreciation' in the sense given by the OED (2015)—namely, to 'recognize the full worth of', to 'apprehend or understand clearly', or to 'grasp the significance or subtleties' of a subject, object or situation—then the ability of listeners to fully appreciate a work they are unmoved by seem limited (*OED Online*, 2015). An assertion of 'appreciation', therefore, is called into question when the listener is unmoved by the material. Even if they have a full grasp of the musical form and are able to follow the themes, such claims demonstrate a level of inauthenticity. Similarly, when an artist that does not share in the values of the culture they appropriate, their act is considered, more

often than not, to be existentially inauthentic. For an appropriated work to evade objections from insiders, the artist needs to have demonstrated some form of authenticity, though even then, a declaration of an authenticity of intention is no guarantee of insider acceptance.

1.8 Summary

Subject or voice appropriation, is the term used to describe the portrayal of certain aspects of an insider's' culture, which can include the appropriation of attitudes and expressions, but does not involve the taking of actual content. For this reason, there is some dispute over whether subject appropriation can be considered an act of appropriation at all. Several authors note that the potential damage of misrepresentation, through subject appropriation, is contingent on the insiders' inability to refute it.

Works that arise from cultural appropriation may contain aesthetic failures, most of which are centred on different forms of inauthenticity. An artist can engage with content innovatively or non-innovatively. However, in both cases, a work may be judged on the creator's intention and whether the artist has any concern for the broader aspects of the culture they are appropriating.

Having discussed the various forms of artistic cultural appropriation, I now turn my attention to the central theme of my thesis, Olivier Messiaen. In the next chapter I consider what Messiaen's appropriation of non-Western rhythmic influences reveal about his artistic self-identity.

Chapter 2

Contextualising Messiaen's Appropriation of Indian Rhythm

2.1 Introduction

In this chapter I will examine: (1) The non-Western influences on Messiaen's Musical language. (2) The correlation between non-Western rhythm and Messiaen's ideas on rhythm in nature. (3) How Messiaen's appropriation of non-Western materials serve as a means to overcome Bloomian anxieties. (4) The influence of ancient Greek metric principles on Messiaen's musical language. (5) Messiaen's exploration of Indian rhythms through the filter of Greek and Western music. (6) Whether Messiaen's engagement with Indian music reveals an authentic intention. (7) How the *deśitālas* from Śārṅgadeva's *Śaṅgītaratnākara* reflect Messiaen's musical interests. (8) What Messiaen's pedagogical works reveal about his knowledge of Indian classical performance practice, and how *gānas* have influenced Messiaen's process music.

2.2 The Cultural Influences of Messiaen's Musical Language

Messiaen's musical language draws on a host of cultural influences. Indian rhythmic principles were central to the formation of his rhythmical language. Messiaen's use of North Indian (*Hindustānī*) and South Indian (*Karṇāṭak*) rhythms constitutes a form of cultural appropriation, the ethics of which are contingent upon the nature of the acquisition, the composer's intention(s) and exteriority, the deployment and representation of the appropriated materials in the composer's music, as well as the strategic formation, that is, how the materials are viewed by others, and impact it has on the 'insider' culture.

Messiaen's fascination with the exotic led him to explore not only non-Western cultures, but also the natural world. In several works, indigenous birdsong are used to represent a specific country: *Réveil des oiseaux* (1953) is based on birdsong native to France that would have been 'found together in nature' (Messiaen and Samuel, 1994: 131), and the bird transcriptions taken at Bryce Canyon were used in *Des canyons aux étoiles...* (1971–4) (Steinitz and Hill, 2008: 464). Authentic birdsong is often accompanied by bird material foreign to the country depicted. For example, the song of the French nightingale in the second movement of Messiaen's love letter to Japan, *Sept haïkaï* (1962), replaces the song of the Japanese Bush Warbler (Messiaen, 2000b: 473). Furthermore, stylised bird material is often used to bridge the gap between the 'authentic' dictations and other musical elements, sometimes constituting a hybrid of precise and probable materials based on previously dictated birdsong (Messiaen and Samuel, 1994: 95).

The cultural artefacts that Messiaen acquired included an array of European and non-European elements. The composer was exposed to ancient Greek and medieval Indian rhythm during his time at the Paris Conservatoire, circa 1924. Messiaen was taught Greek metre in his history classes by composer Maurice Emmanuel (1862–1938). A few years later, he was encouraged to improvise on Greek rhythms by his organ teacher Marcel Dupré (1886–1971). Messiaen also encountered the metre through his consultation of Dupré's work in *Traité d'improvisation à l'orgue* (1925) (Johnson and Rae, 2008: 32; Messiaen and Samuel, 1994: 73).

Messiaen's first experiences with Indian rhythm came through reading Grosset's (1913) *Histoire de la musique depuis l'origine jusqu'à nos jours*, in Albert

Lavignac's *Encyclopédie de la musique et dictionnaire du Conservatoire*.¹ Grosset's account of Indian music also included a transcription of 120 *deśītālas* taken from the *Saṅgītaratnākara* (ca.1240 A.D.) by the thirteenth-century Hindu theorist Śārṅgadeva. The material on Indian modes in the first of *Traité de Rythme, de Couleur, et d'Ornithologie* (1994) was heavily influenced by Grosset's chapter on Indian music. Further exploration led Messiaen to *Accents and accentuation of Vedic Hymns* by the eminent Western Vedist Haug (1873) and *Inde du nord* by Alain Daniélou (1966), as well as translations of commentaries by Sri Aurobindo in the *Bhagavad-Gita* and the *Upanishads*.

Messiaen's primary interest in Indian music was its ancient rhythms and the symbolism underlying them; Indian culture did not hold the same fascination for him as Japanese culture (Messiaen and Samuel, 1994; 78, 99). However, Messiaen's meticulous nature and untiring curiosity prompted additional research into aspects peripheral to India's ancient music, and included the study of Hindu spirituality and mythology by Jean Herbert (1947; 1953) (Messiaen, 1994: 260). However, it wasn't until the 1960s that Messiaen gained a deeper understanding of the symbolism underlying Śārṅgadeva's rhythm (Johnson and Bruhn, 1998: 131), which he attained through his friendship with the musical theorist and *tablā* player Tarun Kumar Ghosal, who assisted Messiaen with the translation of the *tāla* names (Messiaen, 1994: 264).

According to Halbreich (1980), Indian rhythms become a central part of Messiaen's rhythmic language from 1935, pointing to the organ work *La Nativité du Seigneur* (1935) as the first significant example of a work to use Greek and

¹ The chapter precedes an extensive account on the music of Ancient Greece by Messiaen's teacher Maurice Emmanuel, and follows a fifteen-page essay by Courant (1912) on the music of medieval Japan, both explored in the Messiaen's music.

Indian rhythm. Fabbi and Bruhn (1998: 65) assert that the rhythms are prevalent in Messiaen's music from the 1940s. Johnson and Rae (2008: 32) suggest that the Greek rhythms appear a few years earlier, but only after *L'Ascension* (1933) do the *deśitālas* begin to play a more prominent role in Messiaen's music. The ametrical rhythms throughout *Les Offrandes oubliées* (1930) and *Le Tombeau resplendissant* (1931) are heavily influenced by Greek metre (see Appendix D).²

Messiaen's interest in Indian subjects are limited to medieval Indian rhythms, his research showing little interest in Indian contemporary music or aspects of contemporary culture. However, his exploration of Hinduism, through his study of writings on the Upanishads as well as his consultation with an Indian musician in his study of Indian music point to the kind of authenticity as intention described by Kivy (1997).

2.3 The Correlation between Messiaen's Perspectives on Rhythm, Religion, and Nature

Messiaen defines rhythm as 'the ordering of movements inspired by nature', a description he inherited from the plainchant theoretician Dom Morquereau (1932: 39) that was itself derived from Plato³, and modified to include Messiaen's interests in nature (Messiaen and Samuel, 1994: 67). His amendment to Morquereau's definition implies the exclusion of repetition and the equal

² My use of the term 'ametrical' is not intended to imply the absence of pulse—namely, the absence of a regular pulse. Messiaen's rhythms are built from the smallest units of measure, similar to the metrons of Ancient Greece and the *mātrās* of Medieval India.

³ Morquereau's definition derives from Plato's: 'and that the order of motion is called "rhythm"' (*kineseos taxis*) (Plato, 1926: 128–9).

division of beats, particularly given his distinction between human time and other forms existing in nature, as described in the first Chapter of *TRCO* (Messiaen, 1994).

Johnson and Rae (2008: 32) suggest the ametrical nature of Messiaen's music denotes a preference for rhythm that favours 'an extension of durations' over a 'division of time'. Messiaen's dedication to ametrical rhythm signifies a concern for duration that supersedes the typically Western preoccupation with temporal division.

The musical works that Messiaen deems 'rhythmic' are those that correspond, in some way, to his principles of natural rhythm. The description given by Messiaen of his rhythmical language in *Music and Color* denotes a preoccupation with irregularity and unevenness (Messiaen and Samuel, 1994). His description of rhythm in nature is one that shuns similitude, despite the many examples to the contrary: tessellations in honeycomb structure, replicating cells, the reproduction of animals, and the motion of waves in the sea (Messiaen, 1994). Conversely, squareness, sameness, and repetition are adjectives reserved to describe products believed to be manmade, mechanistic, or 'anti-natural' (Messiaen and Samuel, 1994: 68).

His 'synthetic' classification also excludes bilaterally symmetrical rhythms consisting of uneven durations, and highlights several examples in nature that explain the emergence and significance of non-retrogradable rhythms in his music: these include the wings of birds and butterflies, and the symmetrical shape of the human face (1994: 76–7).

In *Music and Color*, rhythm is described as an essential component of music pre-dating melody (Messiaen and Samuel, 1994: 67). However, in

Technique de mon langage musical (1944), his declaration of the supremacy of melody, 'le rythme restant souple et cédant le pas au développement mélodique' [rhythm remaining flexible and giving way to the melodic development], implies that rhythm should always remain compliant to the whims of melodic development; all other elements, including harmony, are subservient to its wishes (Messiaen, 1944: 23).

Messiaen considered rhythm to be the primordial and essential aspect of music that existed before melody and harmony (Messiaen and Samuel, 1994: 67).⁴ His views on the primordially of rhythm have much in common with Western ideas about the evolution of music, inherited from nineteenth-century musicological perspectives. However, Messiaen's hierarchy of musical elements differ from Western perspectives, which tend to prioritise harmony, and its expressive qualities, over rhythm.

Messiaen's concept of rhythm reveals no conflation between primordially and the distinctly Stravinskian characteristic of primitivity. His rhythms are used in the depiction of nature, landscapes, and also in the transmission of sophisticated and complex theological concepts. Conversely, 'manmade' elements (such as harmony) are not automatically ascribed superiority—again, a model that was in contrast to Western perspectives on musical hierarchy during the nineteenth and early-twentieth centuries.

This divide between man, nature, and God is an inherently Christian concept, one that is set apart from the perspectives of many Eastern traditions, including Buddhism and Hinduism, where no such distinction applies.

⁴ Johnson and Rae (2008: 32) point to similar statements made by Messiaen during the *Conference de Bruxelles* in 1958.

According to Pople and Hill (2008: 31), exoticism is a core feature of Messiaen's rhythmical language, and manifests as material derived from simple ideas that could easily be applied to Western practice, resulting in musical hybridity through careful study, analysis, and synthesis. Artists awarded the status of great rhythmician by Messiaen (1994) are ones who succeed in breaking away from repetition. At the same time, those who achieve rhythmic ingenuity, do so through conveying unevenness in one respect or another. Ametrical rhythms are considered important by Messiaen because they retain an inherent primordial quality and are, therefore, closer to God and nature.

2.4 Bloomian Anxieties in Messiaen's Appropriation of Content

For Western composers, exoticism served as a coping mechanism for the influence-anxiety described by Bloom (1997). Nowhere is the anxiety of influence more keenly felt than in the work of the post-tonal composers of the twentieth century, who not only had to overcome their anxieties with the masterworks of the past, but were also faced with an existential crisis resulting from the disintegration of tonality, something that had been taken for granted by their predecessors.

The ground-breaking works of the twentieth century not only function as anxiety-agitators—the means through which the young artist overcomes influence and finds a voice—these works also serve to illustrate the linguistic anxieties faced by composers in a post-tonal world: Schoenberg's *Five Orchestral Pieces, Op. 16* (1909), Stravinsky's *Le Sacre du printemps* (1913); or later, Cage's *4'33"* (1952), Stockhausen's *Gruppen* (1955–7), and Ligeti's *Atmosphères* (1961).

Each piece epitomises the crisis felt by the young artist, provoking the question, *what now?* Bloom's anxiety of influence concept brings to the fore the dilemma of inseparability, that is, the difficulties of consolidating musical language with personal identity. The six revisionary ratios—*clinamen*, *tesserae*, *kenosis*, *daemonization*, *askesis*, and *apophrades* are labels used by Bloom (1997) to classify the means by which the young artist will attempt to escape the influence of the precursor. The type of revisionary ratio chosen, consciously or otherwise, says as much about *ephebe* as does the object of his or her anxiety.⁵

In Messiaen's case, influence-anxiety led him away from Ravelian impressionism, encountered during his youth, towards the exploration of exotic materials, which included the content, subject, and styles from Asia and South America, e.g. *Harawi* (1945), as well as the non-human 'exotic' materials of birdsong, all of which served as his means of escaping post-tonal anxieties. In this regard, Messiaen's influence-anxiety, his motive for the appropriation of non-Western materials can almost certainly be considered, in Lipsitz's (1994) terms, a form of strategic anti-essentialism. Hill (2008: 8) asks us to consider whether birds provided Messiaen with an avenue of retreat from the 'disintegration' of Western traditions.

Although Bloom's revisionary ratios, are intended to explain the methods chosen by the *ephebe* to overcome influence-anxiety arising from the poetic misreading of a precursor's masterwork(s), the revisionary ratios can be abstracted and used as a means of understanding an artist's relationship to a

⁵ In a discourse of influence-anxiety, the *ephebe* is an overly gendered term. However, I have kept Bloom's terminology for the sake of clarity.

particular aspect or his or her work⁶. Messiaen's modification of exotic content, for instance, can be deemed to be a mechanism designed to help him cope with the changing face of Western traditions, lying somewhere between *clinamen* and *tesserae*. The former describes the corrective modifications applied to the technical procedures already apparent in his musical style, i.e. what he does to the material he is appropriating. The expansion of non-retrogradable rhythms to encompass larger phrase structures in *Danse de la fureur, pour les sept trompettes* (1941), or the use of additive rhythms derived from his encounter with Śārṅgadeva's deśītālas are examples of *clinamen*. The latter, *tesserae*, more aptly describes the method behind Messiaen's innovative appropriation of content, which involves an elaboration that maintains the original terms in some ways, but also uses them in a different sense e.g. Forming a rhythmic pedal by combining and retrograde and dissolution of *rāgavardhana* (93) with *gajalīla* (18), and assigning them to the piano in *Liturgie de cristal* of *Quatuor pour la fin du temps* (1941)—The implication being that the original did not go far enough.

Messiaen sought validation in his appropriation of materials by finding commonalities between Eastern concepts and ideas he had previously explored. For example, his preoccupation with prime numbers can be traced back to his childhood: 'When I was a child, I already loved prime numbers' (Messiaen and Samuel, 1994: 79). His attraction to primes was reignited by the numerical principles found in Greek and Indian rhythms. His interest in Indian rhythm also extended to its numerology, evidenced by the supplementary material in *TRCO* on the relationship between the 'lion' tālas (101), (31), (8), and (27) (see

⁶ However, Bloom's writing on poetic misreading refers not to influence in a generalised sense, but to the specific intra-poetic relationships (Bloom, 1997: 11).

Appendix L), the number five, and the symbolic connection between this number and Śiva Nataraja (Messiaen, 1994: 316): ‘I was directed toward asymmetrical divisions, and toward an element encountered in Greek meters and Indian rhythms: prime numbers’ (Messiaen and Samuel, 1994: 79).

Similar confirmation behaviours are evident in his creation of *personnages rythmiques*; although *siṃhavikrīḍita* (27) is used by Messiaen to explain the technique, he first identified it as a rhythmic feature arising from Stravinsky’s *Danse sacrée* from *Le sacre du printemps* (1913) (Messiaen, 1966: 9). Both Greek and Indian rhythms provided an outlet for the composer’s fascination with asymmetric divisions (Messiaen, 1994: 79). The nine principle techniques of Messiaen’s rhythmical language are also to be found in the twenty-five Indian rhythms most commonly deployed in Messiaen’s music (Šimundža, 1987), most of which are to be found in the *siṃhavikrama* (8) and *rāgavardhana* (93) tālas (see Appendix L).

Griffiths (1985:49) suggests that Messiaen’s ideas of musical time had much in common with the temporal concepts underlying the music of India, Bali, and Japan, suggesting a reiteration of his concepts rather than an appropriation of someone else’s. Messiaen’s admission of ignorance at having discovered, by intuition, several of the rhythmic principles underlying *deśītāla* prior to embarking on a serious study of them, shows again the act of seeking validation through exploration (Messiaen, 1994: 265).

The collage structures found in the music Japanese gagaku—a style that Messiaen believed embodied both the ancient and the modern (Messiaen and Samuel, 1994: 100) —are a feature of his music prior to the Japanese inspired work, *Sept haikai* (1962), and are present in several pieces of the 1940s: *Quatuor*

pour la fin du temps (1941)⁷; *Trois petites liturgies de la présence divine* (1944), and *Turangalîla-Symphonie* (1946–8). These structures begin to take on greater significance in his orchestral music of the 1960s, beginning with the strophe movements of *Chronochromie* (1960), but are not crystallised until his haiku poem, two years later.⁸

According to Troup (2008: 423) the collage structures and Japanese birds in *Sept haïkai* differ from those found in *Chronochromie* in two respects: first, in the later work, there is a separation between birdsong and impressionistic tone paintings (2008: 423)⁹; second, cretic rhythms are superimposed rather than juxtaposed. For example, cretic rhythms appear (in irregular form) against colour chords, stylised birds and symmetrical permutations throughout the second movement, *Le Parc de Nara et les lanterns de Pierre*, and are superimposed (and juxtaposed) against the bird materials of *Les Oiseaux de Karuizawa*, (from b. 37), as opposed to the simple juxtaposition of cretic-like rhythms occurring in antistrophes of *Chronochromie*. Troup (2008: 421) argues that the success of the collage structures in *Sept haïkai* provided Messiaen with the confidence to continue exploring this device in later works.

The static quality of Messiaen's harmony, aided also in his use of collage structures and block forms, is characterised by Cross (1998: 55) as non-Western,

⁷ For instance, a seventeen-note rhythmic canon in the piano part comprising of twenty-nine chords is superimposed against the repeated pattern of fifteen durations in the cello of *Liturgie de Cristal*.

⁸ *Chronochromie* and *Sept haïkai* are separated by Messiaen's two-week visit to Japan with his second wife, Yvonne Loriod (Messiaen and Samuel, 1994: 99).

⁹ Hill (2008) also observes impressionistic depiction of birds in Messiaen's *Catalogue d'oiseaux* (1956–8).

counter to the teleological functionalism of Western harmony.¹⁰ However, musical stasis was already a prominent feature of his musical language, prior to any discernible eastern influence, occurring in much of his early work—*Les Offrandes oubliées* (1930), *Le Tombeau resplendissant* (1931), and the second half of *Dyptique* (1930).

Stasis is a characteristic feature of Messiaen's that is most often criticised for its apparent lack of textual dynamism (Benjamin, 2008; Begbie, 2000: 140); Blake (2015) considers the layers of repeated rhythmic pedals in *Turangalîla-Symphonie* (1946–8) to be textually cluttered and linguistically incoherent.

The musical stasis created principally from Messiaen's textural collages is also a feature that he believed was shared by many of the musical styles of the Orient; stasis, in this sense, is intended to signify aspects of the composer's spirituality, symbolising the invisibility and intangibility of eternity (Messiaen and Samuel, 1994: 103).

I myself am a static composer because I believe in the invisible and in the beyond; I believe in eternity. Now, Orientals are on much closer terms with the beyond than we are, and that's why their music is static.
(Messiaen and Samuel, 1994: 103)

Nevertheless, Messiaen's explanation for the static similarities between his music and those of the 'Orient' are contingent upon his essentialising the relationship between Eastern music and Eastern spirituality; stasis is used to signify the beyond, and the static music of eastern cultures is proof of *their*

¹⁰ Although Cross (1998: 55) notes that Messiaen's music is not entirely static, describing it as 'progression by means of accumulation', I would argue that Cross's description of stasis is no different to the kind of accumulative progression of most forms of music described as static, such as the cumulative effect created by the different ragas over the course of a musical set.

closeness with the beyond, in a way that *we* are not, as evidenced by *our* music. Messiaen's use of musical stasis is intended to signify that he too is on close terms with the beyond. The blurring, or absence, of boundaries and interconnectivity between reality, spirituality, thought, and matter in Messiaen's music bears similarity to the 'hylozoistic' perspectives that Lannoy (1974: 273–4) attributes to Indian philosophy.

In order for the material to be successfully incorporated into Messiaen's musical language, it needed, somehow, to reveal a hidden source that resonated in accordance with his own spiritual and philosophical inclinations, all of which speaks to the composer's need for connectivity with the materials when composing. Johnson and Bruhn (1998: 131–2), claim that Messiaen's use of the symbolic aspects of Indian rhythm involve appropriation by way of association between Hindu and Christian symbolism.

Hsu (1996: 17) suggests that Messiaen's desire to synthesize the 'music of all times' was the reason he was drawn to the materials in the first place, believing that this original source material was engrained in traditional Eastern folk music. Hsu (1996: 17) also notes the similarity between Messiaen's universalism and the Taoist-inspired view of Chinese composer, Chou wen-chung, in that both seem to regard Western and Eastern traditions as stemming from the same point of origin. The idea of the ultimate power of Eastern culture lying somewhere beyond it, also implies that traditional folk music is a diluted version of the original source material. Messiaen seeks validation in his appropriation by generalising away the uniqueness of his subjects. He achieves this by searching for commonalities between Eastern and Western subjects, thus self-validating his creative decisions.

The importance of establishing a connection with the material is clearly evident in the comparisons Messiaen (1994: 122–31) makes between materials and concepts from divergent periods and provinces e.g. using Greek feet to describe the rhythms of Stravinsky, Ravel, de Falla, as well as to understand the rhythmic structures of ancient tālas from the *Nāṭya Śāstra* (c. 200 BCE–200 CE), and in turn, comparing the fifth tāla of the *Nāṭya Śāstra* with the rhythms in the fourth dance of the *Six Dances in Bulgarian Rhythm* of Bartók's *Mikrokosmos* Sz. 107, BB 105 (Messiaen, 1994: 250–3).

The material that does not reflect Messiaen's philosophy, or where no connection can be established, such as the notable absence of Indian classical modes, can simply be discarded, or alternatively extracted from its cultural and contextual identity. This is evident in Hsu's claim (1996: 127) that Messiaen's reluctance to acknowledge Bartók as one of his 'masters of thought', may have been due to an inability to connect with the Hungarian composer's atheistic outlook.

Predominantly, Messiaen's appropriation of content is expressed by 'using modern knowledge' but remaining within the boundaries of the culture's traditions (Messiaen and Samuel 1994: 102). In this sense, 'modern knowledge' implies a Western treatment of non-Western styles—self-identity takes precedence over period authenticity. Examples of this include the development of the Dheṅkī (58) rhythm via symmetrical augmentation of the extremes in (bs. 4 and 6) *Regard de l'Eglise d'amour* from *Vingt regards sur l'enfant-Jésus* (1944), and the amplification of non-retrogradable rhythm in *Joie du Sang des Étoiles* (1946–8) —both are similar in their development of the jātis of Karṇāṭic musical theory. The jātis each maintain their laghu beats, but the base numbers are

incrementally transformed through a series of inexact augmentations (see Fig. 2.6). The rhythmic characters in the trombones and horns (from rehearsal Fig. 14) of *Joie du Sang des Étoiles* undergo a similar transformation through a series of incremental augmentations that are contrasted against a fixed rhythm of consistent duration. Messiaen (1994: 332) asserts that similar devices are to be found in several of his works, prior to his discovery of karṇāṭic theoretical principles, suggesting that some of these devices merely served to reaffirm previously established aspects of his rhythmical language. Messiaen's adaptation of Karṇāṭic jātis epitomises his ethos towards cultural assimilation, namely, that one should resist the temptation to produce stylistic facsimiles, and instead assimilate non-Western materials and ideas by means of contextual transformation.

Ceci montre qu'il ne s'agit pas, pour les Européens, de copier les Hindous, mais de s'assimiler leurs rythmes pour en tirer *autre chose* (Messiaen, 1994: 333).

[This shows that, for the Europeans, it is not a matter of copying the Hindus, but of assimilating their rhythms for another purpose.]

Messiaen's approach, in this respect, was not limited to Western explorations of Eastern music, but extended, in principle, to the Eastern treatment of Western materials, apparent in his warnings to Japanese students against assimilating Western music at the cost of abandoning the music of their cultural origins (Messiaen and Samuel, 1994). His ethos, which clearly links personal authenticity with cultural identity, is exemplified by his declaration that the music composed by his Japanese students should endeavour to 'remain Japanese' (Messiaen and Samuel, 1994: 102).

The absence of any surface influences on the musical language of his Western students also shows that his emphasis on identity was not limited to his Asian students; Messiaen is not immediately apparent in the musical languages of Boulez, Benjamin, or Stockhausen. Moreover, Xenakis was encouraged by Messiaen to further explore his Greek heritage and experiment with his knowledge of architectural and mathematical principles by applying them to his music (Matossian, 1986: 48). The care taken to ensure that each student was given the freedom to develop their personal style is apparent in the accounts of George Benjamin and Pierre Boulez, who claim their former teacher never imposed his religion on them, nor his interest in birds, or the organ (Lebrecht, 2008).

In his contact with students, he displayed a rare mixture of passionate engagement coupled with a genuine and profound acceptance of difference in others. He tried with all his might not to impose his own views or tastes on his students, though with the degree of enthusiasm he displayed, this wasn't always easy. (Benjamin, 2008)

Messiaen's use of exotic artefacts translates into an innovative reconstruction of the materials, usually by way of exaggeration, often involving total or, in the case of the *deśītālas*, partial recontextualisation of content. He found validation in his methods of abstracting rhythm from pitch through the examination of Indian music: 'Messiaen found resonances of this approach in the separation of *rāga* from *tāla* in Indian music' (Pople and Hill, 2008: 35).

In Bloomian terms, Messiaen's tendency towards the separation of musical elements, could be categorised, with respect to Indian classical music, as a form of *Apophrades*, whereby the predecessor work, in this case the totality of Indian classical music, is viewed through the lens of its successor (Bloom, 1997:

15–6). However, several of the ametrical rhythms present in the medieval *deśītālas* are also apparent in the early work of Stravinsky; the rhythmic principles previously identified by Messiaen in *Le Sacre du printemps* were subsequently reiterated to him during his encounter with Indian rhythm.

Messiaen's technique of superimposing divergent rhythmic types is almost certainly influenced by Stravinsky and is not an essential feature of Indian music. In particular, the *superposition d'un rythme à ses différentes formes d'augmentation et diminution* [rhythm superimposed upon its different forms of augmentation and diminution], echoes the Stravinskian practice of placing ametrical rhythms over a pattern of equal note values. Moreover, the divergent forms of *canons rythmiques*, including the *superposition d'un rythme à sa rétrogradation* [superposition of the rhythm upon its retrograde], produces a rhythmic discourse similar to the 'hushed counterpoints' that Messiaen identifies as a feature of *Danse sacrale* and *Glorification de l'élue* (Messiaen and Samuel, 1994: 71).

Stravinsky's ingenious rhythmic structures were highly regarded by the French composer, evidenced by the numerous references to his music in *Traité de rythme, de couleur, et d'ornithologie* (1949–92). Stravinsky's rhythms connotes a natural ability to generate rhythmic discourse that is comparably esoteric when held up against the meticulousness of Messiaenic methodology; Stravinsky's rhythms imply the work of an alchemist rather than those of an architect.

While anacrusis, inflexional endings, agogic and dynamic accents, are all quintessential to the rhythmical language of both composers; Stravinsky's ability to create a seemingly organic, as opposed to constructed, rhythmic discourse is

very much in contrast to Messiaen's systematic procedures. The various forms of rhythmic canon, for instance, are Messiaen's way of attempting to re-capture the effortlessness of Stravinsky's rhythmic superimposition, by way of process. The ametrical rhythms of Indian *deśitālas* provided Messiaen with an opportunity to explore Stravinskian-influenced rhythmic techniques, by way of *daemonization*, without the burden of engaging Stravinsky's influence directly. 'To appropriate the precursor's landscape for himself, the ephebe must estrange it further from himself' (Bloom, 1997: 105)

Pierre Boulez claims that Messiaen's abstraction of exotic materials from their cultural context was a way for him to imprint himself upon the material and develop his own personality (Nichols, 1986: 167). This concept is similar to Bloom's description of the young artist that attempts to overcome influence-anxiety by way of *tesserae*, an antithetical completion of the precursor's work by treating the material as if it were in pieces (Bloom, 1997: 49)

Boulez asserts that the destructive methods applied to artefacts are a necessary means through which the composer obtains his distinctive personality, and suggests that this method applies not only to Messiaen, but also to all great composers (Nichols, 1986:167). Boulez describes the process of extraction, somewhat uncharacteristically, in Messiaenic (and Messianic) terms, as a kind of death and rebirth, a form of destruction and renewal:

Destruction does not always mean you have to hate something; you have to destroy it to possess it. I think Messiaen made us quite aware of that, especially when he said, 'I found this in that composer, but I used it in this way', I turned the chords around so that the relationships were not the same. (Nichols, 1986: 167)

Boulez's suggestion could also imply that Messiaen's destruction through extraction signifies a reaction against the original material. Bloom (1997: 15) describes this as a 'movement towards a personalised Counter-Sublime, in reaction to the precursor's Sublime'—*daemonization*. However, the absence of 'hatred' towards the material denotes *tesserae*; i.e. maintaining the terms in some way but applying them in a different sense: 'I found this in that composer, but I used it in this way' (Nichols, 1986: 167). The characterisation of Messiaen's antithetical treatment as an act of 'destruction' speaks more to the creative persona of Boulez than of the modifying, recontextualisational practices adopted by his former teacher. His remark suggests that the most substantive aspects of French art music occurred by way of antithesis, whose very existence arose from a reaction against the musical influences of Germany (Nichols, 1986: 169).

Boulez's recollection of Messiaen's repeated distinctions between 'technique' and 'the music' illustrates the extent to which deconstruction permeates Messiaen's compositional practice: '[Messiaen] explains, you know "here the music is this, and the technique is that" which is strange for me, because for me the music *is* the technique and the technique *is* the music' (Nichols, 1986: 168). This distinction between music and technique is evident in Messiaen's pedagogical materials, which separate objects, e.g. *desĩtālas*, from the devices used to manipulate them, such as additive rhythms. Messiaen's materials are in fact objects that are acted upon, either through corrective modification, or recontextualisation.

The corrective mechanism—*clinamen* is apparent in Messiaen's innovative appropriation of Andean folk melodies in *Harawi* (1945), in the example below, a transformation of *Delirio* by Peruvian composer M. Duncker-

Lavalle that was first used as Messiaen's *Thème d'Amour* in his incidental music for Lucien Fabre's *Tristan et Yseult* (1945) (see Appendix C), rewritten in the modes of limited transposition with an ametrical renovation applied to its rhythms (Fig 2.1):

Fig. 2.1 (a–g) *Melodic Analysis:*
Thème d'Amour motif

The figure displays seven musical excerpts (a-g) illustrating the 'Thème d'Amour' motif. Excerpt (a) is from 'Delirio: bs.3-4' in 3/4 time, featuring a melody with the lyrics 'Ay! mi due fio!'. Excerpt (b) is from 'Harawi: theme d'Amour' in 2/4 time, featuring a melody with the lyrics 'Re tour de ciel.' and a soprano (Sop.) part. Excerpt (c) is from 'VI. Répétition Planétaire' in 2/4 time, featuring a piano (pf.) accompaniment with a melody marked 'M3'. Excerpt (d) is from 'VI. Répétition Planétaire' in 2/4 time, featuring a soprano (Sop.) part with a melody marked 'M3' and the lyrics 'En fourche un cri noir'. Excerpt (e) is from 'VI. Répétition Planétaire' in 2/4 time, featuring a soprano (Sop.) part with a melody marked 'M3' and the lyrics 'Es ca lier tour nant.'. Excerpt (f) is from 'IX. L'escalier Redit, Gestes du Soleil' in 2/4 time, featuring a soprano (Sop.) part with a melody marked 'M3' and the lyrics 'l'es ca lier du temps.'. Excerpt (g) is from 'IX. L'escalier Redit, Gestes du Soleil' in 2/4 time, featuring a soprano (Sop.) part with a melody marked 'M3' and the lyrics 'So leil gar den.'.

- | | |
|-------------|---|
| a. bs. 2–3 | <i>Delirio</i> |
| b. bs. 5–6 | II. <i>Bonjour Toi, Colombe Verte</i> |
| c. bs. 53–4 | VI. <i>Répétition Planétaire</i> |
| d. b. 84 | VI. <i>Répétition Planétaire</i> |
| e. b. 91 | VI. <i>Répétition Planétaire</i> |
| f. b. 4 | IX. <i>L'escalier Redit, Gestes du Soleil</i> |
| g. bs. 60 | IX. <i>L'escalier Redit, Gestes du Soleil</i> |

Clinamen is also evident in the collage structures of the *Gagaku* movement from *Sept haïkai* (1962), which are adapted from the traditional Imperial Court Music Messiaen encountered while in Japan; in the fourth movement, the collage structures are used to depict a modified version of Japanese gagaku. This is contrary to Messiaen's use of Indian *deśitālas*, which appear in his music by way of a total recontextualisation.

The Orient provides an outlet for Messiaen's creative expressions in a manner comparable to Hall's description (1997: 34) of the social function of 1920s Jazz, as being the means of sublimation for white American audiences. Less brazen than the route through which 'polite society' processed erotic sensations from a comfortably distant interaction with the 'other'; the Orient serves a dual purpose for Messiaen: acting as the cover through which he can covertly explore Stravinskian concepts, but also a means to justify his music's spiritual signifiers, which were crafted by way of innovation, through modification and decontextualisation of content.

2.5 The Influence of Greek Metrics on Messiaen's Rhythmical Language

The Messiaenic concept of rhythmicization typically involves adding structure to raw material; it shares much in common with the Aristoxenian notion of *rhythmopœia* (the art of arranging rhythm). Messiaen recognised that uneven rhythms were integral to the metres of ancient Greece, and attributes their kinematic quality to the alternation of *arses* and *theses* (Messiaen and Samuel, 1994: 69). These concepts are revisited by Messiaen in several ways; first, and somewhat traditionally, through two devices discussed in *Technique de mon langage musical*:

1. *Préparations et chutes rythmiques* [Rhythmic preparations and descents], or the melodic version, *anacrouses-accent-désinences* [upbeat-accent-termination]: a three part small-scale formal structure consisting of a preparation, accent and descent (the first of which is akin to an anacrusis) (Messiaen, 1966: 13) (Fig. 2.2):

Fig. 2.2 Rhythmic preparations:

(a) III. *Yamanaka* – Cadenza bs. 47–8; (b) I. *Introduction, Sept haïkaï* (1962) bs. 2–4:

Un peu vif (♩=112)

47 (a) Preparation Accent Descent

arsis *thesis*

f *ppp*

Modéré ♩=80

2 (b) 8 vns. Preparation Accent Descent

(vibrato) *mf*

2. The uneven antecedent and consequent periods, found in the binary, ternary, or song-sentences of several of Messiaen's works. For example, the antecedent/consequent theme in the final section of *Les Offrandes oubliées* (1930) (Fig. 2.3):

Fig. 2.3 Antecedent and consequent from *Les Offrandes oubliées* (1930):

Extrêmement lent

vns. I antecedent

p *espressif et sensible*

consequent

Secondly, through his use and expansion of the Greek device—*diærisis* (a), defined as: 'the rearrangement and disposition of the component parts of a rhythm or foot' (Williams, 2009: 179); (b) The accent and termination of his rhythmic preparations and descents, discussed in Messiaen (1966: 13) are as

varied and malleable as Greek *arsis* and *thesis* in that they can potentially occur on either strong or weak beats of the bar line (Fig. 2.4):

Fig. 2.4 Rhythmic preparations: (a) VI. *Danse de la fureur, pour les sept trompettes*

from *Quatuor pour la fin du temps* (1941) bs. 4–7

(b) III. *Yamanaka – Cadenza, Sept haïkai* (1962) bs. 47–8:

(a)
Décidé, vigoureux, granitique, un peu vif
 4
 Vn. & Cl.
ff non legato, martelé
 Vc. & Pf.

(b)
Un peu vif (♩=112)
 48 Tpt.
f
 Preparation
ppp
arsis
 Accent
f
 Descent
thesis

The numerous ametrical groupings of stressed and unstressed rhythms, combined with the uneven phrase lengths, are akin to the multi-layered species found in the *arsis* and *thesis* of Greek prosody. Williams (2009: 24) claims the term *rhythmizomenon* was the name describing the raw materials found in the arts that employed movement, i.e. music, dance and poetry, which could be gathered into a rhythm by arranging the *chronos* [time] and *pous* [foot]. Due to the absence of polyphony, harmony and orchestration, Greek music was chiefly concerned with rhythm, and as such allowed for a focus on the *arsis* and *thesis* of an entire phrase (Williams, 2009: 25).

Furthermore, the Greek concept of large-scale phrases, embodied in the Aristoxenian theory of magnitudes, required that larger phrase lengths be broken down into smaller ones in order for them to be understood. The

relationship between the *chronoi podikoi* (the arsis and thesis of a foot) and the *chronoi rythmopæias* idios, (referring to the time occupied by a group of feet) within a phrase, was paramount to the formation of a rhythm that was considered pleasing, or *errhythmical*, in its arrangement (Williams, 2009: 4).

Although Messiaen does not refer to the terms directly, his writings and discussion on the subject of rhythm bear a striking resemblance to the classes used by the Greeks to describe the quality of the material's rhythmic organisation. Messiaen highlights two distinct approaches taken by Western composers in their methods towards rhythmic organisation (Messiaen and Samuel, 1994: 68): those that successfully utilise uneven durations, such as Stravinsky's *Le Sacre du Printemps* (1913), resulting in a work that is 'rhythmical'; while others, like J. S. Bach, create works that are absent of rhythm in spite of their masterful usage of harmony.¹¹ Messiaen observes that Bach's music displays consistency of duration through repetition, but due to its even durations cannot be considered rhythmical (Messiaen and Samuel, 1994: 68).

Messiaen's qualitative assessment of rhythm has much in common with the Greek concept of *rythmopæia*, a term used to describe the art of structuring the raw material—*rythmizomena* (Williams, 2009: 34). These terms describe the degree to which a work's rhythmic organisation was thought to be clear and convincing; those considered successful in this respect were deemed *errhythmical* (Williams, 2009: 4).

¹¹ The exception to this is in Messiaen's appraisal of Mozart's rhythms. In spite of the even durations occurring at beat level, the groups, phrases and sentences reveal a contrast between *arsis* and *thesis*, which Messiaen attributes to Mozart's use accents and flexional endings (Messiaen and Samuel, 1994: 69).

A third category of rhythm is implied by Messiaen's description of the transformative effect of 'rythme vivant' which can be applied 'à la vie, au moi, et au Rythme qui est un être vivant' (Messiaen, 1994: 40–1)[to the life, to the self, and to the rhythm that is a living being]. A similar transformative experience is described during his encounter with Anak Agung Gede Mandra's Balinese orchestra at the 1931 World exposition in Paris (Messiaen, 1994: 59). The words 'beaux' and 'tendre' are used in his comparison between the natural 'rhythm' of the fuchsia plant and the *deśitālas* of ancient India (Messiaen, 1994: 56). Messiaen's description of an organism, whose beautiful organisation affects the human soul, is comparable to the Aristoxenian concept of rhythmic beauty—*eurhythmy*.

Also apparent is the shared attitude towards musical repetition; Messiaen's characterisation of unrhythmical music, which includes the 'uninterrupted succession of even durations' (Messiaen and Samuel, 1994: 68), bears a conceptual resemblance to the Aristoxenian notion of *arrhythmia*—the unintelligible phrasing that gives offence to one's musical sensibilities (*aesthēsis*) (Williams, 2009: 1, 34). Williams (2009: 86) remarks that the variety of phrase construction in Greek metre meant the audiences would have been more sensitive to the effect of repetition, and as such, music that was overly repetitious was considered vulgar.

Although the Greek's enhanced attention to sameness has been lost, the ideology that connects repetition with vulgarity has, nevertheless, been assimilated into the theory and praxis of Western art music. According to Theodor Adorno, the non-repetitive nature of much of the music from the Romantic and Classical period is explained by the interaction between clearly

defined large-scale form and the small-scale elements, which became increasingly less distinctive over the course of the twentieth century (Paddison, 1993: 178).¹² Messiaen suggests that the trance-like state arising from too much musical repetition, is wrongly regarded by the listener as ‘perfectly rhythmic’ (Messiaen and Samuel, 1994: 68). His sentiments in this respect are in keeping with the stupefied state resulting from exposure to the manufactured products of the culture industry described by Horkheimer *et al.* (2002).

Secondly, Messiaen (1994: 52–3) described the sounds, shapes and motion of the natural world in terms of their rhythm, which he labels ‘Les rythmes extra-musicaux’. The rise and fall of the musical measure are especially apparent in the sounds of nature, the shapes and movements of wildlife, as well as the contours and textures of the landscape (Messiaen, 1994: 53). These are understood in terms of their *arses* and *thesis* motion. The *rythmes extra-musicales de la nature* are organised into eight categories: (1) the noises of nature, (2) birdsong, (3) mineral kingdom, (4) plant kingdom, (5) animal kingdom, (6) dance, (7) prosody (or language and poetry), and (8) the plastic arts:

Le musicien actuel aurait tout à gagner à écouter, à noter les bruits de la nature. [...] (le bruit des gouttes d’eau tombant des arbres pendant et après l’orage est particulièrement intéressant pour l’étude de l’accelerando et du rallentando) [...], *arsis* du *thesis* du vent et de la mer – et tous les bruits et bruissements des insects.. (Messiaen, 1994: 53)

[A true musician would have everything to gain from listening, from noting the noises of nature [...] (the noise of raindrops falling on trees during and after a storm, is particularly interesting for the study of accelerando and rallentando) [...], the *arsis* and *thesis* of the wind and the sea, and all the noises and rustlings of insects.]

¹² Adorno regards repetition as one of the principles tools used by the culture industry, antithetical to higher forms of artistic expression (Horkheimer *et al.* 2002: 108, 112).

There is also a correlation between the *arsis* and *thesis* of Messiaen's extra-musical elements, and Greek perspectives on the interconnection between rhythm and dance; it was believed that rhythm could be observed in movement of the body, in the articulation of sound as well as in the tones of music (Munk, 1844: 7). Moreover, *arsis* and *thesis* was thought to be multi-layered, from the *élan* and *repos* of a single foot, to the ebb and flow of a group of feet, to the overarching form of an entire phrase, establishing a much closer link between short-range rhythmic motifs, mid-range phrases and sentences, and large-scale forms. Messiaen further expands on this concept in *TRCO* to encompass the very fabric of the Universe (Messiaen, 1994).

Lastly, Messiaen and ancient Greece both put emphasis on the alternation of short and long durations, which is distinct from the evenly metred rhythms found in Western classical music. The alternation of short and long note values produces a metrical pattern that is practically impossible to perceive in the Western sense, due to the absence of a common divisor between the units, the absence of which masks the sense of a consistent underlying pulse. The uneven rhythmic patterns, such as Messiaen's additive and subtractive rhythms, disrupt hypermetric structure that naturally arises from regular metre, and as such, the periods and phrases cannot be anticipated because of the irregularity that occurs at each structural level (Pople and Hill, 2008: 36).

Metre is strongly tied to the perception of duration and succession. In Western classical music, this is achieved through 'even, contiguous and continuous groupings' (Sadie and Tyrrell, 2001: 279). Although the correlation between metre and hyper metre is a Greek inherited concept, in Western classical music, hypermeter presumes larger periods which can be easily divided

into even divisions, and while this is true of much Western classical music, it is less intrinsic to the music of ancient Greece, India, and also Messiaen's rhythmical language.

2.6 Messiaen's Exploration of Indian Music through a Western Filter

Messiaen's understanding of Indian rhythmic principles was informed by his knowledge of Greek rhythm. This is apparent in his exploration of Indian music in book one of *Traité de rythme, de couleur, et d'ornithologie* (1949–92), whereby the devices and characteristics of Indian rhythm that Messiaen finds most appealing are legitimised by their apparent similarity to aspects of Greek rhythm. For example, the five *mārgatālas*, ancient rhythms dating back to the *Nāṭya Śāstra* (ca. 200 BCE–200 CE), are broken down into smaller units in his analysis and compared to corresponding Greek feet (Messiaen, 1994: 250); both permutations of *cācapuṭa*, the second *mārgatāla*, are labelled as trochees and choriambes, respectively. Furthermore, *tālas* that have no obvious similarity are discussed in terms of their dissimilarity to Greek feet—the *caccatpuṭa*, for instance, is regarded as a retrograde to the dochmiac. In addition, all eight of the Hindu *gānas* are allocated a corresponding Greek foot, which again shows Messiaen's tendency to connect Indian rhythms with Western ones (Messiaen, 1994: 260).

Messiaen also compares *tālas* to various Western classical works. For example, the two versions of *cacapuṭa* when combined resemble the central rhythm to Orpheus's aria and ritornello in the second act of Monteverdi's *Orfeo* (Messiaen, 1994: 249). Messiaen also compares the effect of Vedic poetic accents, which he first encountered in Haug (1873), to a Cantor's recitation of Western

hymns (Messiaen, 1994: 263). The principle of *diminution et l'augmentation inexacte*, derived from Śārṅgadeva's *lakṣmīśatāla* (88), is compared to the development of the tonally ambiguous octave motif in Debussy's *Brouillards* (1912) (Messiaen, 1994: 251). Indian rhythms are also compared to works with a Slavic and Russian folk influence: *sāmpakkeṣṭāka* and *vijaya* (51) make up the two rhythmic phrases used throughout the scherzo of Bartók's *String Quartet No.5, Sz. 102, BB 110* (1934), of which the latter is seen as an extension of the former.^{13,14}

Techniques such as, *valeur ajoutée*, and *accroissement et décroissement d'une valeur sur deux addition valeur ajoutée* are not features of found in Indian classical music; their creation was inspired by the proportional properties of certain tāla. The ametrical rhythms that do not fall into a European/isochronal metric system are automatically given a Western archetype. The techniques inferred by Messiaen from his analysis of Indian rhythm are the result of modifications, distortions to 'normal' Western archetypes. *Trīya* (3), for instance, whose structure is **ooò**, is understood as three semiquavers with the last note fractionally prolonged, the prolongation is then understood by Messiaen to be a rhythmic device—*ajout du pont*.

Messiaen's explanation of Indian rhythmic principles often involves comparing them to rhythms and devices found in Western music. This tendency indicates the composer's reliance on understanding the music through Western terms. Conversely, given that *TRCO* is a pedagogical work, Messiaen's reconceptualising of complex rhythmic ideas within the familiar framework of

¹³ The *sāmpakkeṣṭāka* rhythm occurs throughout the trio section only.

¹⁴ The *sāmpakkeṣṭāka* tāla is also compared to the muted trumpet duet from the second part of *Le Sacre du Printemps* (1913).

Western musical language may simply be an indicator of his exceptional teaching skills. Although aesthetic errors are almost certain to arise from this type of comparative study, his analysis aims to show that interesting musical phenomena can be found across a variety of musical styles, a position that highlights the composer's tendency towards a universalist worldview i.e. emphasising universal principles in an inclusive manner.

2.7 Does Messiaen's Engagement with Indian Music Reveal an Authentic Intention?

According to Griffiths (1985: 49), Messiaen's fascination with Eastern rhythm can be explained by two factors: first, the composer's dissatisfaction with the 'progressive' nature of 'European time' and, secondly, his concern with the increasing perception in Western society that music was a form of 'polite entertainment'.

In spite of certain parallels, Messiaen's interest in the Orient can be set apart from that of Orientalists like Maurice Delage (1879–1961) and Albert Roussel (1869–1937) in one important respect: Messiaen was motivated by what he considered to be the transmission of musical truth. As with Delage and Roussel's cultural appropriation of Indian subjects and themes,¹⁵ Messiaen was motivated to seek out, assimilate, and incorporate 'new' sonic elements into his musical language. However, his exhaustive study of performance and compositional principles of Indian classical music indicates that his interest went beyond the naïve allure of the exotic, experienced by his Orientalist predecessors.

¹⁵ Even in spite of the differences in their appropriation of Indian music described by Pasler (2000).

Evidence of authentic intention is to be found in the composer's attention to detail in his study of Hindu rhythm in the first volume of *Traité de Rythme, de Couleur, et d'Ornithologie* (1949–92), not only in the effort expended to understand the religious and poetical significance of the *deśītālas* through a study of Hinduism and Hindu-related symbolism, but also in his attempts to understand the rhythmic systems of Hindustānī and Karṇāṭak musical forms. Of particular note is his attention towards the correct pronunciation of materials,¹⁶ which signifies a respect for the culture from which it originates.

Conversely, the separation of Hindu signs from their signifiers—evident in works such as *Oiseaux exotiques* (1955–6), where the creative focus is not religious—implies a lack of interest in the existential aspects of Indian culture, potentially bringing into question Messiaen's authenticity of intention. Especially problematic is the replacement of Hindu symbols for Christian ones, which, in the very least, implies subservience to Messiaen's religious ideology. According to Griffith (1985), Messiaen demonstrates an equal disregard for musical styles when they are used to convey aspects of his Roman Catholic faith:

It takes a sublime, even saintly naiveté to accept materials from Massenet and Glenn Miller, then use them to praise Christ as if had never been employed for any baser purpose (Griffiths, 1985: 102).

Messiaen's detailed research into Indian music and the value he placed on the material shows authenticity of intention. However, in his music, *tāla* are used innovatively, and with a selective or complete disregard for provenance authenticity. This approach allows him to explore aspects of Indian music that

¹⁶ For instance, the first word of the title to Messiaen's symphony is actually pronounced *Touranegheuli-la* (Messiaen, 1994: 270).

serve his creative interests and exclude those that do not, all the while through the filter of a Western musical language. The hundred and twenty *deśītālas* of Śārṅgadeva are removed from their stylistic context and extracted of their symbolic meaning. The end product is a cultural hybrid that retains some of the aesthetics of the original, while bearing little contextual, stylistic relation to it.

His use of Indian-influenced techniques is distinct from his use of Japanese-influenced compositional techniques in *Sept haïkaï* (1962), where they are used in relation to Japanese subjects. It is possible that the distinction between the way they are used can be explained by Messiaen's admission that India did not have other attractions for him besides its ancient rhythms (Messiaen and Samuel, 1994: 78).

The disposability of the cultural and religious symbolism of the ancient Indian rhythms suggests that Messiaen's artistic appropriation can be characterised as 'existentially inauthentic' in the manner outlined by Young (2010). However, his dedicated research, concern for a faithful representation of materials in his pedagogical works, and the subsequent innovative use of Indian rhythmic principles in his musical language implies the kind of authentic intention described by Kivy (1997).

2.8 In What Way Do Śārṅgadeva's Deśītālas Reflect Messiaen's Musical Interests?

The *deśītāla* are essential to Messiaen's rhythmical language. Once the rhythms are stripped of their stylistic context, he uses them in several ways: (1) through the merging of *tāla* to form larger rhythms; (2) through juxtaposition (or superimposition) with other rhythms, e.g. as a rhythmic pedal; (3) as raw

material, exposed to a variety of destructive techniques; (4) as the basis for a rhythmic technique to apply to other rhythms, inspired by the proportional characteristics of the original tāla.

Messiaen's technique of superimposition is entirely his own invention. However, his practice of merging tāla is a technique most likely derived from his study of Greek metrics. The deśītāla were the catalyst for Messiaen's rhythmic transformations (Messiaen and Samuel, 1994: 76), most of the techniques derived from deśītāla constitute the kind of completion and antithesis, *tesserae*, described by Bloom (1997). This is because most Messiaen's techniques are an elaboration on the original, which are then recontextualised.

Eight of Messiaen's rhythmic techniques were directly influenced by his exploration of deśītāla (Šimundža, 1987: 118), seven of which are acknowledged by Messiaen himself (Messiaen and Samuel, 1994: 76):

1. Addition of the dot (*ajout du pont*)
2. Added value (*valeur ajoutée*)
3. Increase and decrease of one of two values (*accroissement et décroissement d'une valeur sur deux*)
4. Inexact augmentation (*augmentation inexacte*)
5. Dissolution and coagulation (*dissolution et coagulation*)
6. The use of numbers (*importance des nombres*)¹⁷
7. Chromaticism of duration (*chromatisme des durées*)

¹⁷ This device is also explored in my ballet *Black Orpheus* (Oliver, Unpublished), particularly during the *Sr. Escuro*'s theme in the *Aquático dramática* scene. The accented chords of the piano and harp in *Delícia de Gambler* [Gambler's Delight] are based on an increasing and decreasing number pattern. The drum kit rhythm in *Ruína do jogador: Bem-vindo, Sr. escuro* [Gambler's Ruin: Welcome, Mr. Black] is also based on a similar device.

8. Non-retrogradable rhythms (*rythmes non-rétrogradables*)

Five of these techniques can be observed in the *rāgavardhanatāla* (93) alone (Fig. 2.5). *Rāgavardhana* is the second tāla to appear in Messiaen's pedagogical treatise *Technique de mon langage musical* (1944). However, in Messiaen's example, the rhythm appears in its retrograde form (Messiaen, 1966: 9). Retrogradation is not listed as one of his techniques arising from *rāgavardhana*. Nevertheless, retrogradation is often applied this *deśītāla*, and many others. For example, all of the tāla in the *Introduction* and *Coda* of *Sept haïkaï* (1962) undergo retrogradation throughout the course of the work.

Fig. 2.5 Techniques arising from *rāgavardhana* (93)

Messiaen (1966: 9)



In Fig. 2.5, the longest unit is dissolved (disassociation), resulting in a metrical division of the rhythm into two groups, whereby one half is an expansion of the other. The middle note of the second group (B), which is dotted, is simultaneously seen as an added value and an addition of the dot—the latter being a subset of the former. The first group (A) is an inexact augmentation of (B), due to the dotted central note value of the second group. Both sets are non-retrogradable, although Messiaen rarely describes group (A) as such because the rhythms he describes as non-retrogradable are ametrical, containing a mixture of long and short durations (i.e. multi-value, non-retrogradable rhythms). The

example used in *Technique de mon langage musical* (1944) is a classic augmentation of the Śārṅgadeva rhythm as it originally appeared in the Lavignac's *Encyclopédie de la musique et dictionnaire du Conservatoire* (1913).

Several other Messiaenic techniques are comparable to certain rhythmic principles of South Indian music—*augmentation inexacte* and *personnages rythmiques*—are similar to the Karṇāṭak jāti technique; five varieties of augmentation are created from each of the seven classes of tāla. Under this system, the druta is unaffected by the changing proportions,¹⁸ irrespective of the variety (Nijenhuis, 1974: 68). The expanding durations of laghu values produces an inexact augmentation in the first variety, comparable to Messiaen's *inexact augmentation* technique (Fig. 2.6):

Fig. 2.6 (a) Karṇāṭak jātis (Nijenhuis, 1974:68)

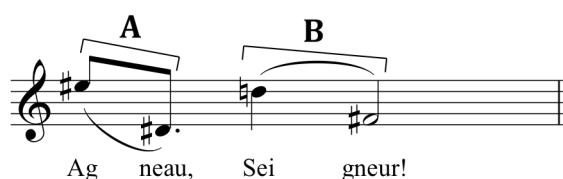
and (b) Messiaen's *augmentation inexacte* (1966: 16):

(a) The five varieties of dhruva tāla:

Class	Variety	Name	Symbols	Number of Beats
dhruva	tisra	maṇi	I ₃ O I ₃ I ₃	3 + 2 + 3 + 3
	caturaśra	śrīkara	I ₄ O I ₄ I ₄	4 + 2 + 4 + 4
	khaṇḍa	pramāna	I ₅ O I ₅ I ₅	5 + 2 + 5 + 5
	miśra	pūrṇa	I ₇ O I ₇ I ₇	7 + 2 + 7 + 7
	saṃkirṇa	bhuvana	I ₉ O I ₉ I ₉	9 + 2 + 9 + 9

¹⁸ The druta is a rhythmical value that is typically half the length of a *laghu*.

(b) *Minuit pile ou face*—Chant soprano (*augmentation inexacte*):



However, Messiaen discovered Karṇāṭak jātis several years after his study of Śārṅgadeva rhythms.

When listening to music, Messiaen experienced visual sensations of colour, texture, and movement, as the result of his psychological synaesthesia.¹⁹ His tendency to visualise a kind of animation of sound is also apparent in many of his descriptions of rhythmic transformation in *TRCO*. For example, several of his techniques involving rhythmic augmentation—such as *personnages rythmiques*, which he considered to be an expansion of tāla (27)—came about through animating the proportional characteristics of *siṃhavikrīḍita* (27) (Messiaen, 1994: 279). The relationship between the rhythmic properties and the visual aspects stemming from the deśitālas’s Hindu symbolism—in this case, the image of a leaping lion—act as a visual representation of the rhythmic technique: one value gradually expands (the leaping lion), while the other remains same length. The idea that the physical movement of animals can be converted into rhythm is discussed in his analysis of extra-musical rhythms:

¹⁹ I claim that his synaesthesia was ‘psychological’, rather than the neurological phenomenon that Messiaen described in reference to the ‘synoptia’ experienced by his friend Blanc-Gatti Bernard (Samuel, 1976: 16–17). Messiaen’s description of his experience is confusing, affirming that it was neither physiological nor imagined (Messiaen and Samuel, 1994: 37, 40). Bernard (1986) provides a detailed analysis of Messiaen’s colour associations.

Galop du cheval, bond du lion, démarche silencieusement ondulée de la panthère noire, gestes de fureur de tigre, nage du poisson, vol ramé ou plané de l'oiseau, sauts de criquet, déploiement coloré des ailes du papillon, jusqu'au bâillement ridicule et terrifiant du crocodile —chacun de ces mouvements est un rythme traductible en musique...(Messiaen, 1994: 58).

[The horse's gallop, the lion's leap, the silent undulations of the black panther's stalk, the tiger's furious gestures, the fish swimming, the rowing or gliding flight of birds, the cricket's jump, from the colourful deployment of the butterfly's wing to the ridiculous and terrifying yawn of the crocodile, each of these movements has a rhythm which can be translated into music...]

The *deśītālas* provided Messiaen with a means to explore and develop his interest in rhythm as ordered movement, a concept he had encountered in his earlier study of Greek metrics. His interest in ordered movement manifests as a literal transformation of rhythms by way of modification. With the exception of his non-retrogradable technique, inspired by seven of Śārṅgadeva *tālas* that are rhythmic palindromes, these techniques arise by applying the proportional durations of *deśītālas* to rhythms of regular metre. For example, Messiaen's rhythmic transformation of *Delirio* by the Peruvian composer M. Duncker-Lavalle (see Appendix C) are derived from the proportional characteristics of Śārṅgadeva's *deśītāla* (Fig. 2.7):

Fig. 2.7 Messiaen, *augmentation inexacte*

M. Duncker-Lavalle, *Delirio*



Messiaen, *Thème d'Amour, Tristan et Yseult*



Rhythmic transformations:

- | | |
|---|-----------------------------------|
| 1. Withdrawal of the dot (of a third the value) | 5. Addition of a third the values |
| 2. Classic augmentation | 6. Classic augmentation |
| 3. Classic augmentation | 7. Classic augmentation |
| 4. Classic augmentation | |

Alternatively, Messiaen exploits the proportional characteristics of a tāla, and modifies it through normalisation or exaggeration (Fig. 2.8):

Fig. 2.8 Sārasvati kanthābharana (115) *Introduction, Sept haïkaï* (1962):



2.9 An Assessment of Messiaen's Knowledge of Indian Classical Performance Practice

Messiaen's rhythmical language is based on the properties and proportions underlying several of Śārṅgadeva's deśitālas. Several of his rhythmical techniques were intuited from his engagement with the Śārṅgadeva's rhythms before proceeding into a more detailed study of Indian rhythmic procedures (Johnson, 1998; Shenton, 2008). Further research of North and South Indian rhythmic principles, particularly his later exploration of karṇāṭak jātis, confirmed many of his ideas about them (Messiaen, 1994: 265). Initially, much of

his information on Indian music came from the Chapter by Grosset (1913) entitled *Histoire de la Musique de l'Inde* from Lavinac and La Laurencie's *Encyclopédie de la musique et dictionnaire du Conservatoire*, as well as *Inde du nord* by Daniélou (1966). Both works were pivotal to Messiaen's understanding of Indian modes and ragas (Messiaen, 1994: 260).

However, his writing on Indian rhythm shows an awareness of certain aspects of Indian performance practice, as well as the procedures commonly employed to vary, and further develop *deśitāla* throughout the course of a work. A brief discussion of the devices *avanaddha* and *atīta* are included in his Indian rhythm chapter in book one of *TRCO*, as well as an explanation of a technique used for splicing the units of a *tāla* into two equal beats, similar to the dissolved *arsis* and *thesis* found in Greek metrics, which he calls '*contretemps*' (Messiaen, 1994: 255). The Messiaenic technique that dissolves (or merges) notes within a rhythm, known as *dissolution et coagulation* [dissolution and coagulation], was most likely inspired by *contretemps*, and to a lesser degree the mnemonic syllables placed above the *tāla*—*bols*—which Messiaen believed had the effect of destroying the rhythm completely (Messiaen, 1994: 255).

Moreover, the '*gānas*', which consist of eight sets of three values and are comprised of every possible combination of *laghu* and *guru*, have much in common with several developmental procedures adopted by the composer during the 1950s. Messiaen shows several ways in which these permutations are organised, one of which involves the distribution and reorganisation of ten syllables (Fig. 3.1a, b), a method dating back to the fifth century B.C, taught to him by the Hindu musician Turan Kumar Ghosal (Messiaen, 1994: 261)

Two of Messiaen's permutational techniques are most likely derived from this aspect of Indian performance practice; first, the process of *permutations symétriques* (applied to a range of durations of different length) and secondly; his permutation in the form of an open fan technique (Fig. 2.9c) which, according to Johnson and Rae (2008: 109), is behind much of the rhythmic organisation in *Île de feu II* from *Quatre études de rythme* (1949–50). The open fan process involves a systematic alternation from the centre of a chromatic series of durations outwards. Furthermore, the groupings of syllables into larger groups arising from the numerical gâna groupings (or 2, 3, 4, etc.) function in a similar way to the processes guiding the permutations of duration in *Chronochromie* (1960) in that their function is to narrow down a large number of possible permutations.

Fig. 2.9 The arrangement of Gânas (Messiaen, 1994: 261)

and Messiaen's permutation techniques

(S =  I = )

(a) ia ma ta ra ja bhâ na sa la ga
 || I | S | S | S | I | S | I | I | I | S ||

(b) ia ta ma ra ta ja ra bhâ ja na bhâ sa na la sa ga
 || I | S | S | S | I | S | I | I ||


(c) (Open fan):
 || 12 11 10 9 8 7 6 5 4 3 2 1 ||
 || 6 7 5 8 4 9 3 10 2 11 1 12 ||

Messiaen (1994) further explores Ghosal's organisational procedures with an invented permutation; rather than taking every second, third, or fourth syllable in the construction of his rhythm, he alternates between the syllables by

starting from the furthest, and gradually working inwards, in the shape of a fan. Messiaen expands on the process further with two sets of seven syllables, one in normal order, one in retrograde order, adding a dot (*ajout du pont*) to the odd numbered values of the sequence (Messiaen, 1994: 263) (Fig. 2.10). The process is repeated, but this time, the dots are placed on the even numbered notes of the series, the implication being that one set can be superimposed on to the other, creating a superposition of rhythm upon its different forms of augmentation. Johnson (1998: 127) claims that Messiaen's 'fan' pattern is the very process that determines how *personnages rythmiques* is applied to the tāla in the first movement of *Reprises par interversion* from *Livre d'orgue* (1952).

Fig. 2.10 Expansion on Gânas techniques (Messiaen, 1994: 263)

($\acute{S}$ = ♩ . I_c = ♩.)

(a) ia ma ta ra ja bhâ na sa la ga
 || I | S | S | S | I | S | I | I | I | S ||

(b) ia ma ta ra ja bhâ na ga la sa na bhâ ja ra
 || I_c | S | $\acute{S}$ | S | I_c | S | I_c || $\acute{S}$ | I | I_c | I | $\acute{S}$ | I | $\acute{S}$ ||
 ♩. | ♩. | ♩. | ♩. | ♩. | ♩. | ♩. || ♩. | ♩. | ♩. | ♩. | ♩. | ♩. | ♩. |
 ia ma ta ra ja bhâ na ga la sa na bhâ ja ra
 || I | $\acute{S}$ | S | $\acute{S}$ | I | $\acute{S}$ | I || S | I_c | I | I_c | S | I_c | S ||
 ♩ | ♩. | ♩ | ♩. | ♩ | ♩. | ♩ || ♩ | ♩. | ♩ | ♩. | ♩ | ♩. | ♩ |

Messiaen's rhythmical language is a hybridisation of ancient Greek and Indian techniques. However, it is all the more likely that his permutation devices, and other developmental techniques such as *rhythmic pedals*, *superimposition of rhythms of unequal length*, used in *Liturgie de cristal* of *Quatuor pour la fin du*

temps (1941) and in the *Introduction of Turangalîla-Symphonie* (1944–46), originate from his study of Indian music rather than from Greek or Medieval music. Furthermore, the techniques that most resemble medieval isorhythm were originally created without any knowledge of the techniques employed by medieval composers (Griffiths, 1985: 92; Johnson, 1998: 125).²⁰

Messiaen's chapter on Indian music in *TRCO* extends to a discussion of the standard percussion instruments (drums and cymbals) commonly used in Hindustānī and Karṇāṭak music, as well as the role and timbral qualities of several membrane percussion: pakhvāj, bāṇyā, tablā and mṛidaṅgam, and includes a discussion on Indian classical improvisation techniques, particularly those used in older song forms such as the *alāp* and *dhrupad* (Messiaen, 1994: 255). Further topics include: the practice of assigning specific tāla to certain songs, the connection between tempi and song, and the relation between musical forms and specific geographical regions (Messiaen, 1994: 256–8). However, the explanation of these topics is by no means comprehensive.

Messiaen conveys his knowledge of Indian performance practice in *TRCO*, which include a discussion of its theoretical principles, and also some of the instrumentation and musical forms common to Hindustānī and Karṇāṭak music. However, his research shows relatively little evidence of exposure to actual performances of Indian music. Furthermore, very little is said about the sonic aspects, texture and timbres of Indian music in his writing. Messiaen's relative underexposure to live or recorded performances, and little contact with Indian

²⁰ Johnson (1998: 125) points to a further example that was created before Messiaen's knowledge of similar medieval techniques: the mensuration canon that occurs in the fifth movement, *Regard de Fils sur le fils*, of *Vingt regards sur l'enfant-Jésus* (1944).

musicians, is reiterated during his conversations with Samuel (Samuel and Messiaen, 1994), confirming that the ancient rhythms were the extent to India's influence on his music.

2.10 Summary

While the summit of Messiaen's interest in India is embodied in the ancient Hindu rhythms, his exploration of subject matter peripheral to his immediate creative interests, such as Hindu spirituality and mythology, as well his study of the cultural, poetical and religious significance of *tāla*, is evidence of authentic intention under Kivy's (1997) definition. His attention to detail in the study of Indian rhythms, and the acknowledgement of different regional techniques is further evidence that he was motivated by the transmission of music truth. In this respect, his work can be set apart from the music of the early French Orientalists, such as Albert Roussel's *Padmâvatî Suites* Op. 18 (1918), who conveyed an interest in the subject of Indian music without showing a serious concern for its compositional techniques. His discussion of Indian classical developmental practices, such a *contretemps* which most likely inspired his *dissolution et coagulation* technique; his examination of *jātis* and *gānas*, the latter influential to his symmetrical permutation technique, and his knowledge of instrumentation and traditional musical forms are also indicators of Messiaen's authentic intention.

Having explored Messiaen's writing on Hindustānī and Karṇāṭak rhythmic techniques, in the next chapter I will explore the composer's study of Śārṅgadeva's *deśītālas* and his exegesis of Hindu symbolism.

Chapter 3

Gauging Authentic Intention in Messiaen's Excavation of Hindu Symbolism from Śārṅgadeva's Hundred and Twenty Deśītālas

3.1 Introduction

In this chapter I will examine: (1) The extent to which Messiaen's research shows attention to period and provenance authenticity; (2) his understanding of the animal symbolism of Śārṅgadeva's deśītālas, with a focus on the symbolism of lions, elephants, horses, and mythic animals. (3) Messiaen's understanding of the numerological phenomena of deśītālas, and their symbolism of movement. (4) Messiaen's misreading of rhythmic notation and deśītāla names. (5) The similarities and differences between Indian classical performance practice and Messiaen's use of deśītālas.

3.1 Messiaen's Research: Attention to Period and Provenance

Authenticity

Messiaen's authentic intention toward Indian music is revealed through the care given to the serious study of its content and subject in book one of *Traité de rythme de couleur et d'ornithologie* (1949–1992). I investigate this from three perspectives: [1] whether his research shows a depth of knowledge in the theory and praxis of Indian music; [2] the extent to which his research displays a breath of knowledge of Indian music; [3] Messiaen's understanding of Hindu symbolism; and [4] the presence of errors or mistranslations in his study and what this reveals about the composer's intention.

Messiaen's depth of knowledge of Indian classical music is shown in his examination of several compositional procedures and performance practices in *TRCO*. This includes the identification of the form and structure of the *dhrupad*, one of the oldest musical compositions (*prakaraṇa*) in Indian classical music, as well as some technical knowledge about the tetrachords of certain modes used for the melodies of each section (Messiaen, 1994: 255–7). Messiaen shows his knowledge of tempi, referring to the *druta laya*, *madhya laya*, and *vilambita laya*; and, despite some irregularities in nomenclature,¹ he also discusses the different types of tempi fluctuations or 'yatis', *sama*, *srotovaha*, *gopuccha*, and *mṛdaṅga*, which describe equal, accelerated, slowed, and mixed tempi, respectively (Datta, 1976: 80, 103).

Messiaen (1994: 258–9) identifies a few of the stylistic differences between compositions from Hindustānī and Karṇāṭak regions and the instrumentation used in some of the standard musical forms, providing a basic account of the design, playing techniques, and timbres associated with the main types of drum, namely, mridaṅgam, pakhvāj, tablā, and bāyā.² He also gives an account of the improvisational demands placed on performers of Indian classical music.

His breadth of knowledge is demonstrated in his account of some of the historically significant musicological treatise: the *Nāṭya Śāstra* (c. 200 BCE–200 CE) by sage Bharata; Somanātha's *Rāgavibodha* (1609); the *Saṅgītaratnākara*

¹ Messiaen (1994: 256) asserts that there are three yatis, but then provides criteria for four. The *srotovaha yati* is described as serving both accelerated and decreased tempo, *gopuccha* is incorrectly described as variable tempo, and mixed tempo is not assigned the term *mṛdaṅga*.

² However, the ghaṭam drum is not included in his discussion.

(1240 CE) by Śārṅgadeva³; and by his acknowledgement of the varying degrees to which ancient rhythmic notation has been retained. He also noted a distinction between the preservation of the *gānas* metric formulae compared with the lost notation for the Sanskrit names of hundreds of tālas (Messiaen, 1994: 258–9).

Rowell (1992: 7–8) attributes the discrepancies in musical writings to the absence of historical linearity in Indian musical scholarship, evident in the re-copying of texts, overlapping of concepts from different periods and regions, and the incorporation of new interpretations at the expense of losing others. Furthermore, a trend in early Indian music led to a gradual move away from conservative styles of improvisation that remained faithful to the source material, by way of variation, towards a practice that embraced improvisational freedom. This coincided with the gradual abandonment of more formal and ritualised styles of the *mārga* tradition in favour of regional *deśītālas*, resulting in an even greater divergence between notation and improvisation of Indian classical music, one that contrasts with the symbiosis of notation and performance in Western music (Rowell, 1992: 12).

Without exposure to live or recorded musical performances, with relatively little engagement with Indian practitioners, and with a sole focus on musicological texts of a genre that is heavily dependant on its oral tradition, Messiaen's research constitutes a relatively narrow perspective on Indian classical music. For example, his study of rhythm does not provide details of how *deśītālas* are incorporated into a musical composition, and how this might vary

³ According to Rowell (1992: 21) there is a wide variation in the dates assigned to many of the treatise from the Vedic to Medieval that 'may indicate a leeway of several centuries in either direction'.

with different forms—the tempi and mood associated with different tāla or different compositions. Also, his Indian chapter is missing any discussion on the sonic and emotive qualities of Indian classical music.

Lastly, we should consider the extent to which Messiaen’s research exposes errors of misreading either through the misinterpretation of primary sources, or by the replication of mistakes already ingrained in the translations of musicological writings, both of which potentially signify the composer’s reluctance to establish a period authentic representation of Hindustani and Karṇāṭak traditions. Due to the absence of available publications in French, Messiaen occasionally misinterprets the cultural and religious symbolism underlying the names of the deśītālas of Śārṅgadeva’s *Sanḡītaratnākara* (c.1240 CE)(Messiaen and Samuel, 1994: 77):

The most glaring mistranslation by Messiaen is of the word *haṃsa* in tālas (19), (30), and (96) as *canard* [duck] instead of the goose or swan—the animal mount of Lord Brahmā (Messiaen, 1994).⁴ The gander is the animal representation of creativity and the manifestation of divine essence. Its ability to swim on the water and take to the air represents the two-fold nature of earthbound and celestial existence ‘at ease in both, not bound by either’ (Zimmer and Campbell, 1963: 48). It is the representation of the immaterial and physical aspects of man:

The macrocosmic gander, the divine Self in the body of the universe, manifests itself through a song. The melody of inhaling and exhaling, which the Indian yogī hears when he controls through exercises (prāṇāyāma) the rhythm of this breath, is regarded as a manifestation of the ‘inner gander’. The inhalation is said to make the sound, *haṃ*, the exhalation *sa*. Thus, by constantly humming its own name, *haṃ-sa*, *haṃ-*

⁴ The swan is also the mount of Brahmā’s wife, Sarasvatī, along with the peacock.

sa, the inner presence reveals itself to the yogī-initiate. (Zimmer and Campbell, 1972: 49–50)

Messiaen acknowledges his shortcomings in providing an accurate interpretation of the meaning of the Sanskrit names, confessing that his exegesis of the *deśitālas* symbolism is largely invented:

L' explication des symbols poétiques et religieux est entièrement de moi [...] Ma vision des vérités cachées sous le symbole reste donc en partie Européenne, avec, sans nul doute, les quelques erreurs que cela comporte... (Messiaen, 1994: 264)

[The explanation of the poetic and religious symbols is entirely my own... My vision of the hidden truths under the symbols remains in part European, with no doubt a few errors, that it brings with it...]

3.1.1 Messiaen's Understanding of Hindu Animal Symbolism

Animals play both a central and multiplicitous role in Hindu mythology. Numerous stories on the origin of animals, their characteristics, and physical features, as well as commentaries on their social and ecological role within Indian society, are contained in both the sacred and secular texts of ancient Indian literature. Often, animals will appear as zoomorphic projections of humans and gods, as an abstraction of an emotional state, or they are used to symbolise moral equilibrium, or the restoration of cosmic and spiritual order, exemplified by Viṣṇu's avatar, Narasimha. The zoomorphic transformations of Gods and humans, such as Prajāpati's incestual desire for his daughter Ushas or the etiological myth of Brahmā and his creation Śatarūpā, while less frequent, are typically connected with acts of immorality and sexual desire. The implication being, Doniger claims, that in the absence of a strict moral code, man and God are nothing more than animals.

Many of the themes in ancient Hindu texts are concerned with ‘moral order’, castigation of the wicked, transcendence, or the control of ‘natural forces’, and they often serve as metaphors for the central tenets of Hinduism—*dharma*, *marga*, and *moksha* (Krishna, 2010: 9). Animal metaphors also appear in a number of children’s fables, the most well-known are found in the collection of stories in the *Pañcatantra* (c. 200 BCE), which were passed down over the centuries by word of mouth.

In the conventional iconography of Hindu art, deities are often pictured with animals that serve as their mode of transportation, known as *vāhanas*. Not only do the animals bear a resemblance to the emotional and spiritual characteristics of their host, they also serve as a means of identifying the deity. Typically, animal mounts are portrayed standing alongside, or being ridden by, their respective hosts; their proximity to the deity is symbol of their shared characteristics. Furthermore, the position of the animal, in relation to the deity, may itself be of symbolic importance, and illustrate the nature of their relationship. While the Shaktis are considered to be the female embodiment of a god’s essence, in Hindu mythology animal mounts are imbued with the qualities of their masters as well (Zimmer and Campbell, 1963: 48). Alternatively, the *vāhanas* may be understood to represent a specific moral or spiritual aspect associated with their host (Viswanathan, 2008). Rowell (1992: 32) claims that the *tāla* names, also named after everyday objects, are the result of analogical thinking, common to Indian music theory.

Several of Śārṅgadeva’s *deśītālas* are named after the Trimūrti deities: Viṣṇu, Śiva, and Brahmā. Others are the names of deity manifestations: the *līla* of

nihśankalīla (6),⁵ which symbolises the ‘creation, preservation and destruction’ of the cosmos, is a reference to the carefree exploits of Śiva-Naṭarāja (Smith, 1996: 1).⁶ The names *kīrti* (48) and *śrīkīrti* (49) are manifestations of the goddess Pārvati, signifying glory and fame (Bunce, 2000b: 991; 2000a: 230). The four varieties of *kañkāla* (65) depict the necklace of skeletons worn by *kañkālamurti*, an iconographical form of Śiva who received penance for decapitating one of the heads of Lord Brahmā (Bunce, 2000a: 256, 273–4).

Several *tāla* names are the embodiment of the Trimūrti’s feminine energy (or Shakti): *sārasvati kanthābharana* (115), is the collar worn by Brahmā’s consort Sārasvati, who is the personification of creative energy, speech, and the arts (Bunce, 2000a: 477); *pārvatīlocana* (81) and *lakṣmīśa* (88) are the Shaktis of Śiva and Viṣṇu, respectively. Other *tālas* include animal *vāhanas*,⁷ such as *nāndī* (63) (Śiva’s bull), *haṃsa* (96) the goose (vehicle of Brahmā). *Gaja* (99) represents Airavata, first of the world elephants and mount of the Vedic deity Indra.⁸ Several *tālas* take their names from the numerous demigods, or regional deities of Hindu mythology: *vasantā* (73) is spring personified; the ‘priya’ of *lalitapriya* (89) and *kokilāpriya* (39) is a manifestation of Agni (the god of fire), named after a local Dravidian god; *Caṇḍa* (104) refers to the moon god Chandra; while *jaya* (28) and *vijaya* (51) are named after twin goddesses who are also the doorkeepers of Viṣṇu (Bunce, 2000a: 118, 167, 230).

Some of the *tāla* names derived from the creation stories of Hindu mythology: *jagajhampā* (77), meaning the Elephant’s jump, conjures the image of

⁵ *Nihśanka* is also the forename Śārṅgadeva, the last two *deśītālas* are named after him.

⁶ Known as the dancing Śiva, ‘king of dancers’ (Smith, 1996: 1).

⁷ *Vāhanas* are vehicles ridden by the gods.

⁸ Or possibly the elephant *vāhana* belonging to Lakshmi.

Airavata's leap from the cosmic egg; *maṇṭhikā* (55), *pratimaṇṭha* (80), and the ten varieties of *maṇṭha* (38) refer to the churning of the ocean of milk and the story of the nectar of immortality. Some of the tāla names are concerned with cosmogonic theories or describe some of the qualities associated with the Hindu principles of *dharma* and *moksha*: *darpaṇa* (7) is a mirror reflecting the image of the cosmic void; (52), (53), (56), (57) and (104) signify a spiritual state of being.

Other tāla are the names of characters from well-known Hindu legends—*mallikāmoda* (43) is named after the joyous lady who laughs fragrant kāmoda, and whose tears flood the river Ganges with scentless red flowers (Prasad, 2009: 301–2). Tālas such as *pratyāṅga* (16) take the name of dance or ritual postures and are intended to signify a particular mythological or spiritual concept, while *tribhāṅgi* (36) and *abhaṅga* (71) are types of hand gesture and leg poses adopted by the Hindu gods themselves.

Twenty-one of the Śārṅgadevan tālas are named after animals or have animal references (see Appendix G), and although the majority are named after birds, the name *siṃha*, meaning 'lion', occurs most often in five of the deśītālas. Two of the *siṃha* rhythms, *siṃhavikrīḍita* (27) and the retrograde form of *siṃhavikrama* (8), are central to Messiaen's rhythmical language. Seventeen of the animal tālas listed (in Appendix G) feature prominently in the iconography of Hindu mythology. Sixteen of the deśītālas are also considered divine animal 'mounts', and one, *Śārabha*, is an avatar of Lord Śiva.

Although Messiaen recognises many of the animal names in his analysis of Indian rhythm in *TRCO*, very few of them are identified as *vāhanas*. However, his study of Hindu symbolism shows he understood the signification of physical proximity between the Gods and animals in Hindu iconography. Furthermore,

Messiaen (1994) acknowledges that many of the animals in Hindu mythology are zoomorphic projections, or avatars of deities.

I will now discuss Messiaen's interpretation of several of the most prominent animal symbols in Śārṅgadeva's *deśitālas*.

3.1.2 Lion Symbolism

The warrior goddess Devi Durgā, a fierce form of Pārvatī, is often depicted riding a lion. The lion is also the vāhana of Vakratunda, one of Ganesha's incarnations symbolising the embodiment of Brahman (Viswanathan, 2008: 5), whereas, in the Rig-Veda, the lion symbolises the strength of Indra and Agni (Krishna, 2010: 158). In the etiological myth, Durgā, a form of the love goddess Pārvatī, is created to despatch the asura, Mahishasura. The demon is granted a wish by Brahmā that prevents him from being killed by any god, man, or beast (Narayan, 1993: 50). In this instance, the lion embodies the fierceness of the warrior goddess Durgā, who is summoned to kill the demon.

Another myth concerns Viṣṇu's avatar, Narasimha, the man-lion sent to destroy the demon Hiranyakaśipu, brother of Hiranyakśa. Once again, a boon is granted that greatly limits the conditions under which the demon can be vanquished: no man, beast, or weapon can kill him, neither in heaven nor on earth, at day or during the night. Hiranyakaśipu is eventually killed on top of a mountain at twilight by Vishnu's avatar, Narasimha, thus fulfilling the demon's conditions (Satyanarayana Rao, 1993: 52). Narasimha is also a metaphor for Viṣṇu's divine omnipresence, as well as a symbol for his righteous anger (Krishna, 2010: 161).

The anthropomorphic traits of the lion are universal; it is ferocious, it is the lord of all beasts, king of the jungle, emblematic of royalty, power, nobility, and majesty. The lion's traits are demonstrated throughout the fables of the *Pañcatantra*, including his vulnerabilities: he is easily outwitted, sporting a thinly veiled arrogance that barely conceals his naïveté.

The lion's characteristic shortfalls tend to arise at moments when there is a failure in the fulfilment of his personal dharma. For example, as Paṅgalaka the lion is exposed to worldly knowledge through his friendship with the bull Saṃjīvaka, the king's ministers begin to starve. An excess of these qualities, as shown by the lion king Madonmatta's senseless slaughter of animals, denotes greed and overindulgence. According to Bunce (2000b: 1008), the word *siṃha*, which means lion, may also imply a 'greed for food which ultimately leads to lust'. Nonetheless, when represented in connection with deities, the lion is a great protector, who comes to the rescue in times of danger, and to bring order through the restoration of cosmic and spiritual equalibria.

Obvious parallels can be drawn between the Hindu symbol of the great protector and the numerous references in Messiaen's music to the Saviour—Jesus Christ. The lion symbol, *siṃha*, appears in several of Messiaen's works and signifies Catholic themes of salvation, resurrection, and 'the death of death', lifted directly from the symbolism of Śiva (Johnson and Rae, 2008: 171). Furthermore, Messiaen will often combine symbols in the same way that he creates false tāla by joining several deśītāla rhythms. For example, in *Couleurs de la Cité céleste* (1963) and *Et exspecto resurrectionem mortuorum* (1964) *tr̥tīya* and *siṃhavikrama* are combined to form a symbol of Christ and the holy trinity (Johnson and Rae, 2008: 44, 170). Occasionally the composer combines rhythms

because of their symbolic similarity: Candrakalā (105), which symbolizes ‘beauty and peace’ (1969: 37) is connected to Lakṣmīśa (88), representing the peace of the goddess Lakṣmī (Viṣṇou’s Shakti) in the fifth meditation of *Méditations sur le Mystère de la Sainte-Trinité* (1969). However, the significance placed on the symbols can vary: sometimes they are extracted of their original meaning entirely or, as with *siṃha*, are a bridge between Catholic and Hindu.

Messiaen (1994: 317) states that tālas (8), (31), (27), and (101) describe Viṣṇu’s fourth incantation, Narasimha. The exclusion of *siṃhanandana* tāla (35) (the lion’s son) from the group listed in *TRCO* suggests a distinction between the son and the tālas directly attributed to Viṣṇu. In spite of the obvious Christian connections to the Son of God, *nandana* (meaning ‘the one who is the cause of joy’) is one of the thousand aliases of Lord Viṣṇu (Bunce, 2000a: 366). *Siṃhalīla* (10), ‘the lion’s game’, denotes Narasimha, as well as a particular kind of sexual union; it is excluded from Messiaen’s list of lion tāla in *TRCO*. This is most likely due to the rhythmic simplicity (three drutas), rather than any kind of symbolic irrelevance. Moreover, *ṭṛtīya* serves as Messiaen’s symbol for the holy trinity, and with its final unit is prolonged, and provides an ametrical alternative to *Siṃhalīla* (10).

Siṃhanandana is the largest lion tāla and exhibits several aspects Messiaen’s rhythmical language; *ajout du point*, *accroissement et décroissement d’une valeur sur deux*, *augmentation inexacte*, and *dissolution et coagulation* are all present, albeit less conspicuously. However, the last four silent beats (niḥśabda) are not a feature of the composer’s rhythmical language. Conversely, *siṃhalīla* (10) exhibits none of Messiaen’s rhythmic techniques, and has likely been excluded due to its overly simplistic rhythm. Furthermore, the version of *siṃhalīla* copied

directly from *Histoire de la musique depuis l'origine jusqu'à nos jours* (1913) is likely to be a mistranslation. In (Śārṅgadeva *et al.* 1943), the tāla has a single laghu at the end, extending the total number of drutas to five.⁹

In an attempt to further understand the symbolism, the composer draws from the images depicted by the reliefs at the Kaṇḍāriyā Mahādeva temple: a woman kneeling before a lion, at his mercy, penitent and vulnerable. Although the relationship between the two figures is unclear, Messiaen's description paints a picture of supplication, adoration, praise, and terror; a metaphor aptly depicting the composer's personal relationship with God. The image also implies an undercurrent of eroticism, a characteristic also evident in Messiaen's erotic portrayal of the affect of God's presence in the text of *Trois petites liturgies de la présence divine* (1943-4). However, the 'strength' in this case may also refer to the spirit of the believer, and the bond between the believer and the omnipresent one (Bunce, 2000b: 1008). In this sense, Messiaen's (1994: 317) description of the relief matches the image conjured up by the name, *siṃhavikrama* (8).

The *Consécration* movement of Messiaen's twelfth organ piece, *Messe de la Pentecôte* (1949-50) portrays the solemn dedication to the sacred through the act of subjective consecration. It is accompanied by the subtitle *Le don de Sagesse*, implying that submission to God's holiness is itself a gift of wisdom. The movement's rhythmic structure consists of strophes alternating between *siṃhavikrama* (8), and *miśra varṇa* (26b), which Messiaen (1994: 329) described as a mixture of colours and a rainbow of durations, and considered it to be the

⁹ The version by Nijenhuis (1992) is a non-retrogradable rhythm with a laghu on either end of the rhythms.

most beautiful of deśītāla (Messiaen, 1994: 278, 329). Although this combination occurs less frequently in Messiaen's opus than the super-tāla—Rāgavardhana (93), Candrakalā (105), and Lakṣmīśa (88)—the combination of *siṃhavikrama-miśra varṇa* tāla appears in several of Messiaen's works, including the *Hayo kapri tama* of *Cinq réchants* (1948) and the external movements of *Sept haïkai* (1962). The qualities commonly associated with the lion—fierceness, majesty, and power—are absent here, and have been replaced by the qualities of modesty, supplication, and praise; some of these terms are used by Messiaen (1994) to describe the sculpture at Kaṇḍāriyā Mahādeva.

Numerology is also a factor for Messiaen's interpretation of the tāla symbolism: it manifests in four of the *siṃha* tālas. In Hindu numerology, the number five is a symbol containing the first masculine number, two, as well as the first feminine number, three. Combined, these numbers signify Śiva's androgynous nature (Bunce, 2002: 25, 29). The durations of (31), (101); the dochmiac meter of (31); the 15 mātrās (3x5) of number (8); and tāla (27), which Messiaen divides into small phases, all contain the number five.

Several aspects of the lion symbolism are missing from Messiaen's description; there is no mention of the lion vāhanas of Vakratunda and the mother goddess Durgā. Messiaen (1994: 317) asserts that according to certain traditions, the lion embodies the qualities of the god of destruction—Śiva Nataraja. However, he does not specify the tradition to which he is referring. The relationship between Narasimha and Śiva Nataraja may derive from the numerous North Indian reliefs that depict the Viṣṇu avatar dancing, suggesting a connection with the god of dance. However, Messiaen's interpretation is predominantly driven by numerological phenomena. The five dances—creation

and evolution, conservation and preservation, destruction and rebirth, incarnation of souls, and deliverance of karma—are exemplars of Śiva’s omnipresence. Whilst the composer is clearly aware of the lion’s relationship to Viṣṇu, more emphasis is placed on a symbolic relationship with Śiva.

3.1.3 Elephant Symbolism

The elephant is a common symbol in Hindu mythology. The white, four-tusked super-elephant Airavata is the vehicle of Indra, the god of rain, and one of the eight elephant vāhanas of the Aṣṭa-Dikpālas¹⁰; Gajamukha and several other mischievous demons are portrayed as elephant-headed creatures; elephants often feature in the iconography of the fortune goddess Lakṣmī; and Gaṇeśa, a son of Pārvatī and Śiva, is an elephant-headed boy seated on a mouse. According to Krishna (2010: 124), the mouse is considered to be an agricultural pest amongst farmers and, as such, the symbol of Gaṇeśa restraining his tiny animal mount may be a metaphor for controlling one’s unhealthy desires. Zimmer and Campbell (1963: 70) suggest that the two creatures together are a symbol for overcoming obstacles, a goal that is attainable irrespective of one’s physical stature.

In Hindu mythology, the mighty elephant is depicted as honourable, virile and strong. It is patient, slow to anger, and stoic: the gentle giant showing placidity in the face of hardship. However, despite its power, its cowardice is often alluded to in Hindu mythology too. In *Pañcatantra*, the hare’s trickery exposes Caturdanta’s fear of the lunar-god when his trunk disturbs the moon’s

¹⁰ The Aṣṭa-Dikpālas are the guardians of the eight directions of space. According to Dallapiccola (2002), they appear in their appropriate positions on the exterior walls of Hindu temples.

reflection in the lake. The elephant's reputation as timid has some basis in fact: during the Mughul period (1526–1857), elephants were used by the military, and it was not uncommon for panicked elephants to crush armies to death (Krishna, 2010: 120).

Many of the elephant's qualities and flaws arise from its ecological role: its power, endurance, and ability to remove obstacles, on the one hand, and its awkwardness and ungainly size, on the other. For example, the story of Gaṇeśa cursing the moon is triggered by the elephant-god's clumsy disposition.¹¹ The elephant 'stuck in a rut' highlights its vulnerability and clumsiness.

The elephant's cumbersome stature necessitates a reliance on wits and wisdom, as exemplified by Gaṇeśa's cunning strategy against the devas in the race around the world to acquire the fruit of knowledge. The elephant god is also considered the scribe of the *Mahābhārata* epic, taking dictation from its author, veda-vyāsa (Wilkins, 1973: 341). The broken tusk, used to transcribe the *Mahābhārata* resulting in the name 'Ekadanta' (single tooth) is also considered by Hindus to be a symbol of knowledge (Krishna, 2010: 126).

One of the etiological myths concerning Gaṇeśa's elephant head also relates to knowledge, wisdom, and fortune. According to one version of the myth, Śiva removes the boy's head in anger, later recants, and then orders the ganas to search for a replacement. The first head discovered is that of an elephant. It is found lying northwards, which is an auspicious direction, denoting prosperity.¹²

¹¹ The mouse swerves to avoid a snake in the road, and Gaṇeśa is sent hurtling to the ground. He falls, smashing his stomach open, unleashing all the food from his belly. The moon starts to laugh and Gaṇeśa breaks off one of his tusks and hurls it at the moon. Gaṇeśa orders that the moon-god never show his face again.

¹² Kuvera, the guardian of the North, is also regarded by as the lord of wealth and riches (Dallapiccola, 2002).

The notion of the elephant as sagacious is ancient and may be attributable to its long lifespan (Knappert, 1991: 106). The elephant is a symbol for determination and hard work in the face of adversity, and the ability to endure great difficulty; but the elephant's struggle also implies a life of hardship.

Messiaen's understanding of the *vāhana*, and its significance within Hindu mythology, is evident in his interpretation of *gajalila* (18): Indra, the God of rain, is seated on an elephant (Messiaen, 1994: 276). However, rarely are the animals described as relating to the 'vāhanas', which suggests that he did not fully understand the connection between deity and animal. In his reference to the vehicle mount of Ganesha, the symbol of desire is replaced by the symbol of the hidden, omnipresent Self (Messiaen, 1994: 323). Messiaen's exploration of *tālas* (18), (77), and (99) reveals an understanding of the Hindu symbolism commonly attributed to the elephant. However, there is one important reference that is missing from Messiaen's explanation: the term *gaja* may also refer to the iconographic form of Gaja Lakṣmī, the goddess of luck and prosperity, perched on a lotus leaf with elephants spraying water on either side of her. In this instance, the elephants signify obeisance to one's Dharma, that is, the fortune and riches acquired through one's hard work and determination (Viswanathan, 2008: 10).

3.1.4 Horse Symbolism

Horses have played an important role in the imagery and symbolism of Indian mythology since their use as agricultural and the military transport in the Vedic age (Doniger, 2014). Krishna (2010) notes a direct correlation between the animals awarded sacred status and their survival in the wild. Like the cow, the

horse was considered a sacred animal in ancient Hindu society, a fact that saved it from being eaten. However, unlike its counterpart, it was not saved from ritual sacrifice. The prohibitive expense of importation meant that horses were only available to the most affluent members of Indian society and, as such, the horse came to be associated with fame, economic and political power, foreign conquest, otherliness, and the exotic (Doniger, 2014: 438–43).

The opening of one of the oldest Upanishads, the *Bṛhadāraṇyakopaniṣat*, (c. 700 BCE) equates the body parts of the sacrificial horse to all aspects of earthly and heavenly existence; the nature's seasons, the passage of time, and the celestial bodies are all represented by the physical attributes of the sacred horse (Olivelle, 1996: 7). In Hindu mythology, the horse is often used as a symbol for sexual prowess and power. An example of this is found in the creation myth *Kṣīra Sāgara*, where the horse springing from the womb of the primordial ocean is a metaphor for fertility. Doniger (2014: 433, 459) argues that the hyper-sexualised mares and stallions in Hindu mythology play a role in narratives about controlling one's passion. The symbolism denotes self-discipline, especially when the horse is portrayed with fire and water. The theme of self-discipline is also to be found in Chapter Three of the *Kaṭha Upaniṣad*, where the horse, the reins, and the chariot rider are a metaphor for the control of one's mind, body, and senses (Upaniṣads, 1996: 238):

Know the self as a rider in a chariot,
and the body, as simply the chariot.
Know the intellect as the charioteer,
and the mind, as simply the reins.¹³

¹³ *kaṭha Upaniṣad* [3.3]

Understanding is thus contingent upon a strong connection between the mind, body (*ātman*), and senses (Upaniṣads, 1996: 239):

When a man lacks understanding,
and his mind is never controlled;
His sense do not obey him,
as bad horses, a charioteer.

But when a man has understanding,
and his mind is ever controlled;
His sense do obey him,
as good horses, a charioteer.¹⁴

Turaṅga, written ‘turaga’ in (Iyengar 1978), is the name of the white horse that arose from the churning of the primordial oceans (Bunce, 2000b: 1013). Turaga may be an alternate name for Ucchaihshravas, the king of all horses who is often depicted with seven-heads. In which case, turaṅga is an alternate name for the vāhana of Indra, the Deva of rain. Šimundža’s (1987: 124) references to mind and intellect in his interpretation of turaṅgalīlatāla (33) are characteristic of one of the Navagraha: Sūrya, god of the sun. However, Sūrya and the Navagrahas, Candra and Indra—deities commonly associated with the horse—receive no mention in Messiaen’s analysis, which focuses on the movement of the horse, the numerological significance of the rhythm, and its connection with the Centaur of Western astrology.

Given Messiaen’s description of Turaṅgalīla as ‘la force de vie et la puissance créatrice’ [the force of life and the creative power] (Messiaen, 1994: 280–81), along with his references to Sumudra Manthan (the churning of the ocean of milk), it is feasible that he was aware of its connection to the story of Ucchaihshravas, even if he did not know the horse’s name. However, Messiaen

¹⁴ *kaṭha Upaniṣad* [3.5–6]

(1994: 280) was drawn to the name *turaṅgalīla*, for its phonetic quality, several years before his exegeses of the Hindu symbolism.

3.1.5 Mythic and Miscellaneous Symbolism

The symbolism underlying *tālas* (34) and (63) are the names of mythical creatures and, as such, constitute a separate animal category (see Appendix G). Messiaen gives less attention to these both with respect to their symbolic interpretation, as well as their deployment in his music. *Śārabhalīla tāla* (34) belongs to the family of the seven multi-value, non-retrogradable rhythms (Fig. 3.5). However, as with *tāla* (63), it is not one of the twenty-five *deśītālas* commonly used in his music.

Nāndī (63), whom Messiaen (1994: 289) identifies as a guardian rather than a *vāhana*, belongs to the category of mythic creatures and typically appears as a half-human bull. Messiaen (1994: 289) does not provide a description of the creature's appearance; his account of *Nāndī* is limited to 'qui garde la porte de Shiva' [a guardian of Śiva's door]. Messiaen suggests that *Nāndī*'s proximity to Śiva, god of destruction, signifies that *Nāndī* himself is a symbol for something very close to destruction.

The bull, considered sacred throughout the Vedic period, signifies power, strength, and fertility. Not only is the bull the guardian and animal mount of Śiva, it is also the *vāhana* of two members of the Seven Mothers (*Sapta Matrikas*)—*Maheshvari* and *Varahi*—and two of the *Shaktis* of *Durga*, as well being an alias name for *Indra* (Krishna, 2010: 65). Several of the qualities associated with *Nāndī* (happiness, dance, and music) were gradually transferred to Śiva *Nataraja* during the post-Vedic period (Krishna, 2010: 69). These attributes are omitted

from Messiaen's description, which seems to focus on the visual image of the guardian at the Śiva's door. Messiaen postulates that the first laghu of Nāndī tāla (63) is a pictographic representation of Siva's door.

The mythical creature Śārabha, an eight-legged bird-lion, similar in appearance to the griffin of ancient Eurasian and Egyptian mythology, is omitted from Messiaen's analysis of Śārabhalīla tāla (34). Śārabha is considered by the Shaiva sect to be the fiercest of all creatures; Śārabha's defeat of Viṣṇu's lion avatar Narasimha symbolises Śiva's dominance over Viṣṇu, and hence Shaivism's superiority over Vaishnavism (Bunce, 2000a: 504; Sahai, 1975: 133). In *TRCO*, Messiaen (1994: 281) simply refers to it as 'le jeu passionné, la vitesse du jeu' ['the passionate game, the speed of the game'], with no mention of it as an animal, nor as an avatar of Śiva.

The 'miscellaneous' deśītālas (in Appendix G) have somewhat ambiguous names: Messiaen (1994: 295) considers *gāruḡi* (86) to be a variation on the name of the mythic bird Garuda—vāhana of Lord Viṣṇu. However, the name may refer to Gāruḡi, one of the thousand aliases of the love goddess Pārvatī; in which case, tāla (86) is not an animal name at all. Assuming Messiaen's interpretation is correct, the symbol falls under the category of 'mythic' instead of 'bird' because Garuda is typically depicted as humanoid with bird-like features, similar in hybrid quality to Śārabha.

The significance of the stork depicted by the tāla name *sārasa* (103), is ambiguous, as it signifies vigilance, passion and grace, and is also the shortened version of Brahmā's consort Sarasvatī. Šimundža (1987) suggests it is the son of Viṣṇu's mythic bird, Garuḡa.

The kings, *Rājamṛgāṅka* (117) and *Rājamārtāṇḍa* (118), are symbolically ambiguous. These deity manifestations are often ascribed animal-like qualities or characteristics: the former is another name for the moon god Sōma, who is ‘marked like a deer’ (Bunce, 2000a: 355); while *Rājamārtāṇḍa* is an appellation for the sun king Surya, and translates as ‘bird in the sky’, the latter most likely a poetic description of the former. Although Messiaen (1994: 304) manages to identify the solar and lunar symbolism of these tālas—he postulates that the increase and decrease of durational values portray the rising moon and the setting sun—the animal imagery is missing. The composer also misses the bird imagery associated with tāla (113), and the ‘sweet voice’ of the *kaladhvani* (113) is not identified as belonging to the Indian cuckoo.¹⁵ I now turn my attention to the subjects of movement and numerology.

3.1.6 The Symbolism of Movement

Some of the symbols evoke a sense of movement: the surge and ebb of rhythmic duration of *simhavikrīḍita*, depicting the bounding lion; the constellation of imagery from *turaṅgalīla* (33), which includes among other things the thrust of a Centaur’s arrow and the galloping of horses; and the cosmic movements denoted by the name *niśāṅkalīla* (6). However, very few of Messiaen’s interpretations refer directly to human poses or physical movement with the exception of the

¹⁵ In the Buddhism, Jayakara is often portrayed on a chariot driven by cuckoos (Majupuria, 1977: 157)

hand gestures used to indicate silent beats, and the movement implied in the images of *vijaya* (51), *dheṇkī* (58), and possibly *udīkṣaṇa* (57).¹⁶

Moreover, the tālas named after leg-poses (*asanas*) seem to have been overlooked. *Pratyāṅga* (16), whose root denotes a ritualised leg pose, is translated as ‘le membres du corps’ [parts of the body] without further explanation (Messiaen, 1994: 276). The *lagṇa* of *yatilagṇa* (17) means ‘clinging’ or ‘clasping’, but Messiaen postulates that the term may refer to a musical instruction for the players rather than the dancers. *Tribhāṅgi* (36) (or *tribhaṅga*) is a standing leg-pose normally held by the Hindu deities, the number three denotes the places in the body that are arched. Instead, Messiaen suggest it describes the division of the rhythm into two iambs that are ‘cut’, or divided, into groups of three. *Abhaṅga* (71), which is the name of an iconographic standing body-pose adopted by the Deities, receives no more than a basic description of the rhythm: ‘lambe, à longue allongée par le point’ [‘a long iamb, elongated by the dot’] (Messiaen, 1994: 291). Given his painstaking efforts to translate the names and symbols of each tāla, it is unlikely that these were omitted because of their self-evident nature. Although the subject of dance is referenced in his treatise, it is distinctly absent from his musical output.

3.1.7 The Symbolism of Numerology

The mystical aspect of numerology is an important part of the Hindu cultural tradition that not only underlies Vedic astrology, but also manifests in the

¹⁶ The jumping rhythm of *Jhampātāla* (76) may also be a reference to a human jump in contrast to the elephant jump of Messiaen’s ‘*Gajajhampa*’ (77).

architectural principals of India's ancient temples (Bunce, 2002: 5, 7–13). An exegesis of numerological phenomena uncovers several iconic and mystical symbols embedded in Śārṅgadeva's tālas, some of which are revealed by Messiaen's (1994) own analysis.

Shenton (2008: 33, 71) notes that while Messiaen's cryptographic representations are mainly syllabic, numerology occurs in the organisation of metre, sections, and rests in the organ works *Les Corps glorieux* (1942) and *Méditations sur le Mystère de la Sainte Trinité* (1969). In the case of tāla numerology, Messiaen's hermeneutical exegesis in *TRCO* is inconsistent; he arbitrarily switches between the sum and integer of a tāla in his efforts to uncover its hidden meaning.

Messiaen's interpretation of *tribhinna* (21) corresponds to the tāla name by adding the total number of units and disregarding their duration; the five beats of *mukunda* (111)—a manifestation of Viṣṇu who 'grants freedom' (Bunce, 2000a: 357)—is acquired by counting the laghus (see Appendix F). For *janaka* (91), Messiaen (1994: 296–7) counts the seven guru beats and also points to the decreasing number of alternating sub-groups: four guru, three laghus, two gurus, one laghu.

A third approach is evident in his reading of *tryaśra varṇa* (26^a). Messiaen (1994: 278) attempts to relate the number in the tāla name, *tryaśra*, to the number of beats; but in doing so, he ignores each repeated unit, reducing the tāla to a diminutive version of its non-retrogradable form, which makes a total of five laghus. The three colours attributed to a rhythm with two laghus and a druta (*IoI*) is never fully explained. However, his reduction is most likely an attempt to connect the rhythm to the 'three colours' suggested by the tāla name. Messiaen's

analysis also shows the number three arising from a coagulation of the rhythm into three unequal values, making *tryaśra varṇa* (26^a) a dissolved *dheṅkī* (58) rhythm. Similarly, Messiaen (1994: 277) ignores the number of laghu and gurus in his explanation of *tribhinna* (21), instead choosing to focus on the total number of units.

There are parallels between the way Messiaen regards the numerological significance of certain tāla, and his remarks on the subject of number in his Greek chapter. Typically, the metres assigned numerical significance by Messiaen are the ametrical ones: the *heptasyllabic adonicus*, *aristophanian hendecasyllabus*, or the *heptakaidecasyllabic sapphic minor*. In this case, the numbers considered to be significant are acquired by adding together the total number of short values, i.e. metrons (Messiaen, 1994: 73–4). Messiaen’s numerological analysis occasionally switches between finding the sum total of mātrās and counting the beats irrespective of their duration.

Occasionally, Messiaen ignores division-level events in favour of beat-level ones, in order that the symbol will better correspond with the tāla name: the numerological symbol for *pratyāṅga* (16)—a ritualised pose meaning ‘on every part or member of the body’ (Monier-Williams, 2008)—arises by counting the four gurus at beat-level, rather than the eight at division level. Messiaen does not consider the symbol for five, the number acquired by simply counting the number of objects. The number four, a feminine number, signifies wholeness, ‘perfection’, and ‘worldly balance’; it denotes the number of seasons, the four parts of the body, and also the number of Vedas (Bunce, 2002: 22). It is also the number of heads possessed by Brahmā. Messiaen was aware of a connection between the tāla name and its numerological phenomena, evident by his

willingness to switch between beat-level and division-level so that the numerological symbol more aptly corresponds to the tāla name.¹⁷

Most of Messiaen's numerological analysis focuses on the sum of division-level beats. The prime numbers of *miśra varṇa* (26^b) and *ṭṛtīyai* (3) are uncovered by counting the total number of anudrutas (demi-semi quavers). *Miśra varṇa* (26^b) is the highest prime with 71 anudrutas, whose number corresponds to the smallest measurement of Brahmā's life cycle. A Brahmān day (kalpa) consists of fourteen Manu-intervals, each comprising of seventy-one mahāyugas, a measurement equivalent to 306,720,000 years (Zimmer and Campbell, 1963: 16).¹⁸

Messiaen's preference for counting the division-level mātrās means that tālas are occasionally assigned symbols that are less suited to their names than those revealed by counting units and disregarding durational value. Messiaen does not consider the potential symbols of each integer (or duration) as being place-values of a larger compound number (i.e. two or more digits). For a deśītāla rhythm, this would be achieved thus: (I = 1, S = 2) produces the cosmic number twelve. Moreover, in keeping with Hindu numerology, the symbolism of

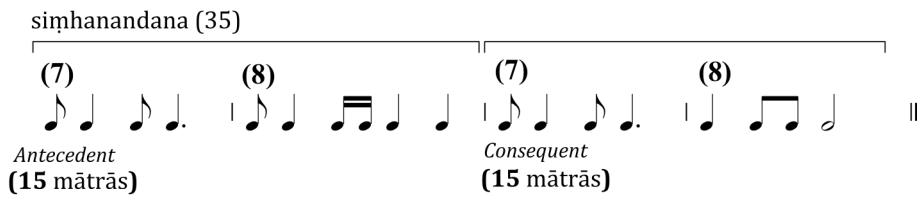
¹⁷ One wonders how many of these connections Messiaen identified but simply neglected to include in his analysis, and whether there were any he missed. For example, the three division-level laghus that make up Darpaṇa (7) (the mirror) are a reflection of the three objects that make up its rhythm; both division- and beat-level produce the same number. The 'mirror' of three could refer to the Tridevi—Sarasvatī, Lakṣmī, and Pārvatī—consorts of the Trimūrti.

¹⁸ A single mahāyuga is the same as 432,000 years, and a thousand of them is the equivalent of a single day in the life of a Brahmā (Zimmer and Campbell, 1963:16). Stone (1981) concurs, but notes numerous discrepancies on the measurements of a Brahmān day. Noting the modifications in measurement to the yuga, he notes, 'It is very doubtful indeed whether anything like the 4 yugas was known at the time of the Rig Veda' (Stone, 1981: 68).

one and two should also be considered separately as well as in relation to the whole number—twelve (Bunce, 2002).

However, other kinds of numerical relationships are discussed in his analysis: the thirty mātrās of *siṃhanandana* (35) can be divided into groups of five, and also four bars of alternating beats of seven and eight mātrās, the first two bars (i.e. fifteen beats) make up the antecedent, while bars three and four make up the consequent ($30 = 2 \times 15$)(Fig. 3.3):

Fig. 3.3 Sub-groupings of *siṃhanandana* (35) (Messiaen, 1994: 282):

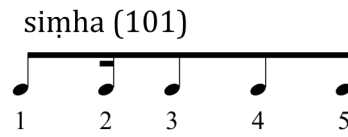


According to Messiaen (1994: 282), *siṃha* the lion, which signifies Śiva and the number five, evidently derives from *siṃhavikrama* (8), which has fifteen mātrās. Messiaen is implying a numerological connection between the two tālas, by suggesting that one derives from the other—*siṃhanandana* is Śiva's son.

However, the number five is not present in the other tālas with the name *siṃha*: *siṃhalīla* (10),¹⁹ *siṃhavikrīḍita* (27), and *siṃhanāda* (31). In fact, the number five can only be acquired in *siṃha* (101) by ignoring the mātrās and counting the five values (Fig. 3.4):

¹⁹ The numerology does not include the tālas number of Śārṅgadeva's table.

Fig. 3.4 The numerology of *simha* (101):



Messiaen also explores prime numbers in his work. He does so consciously in his music from *La Nativité du Seigneur* (1935) onwards (Messiaen and Samuel, 1994: 80). Primes make up the rhythmic pedals of *Quatuor pour la fin du temps* (1941); the twenty-nine rotating chords are used to harmonise a tāla of thirteen crotchets beats throughout the first movement—*Liturgie de cristal* (Griffiths, 1985: 92). Messiaen’s fascination with primes began during his childhood, and was reignited years later by his discovery of asymmetric divisions in Greek and Indian rhythm (Messiaen and Samuel, 1994: 75).

His encounter with ‘unexpected number’ was principally through the metric substitutions, often inserted during the final feet of a Greek verse, as well as through the technique known as *anacalasis*. The indivisibility of these numbers eventually took on aspects of ‘the occult’, and symbolised divinity (Messiaen and Samuel, 1994: 75). Similarly, in Hindu numerology odd numbers, which are considered masculine, are often symbols for aspects of divinity. This is why the first three odd numbers are widely regarded as representations of prominent Hindu deities (Bunce, 2002).

In several deśītālas, prime numbers are produced when the division-level beats are added together. The number five occurs (in dissolved and coagulated forms)—as divisions of drutas, laghus, gurus, or anadrutas—in at least twenty-six of the deśītālas, and an additional five tālas are multiples of the number five. *Simhavikrama* (8), *pārvatīlocana* (81), and *niḥśaṅkatāla* (119) (which are

variations of the same rhythm) consist of fifteen (3×5) laghus; *jagajhampā* (77) comprises of fifteen anudrutas²⁰; and the previously discussed *siṃhanandana* (35) has thirty laghus,²¹ which is also a multiple of five (6×5).

The prime number seven occurs in fourteen of the tālas (1×7 gurus, 7×7 laghus, 4×7 drutas, and 2×7 anudrutas),²² and *mallatāla* (64)—most likely named after the tantric goddess Mallarmā—contains twenty-one anudrutas, and is a multiple of seven (3×7). Four tālas are comprised of the prime number eleven (2×11 drutas, 2×11 laghus); two tālas, (75) and (88), are built from seventeen anudrutas; *rāgavardhana* (93) is comprised of nineteen anudrutas; *laya* (106) consists of thirty-seven drutas; and *miśra varṇa* (26^b) contains the highest prime, with seventy-one anudrutas.

A minority of tāla have proportional attributes that when notated are a pictographic depiction of a concept. *Dheṅkī* (58)—comprised of a *ragaṇa*—for example, is the Bengali word for a rice-shelling device; the long–short–long proportions of the rhythm evoke the image of two female operators standing on either side of the apparatus.²³

However, several of Messiaen’s symbols are pictographic, and hence proportional, resemblances entirely of his own making: Messiaen’s (1994: 301) analysis of *candrakalā* (105), meaning ‘crescent moon’, suggests the different durations represent the earth, sun, and moon, respectively. According to Bunce,

²⁰ An anudruta is half a druta. It is often compared to the semiquaver of Western notation.

²¹ The structure of this tāla is analysed as two groups of fifteen laghus (Messiaen, 1994: 282).

²² For the purposes of simplicity, I have discounted tālas that proportionally represent more than one number. The dipodic structure of *rāgavardhana* (93), for instance, consists of $7 + 12$ (3×4) anudrutas, as well as being a prime number.

²³ Given the simplicity of both the image and the rhythm, it is a sign that could be heard, as well as seen.

(2000b: 975), *candrakalā* (105) is often associated with Lord Śiva's crown. The duration of each value corresponds to the size of each celestial object; the three plutas are the sun, the three gurus signify Earth, and the single laghu is supposed to represent the moon. However, *candrakalā* is defined by Monier-Williams (2003) as a personification of one-sixteenth of the moon's digit. The final laghu in Śārṅgadeva's *candrakalā* (105) is one-sixteenth of the value of the entire tāla. Thus the different durations are more likely to represent the different lunar phases than the Varlet- and Daniélou-inspired celestial trio suggested by Messiaen (1994).

More abstract signifiers include *caṇḍa* (104), depicting the revolutions of the moon (Messiaen, 1994: 279). Messiaen's symbol is produced by separating the division-level beats into two groups, one of three drutas and one of two laghus, with each depicting the moon's revolution. The gradually increasing durations of *simhavikrīḍita* (27)—the tāla often related to *personnages rythmiques* and *principe de l'accroissement et décroissement d'une valeur sur deux* (Messiaen, 1994: 267)—literally represents the bounding lion, alternating with the guru, which is intended to symbolise Kṛṣṇa.

A symbol's meaning is often inferred through a combination of tāla name, pictogram, and number. The non-retrogradable portion of *simhavikrama* (8), analysed as the fourth *Epitrite* and a *vijaya* rhythm, signify 'two pillars' considered to be 'symbols of strength'. Whereas the *vijaya* (51) proper depicts the anjali, a salutatory gesture produced by the cupping of hands (Messiaen, 1994: 285). Both are symbols for balance, aided by the numerological significance of the number eight in the laghus of *vijaya*, all of which implies that balance to be an attribute of the lion.

3.1.8 Messiaen's Misreading: Translations

Messiaen sought help in translating the names of the 120 Śārṅgadeva deśītālas, from Sanskrit into French, with the help of his Hindu friend, the musician and theorist Tarun Kumar Ghosal (Messiaen: 1994: 254).²⁴ In spite of the occasional misinterpretation, Messiaen's consultation of an Indian musician shows his willingness to obtain an authentic interpretation of the material. Also, the poetical and religious symbolism of many of the tālas were intuited through his study of the works of Daniélou (1966), Herbert (1947; 1953), and drew heavily on *La Kena Upanishad* by Aurobindo *et al.* (1949), and the *Bhagavad Gita* (1969) (Messiaen, 1994).²⁵

Messiaen attempted to obtain an accurate interpretation of the underlying tāla symbolism. However, the Śārṅgadeva rhythms are often extracted of their symbolic meaning when used in his music. This is especially the case in Messiaen's early work, where the tālas are chosen first and foremost for their proportional qualities—invented symbols were assigned to them prior to his discovery of their meaning—or for the sound of their name, rather any cultural or religious symbolism. Johnson and Rae (2008: 44) claim that *Couleurs de la Cité celeste* (1963) was the first work to make acknowledged use of the symbolism. For example, the name *turaṅgalīla*, the title used for his symphony (1946–48), was chosen initially for its phonetic quality (Messiaen, 1994: 281). In his later works, the tāla symbolism plays a more significant role in his music, but the separation of tāla from symbolism still occurs.

²⁴ According to Messiaen (1994: 264), Tarun Kumar Ghosal was also an excellent tablā player.

²⁵ In the *Śaṅgītaratnākara*, some of the deśītālas are without religious or poetic significance and are functional, referring to musical terminology or song form, or named after people or objects. The last of the 120 deśītālas is named after Śārṅgadeva himself.

Other forms of misreading result from errors in notation, most of which are mistranslations copied directly from one of the first texts that Messiaen consulted on Indian music—*Encyclopédie de la musique et dictionnaire* (1913)—while others arise from the incongruities within Indian scholarship, or are the result of different regional interpretations or the anachronistic irregularities of different musicological treatises. I have examined the inconsistencies of notation of the 120 deśītālas, using a translation of Śārṅgadeva’s *Saṅgītaratnākara* (see Appendix L),²⁶ the *Saṅgītaśiromaṇi* (1428 CE) translated by Nijenhuis (1992)—an important musicological text composed by scholars from all over India—Joanny Grosset’s chapter on Indian music in *Encyclopédie de la musique et dictionnaire* (1913)—which was seminal to Messiaen’s study of ancient Indian music—and Messiaen’s chapter on Indian music from Book 1 of *Traité de rythme de couleur et d’ornithologie* (1949–92) (see Appendix F).

With regard to Messiaen, I have listed some of the most significant notational discrepancies below:

(7) Siṃhavikrama	(47) Makaranda
(10) Siṃhalīla	(88) Lakṣmīśa
(15) Caccarī	(96) Haṃsa
(19) Haṃsalīla	(105) Candrakalā
(26) Tryaśra varṇa	(117) Rājamṛgāṅka
(35) Siṃhanandana	(119) Niḥśaṅka
(38b) Maṇṭhaka	(38d) Fourth maṇṭha

²⁶ I consulted a version of *Saṅgītaratnākara* by Śārṅgadeva and Krishnamacharya (1943) written in Sanskrit.

The most inconsistent notation is the *siṃhanandana* (35) tāla, which is mistranslated in several sources. In (Grosset, 1913: 302), there is a discrepancy between the Indian and Western notation arising from a mistranslation of its first four values (Fig 3.4). Furthermore, the category in Grosset’s table lists *siṃhanandana* as comprising of thirty mātra, which does not correspond to either of the Indian or Western notation of thirty-two mātras. Grosset’s Western notation was later reproduced in Johnson and Rae (2008), but was never corrected. However, the *siṃhanandana* in *TRCO*, which corresponds to the rhythm in (Nijenhuis, 1992), differs from Grosset’s version in the third, fourth, and twelfth values. The rhythmic symmetry of the prolonged iambus rhythm (indicated by the *X* in Fig. 3.4) is disrupted by the substitution of a normal iambic foot in *TRCO*. The result is a repetition of the opening foot that separates the tāla into a parallel period of two distinct phrases of fifteen mātras.

Fig. 3.4 Notational discrepancies of Siṃhanandana (35)

Author	Notation:
(Śārṅgadeva et al., 1943)	<i>S S I Ś I S o o S S I Ś I Ś S I I ŌX</i>
Grosset (1913)	<i>I S Ś S I S o o S S I Ś I Ś S I I ŌX</i>
Nijenhuis (1992)	<i>S S I Ś I S o o S S I Ś I Ś S I ŌX</i>

Messiaen (1994)	
Johnson and Rae (2008)	

Conversely, Messiaen's version of *sama* (53) and its retrograde form, *turaṅgalīla* (33), which consist of two drutas with virāmas and two without, agrees with the notation in Śārṅgadeva *et al.* (1943) (see Appendix F). However, according to Nijenhuis (1992: 327, 331), only one of the drutas has a virāma, eliminating any retrograde relationship between *tāla* (33) and (53), which again shows the discrepancies between the different regions and periods of music in India. Inconsistencies often occur on the last beat of the *tāla*, such as the extra guru in Nijenhuis's version of the *makaranda tāla* (47). *Haṃsalīla* (19), *krīḍā* and *caṇḍaniḥsārūka* (45), which Messiaen (1994) identifies as having two virāma, only have one virāma on the second value in Nijenhuis (1992: 325). It is likely that Messiaen's version of *niḥsārūka* (40), inherited from Grosset (1913), is in error given that Nijenhuis (1992) and Śārṅgadeva *et al.* (1943) show the rhythm as an iambus, with additional variations of the rhythm not listed in (Grosset, 1913). There is also a notational discrepancy in the rhythm *caccarī* (15) that Messiaen (1994) inherited from Grosset (1913), omitting the laghus (eight in total) that interrupted each of the iambic feet; the eight laghus are present in both Śārṅgadeva *et al.*'s (1943) and Nijenhuis's (1992) notation.

Several *tālas* have identical proportions but are assigned different names. This occurs as the result of (1) regional and period differences, (2)

mistranslation of names, and (3) tempo and stylistic distinctions. The duplication of tāla patterns is often due to different regional names assigned to the same rhythm. For example, Nijenhuis (1974: 65, 1992: 329) notes that the twelfth-century author Jagadekamalla uses *dombilī* tāla (70) and the thirteenth-century author Nandivikeśvara uses *jhombaḍa* tāla to describe identical rhythms. Other discrepancies in the spelling of tāla names include Śārṅgadeva's '*gajajhampa*', which is referred to as '*jagajhampa*' by Jagadekamalla (Nijenhuis, 1974: 77)

Often, rhythms appear duplicated in Śārṅgadeva's table that are most likely distinct in *laya* (tempi), in the same way that the trochee and semantic trochee of ancient Greece are distinguished by their tempi even through the rhythms may be indistinguishable with respect to their proportional properties. Other inconsistencies in tāla names are the result of spelling errors. For example, tāla (77) appears as 'gaja' and 'jaga' in different texts—*jagajhampā* (77) means 'mountain jump', while *gajajhampa* means elephant jump (Appendix F). In cases where the error is the result of variations in labelling by different medieval scholars or the errors are inherited from (Grosset, 1913)—where Gagahampā and Jagajhampā were used interchangeably, and such confused usage dates back to Śārṅgadeva and Dāmodara (Nijenhuis, 1974: 77)—Messiaen can be forgiven.

Errors in notation, tāla names, and the misinterpretation of symbolism are all present in Messiaen's account of Śārṅgadeva's 120 deśītālas. However, the inconsistencies of notation also reveal an occasional correlation between Messiaen's account of deśītālas in *TRCO* and notation in the *Śaṅgītaratnākara*, which contradict the notation in the table of Indian rhythms that Messiaen had initially encountered in Grosset (1913). In Grosset (1913), there is a contradiction in the Indian and Western notation of the *maṇṭhikā* (55), which

has been corrected in *TRCO*. This correction suggests that Messiaen had consulted additional material, beyond the table of *deśītālas* listed in Grosset's chapter—most likely the *Śaṅgītaratnākara*, which was eventually translated for him by Tarun Kumar Ghosal (Messiaen, 1994: 264; Samuel, 1994: 77).

Messiaen's inaccurate transcription of *tribhāṅgi* (36) may itself signify an authentic intention. In Grosset (1913), the Indian notation is *ISIS*, which does not correspond to the rhythm found in Śārṅgadeva *et al.*, (1943). However, in his transcription of the rhythm, Messiaen favoured the incorrect Indian notation over Grosset's accurate Western notation, resulting in a transcription of the *tāla* that was ultimately incorrect.

Having examined his chapter on Indian music, I now turn my attention to the application of Indian rhythmic principles in Messiaen's music.

3.2 Messiaen's Praxis: Comparing Indian Classical Performance Practice with Messiaen's Use of *Tālas*

There are several differences in the way Messiaen uses *deśītālas* compared to their deployment in Hindustani and Kārṇāṭak music. Some of these are due to aspects of Indian performance practice that Messiaen consciously abandoned, while others signify a lack of stylistic knowledge. The key differences include (1) Messiaen's instrumentation of *deśītālas*, (2) the absence of improvisation in Messiaen's music, (3) the musical forms signified by certain *tālas*, (4) inappropriate mixture of *tālas* from different periods, (5) the abandonment of performance practices indicative of the stylistic idiosyncrasies of Indian classical music, such as cutting the *tālas* short instead of converging on the *sam*,

sannipāta, or *ghāta* at the end of the rhythmic phrase,²⁷ and (6) conceptual differences in the use of palindromic rhythms. However, there are also similarities that may either demonstrate Messiaen's interest in retaining certain principles of Indian classical music, or simply be the result of a shared musical preference. These include: (7) conceptual similarities in the way time is both regarded and its employment in Messiaen's music, (8) Messiaen's use of cyclical rhythm and permutation, and (9) the hierarchical organisation of rhythm.

There are parallels between Messiaen's horological concerns and the concepts of temporal organisation underlying the ideology of Indian classical music. First, both make a distinction between time and timelessness. According to Rowell (1992: 181, 186), the co-existence of temporal streams manifests as a separation between the physical, external time that is divisible, and an internal time that occurs within the self (*ātman*), which is unmeasurable and 'devoid of distinctions'. The author asserts that Indian thinkers must have reconciled these two conflicting ideas of time:

If there is any consensus, it is that time is one, indivisible, eternal, and free of any limiting attributes or qualities such as change, motion, from and the like, its apparent properties are inferred by the mind as the result of our perception of such things as speed, slowness, duration, succession, simultaneity, priority, and posteriority. (Rowell, 1992: 187)

Furthermore, Messiaen's (1994: 9–11) separation of qualitative 'true' time from the quantity of structured time—evident in his distinction between the 'exact expression' of a composer's musical conception, provided by Messiaen's *first* notation and the 'false' metre of *fourth* notation—has conceptual similarities

²⁷ The term '*sam*' is a likely derivative of the ancient term '*sannipāta*' (Rowell, 1992: 194).

with the streams of divisible external time and immutable internal time evident in Indian thought (Messiaen, 1966: 29).

Although the internal and external time streams are also comparable to Messiaen's description (in *TRCO*) of physiological and psychological time, they differ in one important respect: for Messiaen (1994), the immutability of time is an attribute of timelessness, i.e. eternity. Messiaen's distinction between time and eternity draw on the theological ideas of Thomas Aquinas: 'Time responds to movement and eternity stays the same' (Messiaen, 1994: 7). Eternity, which signifies God Almighty, is the simultaneity of all and is thus considered immeasurable, existing outside of time. According to Darbyshire (1998: 38–9), immutability of time is represented by Messiaen's symmetrical permutations and non-retrogradable rhythms, symbolising both its circularity and God's eternal nature. However, there are a number of similarities in the way that time is regarded, which include the notion of time as a biological and a cosmological force; the personification of time; the time that brings about destruction of the universe, and time as a symbol of its own end—though for Messiaen, the notion of end times refer to Christian eschatology rather than the cyclical nature of Hindu creation. Griffiths (1985) notes that the palindromic rhythms, evident in four of the five *mārgatālas* from *Nāṭya Śāstra*, denote a concept distinct from the Western notion of directional time: 'It [symmetry] denies the sort of progress by which most Western music proclaims itself at one with a notion of events changing through time' (Griffiths, 1985: 100). In this regard, the symmetry of a palindromic rhythm does not signify the time's end, but is instead a symbol of perpetual decay and ever-new beginnings.

The Hindu concepts of astrological time, calendar time, and aeonic cycles of cosmic time are central to its mythology: the motion of Narayana's hooded serpent 'whose coils symbolise the endless revolutions of time' is a sign of temporal inconstancy (Dallapiccola, 2003: 19). Perpetual inconstancy is the underlying theme of the story of Indra's castle: Viṣṇu, having adopted the form of a small boy, explains to the demigod Indra, who is intent on building the most resplendent castle ever made, that there have been as many manifestations of Indra and his castles as there are insects in a parade of ants (Zimmer and Campbell, 1963: 5–7).

Śiva, Viṣṇu, Devi, and Brahmā simultaneously stand for a never-ending cycle of creation, preservation, and destruction of the Universe. Viṣṇu's all-consuming fire gives way to a cloud that extinguishes the flames, submerging all of creation in an ocean of primeval water—and the whole process is set in motion once more (Dallapiccola, 2003: 19). Brahma creates the universe, observing the four *yugas* that make up a Brahman day (Stone, 1981: 51). At night, he falls asleep to the erosion of reality, but the next day the sun rises and with it comes the creation of a new dawn (Narayan, 1990: 3; Stone, 1981: 56).²⁸ Śiva, the master of music, dances the world into existence, at the end of the cosmic cycle (*kalpa*); while his dance of bliss, Ānanda Tāṇḍava, reins destruction on the world (Smith, 1996: 2). Even the suffering of the damned in the seven regions of *Naraka* is considered temporary (Dallapiccola, 2003: 24).²⁹ Narayan (1990) notes that the concept of cyclical time results in an absence of finality in

²⁸ Stone (1981: 66–7) suggests that while emptied of all matter, the Universe itself is eternal.

²⁹ The Hindu concept of Hell traditionally consisted of seven distinct regions (Dallapiccola, 2003: 24).

the dramas of Hindu mythology: ‘There is no tragedy in the Greek sense; the curtain never comes down *finally* on corpses strewn about the stage’ (Narayan, 1990: 5).

The symmetry of *dhenkī* (58) and *vijayatāla* (51) are examples of this paradox. Their central value symbolises the preservation of life, but their bilateral wings are symbols for destruction and renewal, denoting a cosmic *perpetuum mobile*—the means that brought about their beginning are the same as those that bring about creation’s end: ‘Creation is not the “beginning” and destruction not the “end”’ (Dallapiccola, 2003: 21). Death and rebirth are implied through the effect of palindromic irreversibility, in that any attempts to destroy through retrogradation will produce the same event, inevitably resulting in its renewal.

As opposed to the void that precedes and follows the singular linearity of finite ‘Christian time’, Messiaen’s non-retrogradable rhythms stands for the constancy of eternity—the unique, one-time-only event of Christian creation is in contrast to the endlessness of Hindu re-creation. The cycle of cosmic renewal in Hindu mythology even extends to the deities themselves, who continually die and are reborn (Dallapiccola, 2003: 21). The concept of reincarnation is in contrast to the theological virtues of Christianity, which regards the death and resurrection of Christ to be significantly unique.

Messiaen’s symmetries—permutations, modes, triptych forms, and rhythms—are the means through which he is able to depict time’s end. His intention is to empty the music of the rhythmic and harmonic teleology normally associated with Western classical music, creating the effect of temporal suspension (Griffiths, 1985: 100–1).

Indian rhythmical principles are evident in Messiaen's expansion of symmetrical properties inspired by his study of eleven (Fig. 3.5) of the 120 tālas in the *Sanḡitaratnākara* (Samuel, 1994: 76) and three of the five mārḡatālas from the *Nāṭya Śāstra* (c. 200 BCE–200 CE): *cācapuṭa*, *ṣaṭpitāputraka*, and *ṣaṃpakkeṣṭāka* (Nijenhuis, 1992: 319).³⁰ Another technique to arise from the symmetry of Indian tāla is *un rythme non-rétrogradable développé par agrandissement symétrique de ses extrême à droite et à gauche* [the development of non-retrogradable rhythms by symmetrical expansion]. It is used in the final movement of *Vingt regards sur l'enfant-Jésus, Regard de l'Eglise d'amour* (1944) and is an innovative interpretation of karṇāṭak principles arising from the examination of karṇāṭak jātis (Messiaen, 1994: 332).

Fig. 3.5 The multi-value non-retrogradable rhythms:

Deśītālas	Messiaen (1994)	Nijenhuis (1992)	Śārṅgadeva (1943)
(10) Siṃhalīla	-	10001	-
(26a) Tryaśra varṇa	110011	-	110011
(34) Śārabhalīla	11000011	11000011	11000011
(38f) Fifth maṇṭha	-	1 1 1 (Jagaṇa or haṃsaka)	-

³⁰ In *TRCO*, Messiaen (1994: 250) designates the fourth rhythm *pancapāni*. In (Nijenhuis, 1974: 63), this rhythm is called *udghaṭṭa*. Although this is technically symmetrical, its values are the same.

(38i) Eighth maṇṭha	–	S I S (Ragaṇa)	–
(46) Jayaśrī	SISIS	SISIS	SISIS
(51) Vijaya	Ś S Ś	–	–
(52) Bindumālī	S o o o o S	S o o o o S	S o o o o S
(58) Dheṅkī	S I S	S I S (Ragaṇa)	S I S
(75) Pratāpaśekhara	–	–	òòò
(80) Pratimaṇṭha(ka) or kollaka	IIS SII	IIS SII	IIS SII (?)

Messiaen (1994: 273) claims the first Śārṅgadeva rhythm, *ādi tāla*, symbolises the beginning of creation and the birth of time itself. The single beat signifies the beginning of the cosmic—the first event in the entire Universe: ‘One beat; with eternity before it and eternity after it’ (Messiaen, 1960: 11). His analysis of the *ādi tāla* rhythm in *TRCO* highlights a distinction between two concepts: the beginning of time and the beginning of rhythm. The *ādi tāla* signifies the former because his symbol for the birth of rhythm requires at least

two beats, resulting in both a ‘change of number and duration’ (Messiaen, 1960: 11). In Hindu symbolism, the single unit signifies ‘universal oneness’.

Messiaen’s (1994: 264) exploration of the polytheistic aspects of Hinduism led him to Alain Daniélou, Jean Herbert, and Shri Aurobindo’s commentaries of the *Upanishads* and the *Bhagavad Gītā*. However, Messiaen’s exegesis of *ādi tāla* symbolism conflates the pantheism of Hinduism, particularly the notion of universal oneness, with the supreme monotheistic deity of Christianity. The tritheism of the Hindu Trimūrti—Brahmā, Śiva, and Viṣṇu—and the Christian embodiment of the Holy Trinity—God the father, God the Son, and the Holy Spirit—are discussed as cognate terms, highlighting the former’s resemblance to the latter. Ultimately, Messiaen’s comparison portrays Hinduism as a muddled reflection of Christianity. Moreover, he betrays an air of superiority when he remarks:

Mais ils [les Hindous] n'ont pas reçu la révélation merveilleuse du grand Mystère des Chrétiens: le Dieu unique en Nature et Trois en Personnes, le Mystère d'un seul Dieu: le père, Fils, Saint Esprit. Leur conception de la création du monde reste également confuse. (Messiaen, 1994: 273)

[But they [the Hindus] have not received the wonderful revelation of the great Christian Mystery: the one God in Nature and in Three Persons, the mystery of one God: Father, Son, Holy Spirit. Their conception of the creation of the world also remains unclear.]

Messiaen is keen to point out similarities between the two religions, which are described positively, while the symbolic aspects not conforming to his Roman Catholic faith—for example, the Hindu conception of the world’s creation—are described as ‘confused’ (Messiaen, 1994: 273).

However, there are commonalities between Messiaen’s philosophy of duration and the concepts of time in Hindu mythology, the latter significantly

influencing the organisation of time in Indian music: the distinction between the psychological and cosmological; the synchronous nature of different times; the immensely large and the microscopic running simultaneously. These are reflected in the synchronous layers of metre, multiple-level, beat-level, and division-levels of Indian rhythm, and are also apparent in Messiaen's music:

I spoke to them of all those superimposed times which surround us: the immensely long time of the stars, the very long time of mountains, the average time of man, the short time of insects, and the very short time of atoms: all these times being similar in the sense that they represent for each a normal life-span, on the other hand, all these times present enormous differences to our perception. (Messiaen, 1960: 11–2)

Rowell (1992: 190–1) describes a similar multi-layered organisation of time apparent in the tāla system, the first of which he terms the '*infrastructure* of musical rhythm', consisting of divisions of time, audible and silent gestures, tempo, and synchronisation. The second is the *structural* level: phrase, measure, cadence, repetition of units, and section. The final feature is the *suprastructure* level, which encompasses the seven major forms of ancient music and their alternative versions.

Rowell's description of surface-level events in Indian music—the tones, durations, accents, pulsations, etc.—are directly comparable to Messiaen's concerns for intensities, timbre, and duration showing that both have a similar hierarchy of rhythm.

Furthermore, the rhythmic units in Indian music are built upwards from the smallest units to the largest ones; while the additive, ametrical nature of Messiaen's rhythms requires that temporal organisation is similarly conceived

from smaller values upwards, rather than the top-down rhythmic hierarchy of the Western mensural system.

The two principal categories of metre in Indian classical music are based on distinguishing linear time from cyclical time. Linear rhythms, common to most styles of light music—for example, the Hindi song *Aage Bhi Jaane Na Tu* (1965) [You are not going forward, you are not going back] from the film *Waqt* by Ravi Shankar Sharma—are shorter, consisting of fewer beats, with a rhythmic motion similar to movement of a train (Jauhari, 2016). Conversely, the cyclic rhythms used in traditional forms of Indian classical music tend to comprise of more complex tāla patterns, which are longer, and have a sense of return. Rowell (1992) states that the cyclical nature of temporal organisation is heavily influenced by cultural ideology: ‘Among the most powerful pressures on the arts of India have been cultural preferences for the circular disposition of space and the cyclical disposition of time’ (Rowell, 1992: 180).

Messiaen’s interest in cyclical rhythm manifests as a preference for composite over regular metres. Often, the regular metrical structures used in his music bear little relation to the rhythms being employed. According to Messiaen (1966: 29), they have been notated in this way, using his ‘fourth’ notation, to make it easier for performers who are used to reading music in a regular metre. His preferred ‘first’ notation—preferred because it is ‘the exact expression of the musical conception’ (Messiaen, 1966: 29)—has more in common with the ametrical rhythms of tāla, than the consistent, even metres found in Western classical music. His first notation is reserved mainly for solo movements, such as the solo clarinet of *Abîme des oiseaux* (1941), or the piano cadenzas in *Le désert* from *Des canyons aux étoiles...* (1972), which switches between fourth notation

and a combination of first and fourth notation during the horn solo and tutti passages.

Prior to the system of numerous *deśītālas*, which came into use during the early medieval period, variations of each of the five *mārgatālas* came from improvisation based on the original *tāla*. While some Indian classical works contain a mixture of *tāla*, others are reserved for a specific variety of composition. For example, each variety of *dhruva* and *maṇṭha* was performed using one of the ancient *tālas* (Nijenhuis, 1974: 65). Messiaen's destructive techniques, i.e. *accroissement et décroissement d'une valeur sur deux* or *augmentation inexacte*, constitute a variation based on the original *tāla*. However, his alterations tend to occur in isolation from the original rhythm, as opposed to an improvised sequence that gradually evolves out of the original *tāla*. Furthermore, *tāla* are often assigned to non-percussion instruments rather than percussion soli passages, the latter not uncommon in Indian classical music but not especially characteristic of Messiaen's music.

Conversely, the variation of *tāla* patterns used in early Indian classical forms, such as *thumri* or *khyāl* compositions, are mainly based on gradual changes of a recurring pattern. The closest examples of this kind of rhythmic development in Messiaen's music are in the gradual transformations of *miśra varṇa* (26a) and *siṃhavikrama* (8) in the *Introduction of Sept haïkai* (1962). This technique does not derive from Indian musical principles, but from his use of *métabole*, itself derived from his study of Greek rhythm. However, the rhythmic consistency produced by recurring *tāla* in an Indian classical composition, is comparable to the rhythmic motion of the permutations of Messiaen's rhythmic pedals, such as the piano part of *Liturgie de cristal* (1941).

Rowell (1992: 200) notes that while it was not uncommon for a tāla to be played in each of its manifold states—i.e. *ekakala*, *dvikala*, and *catuṣkala*—it was typical for the syllabic state, the smallest version, to occur at the end of the work, rather than at the beginning. Although the various states of the mārṅa tāla rhythm are expanded by way of rests and not by duration, they are an exact proportional transformation of the original rhythm, and are similar in this respect to the fourteen varieties of augmentation and diminution in *Technique* (1944). However, there is no guiding principle behind the order in which Messiaen's augmentations occur. For instance, in the *Introduction of Sept haïkai* (1962), the *siṃhavikrama* (8) rhythm used in the metallic percussion parts appears in its original form in the middle of the work, while its augmentations occur at either end of the movement; in the *Consécration of Messe de la Pentecôte* (1949), *siṃhavikrama* remains in its original form throughout and is merely juxtaposed against *miśra varṇa* (26b).

The process of augmentation was different under the mārṅa system than the later *deśī* system, which focused on a particular unit (*aṅga*) for expansion, rather than augmenting the entire rhythm. According to Sambamoorthy (1966: 19), expansion of duration was typically applied to the *guru*, and to the *laghu* under the later Karṇāṭak system, corresponding to the tempo of the composition, which was played at different lengths of two, four, or eight *laghu*, respectively. Changing only the duration of the *guru* creates a disproportionate expansion of the rhythm, in keeping with Messiaen's *augmentation inexacte*. However, there is no consistent correspondence between Messiaen's tempi and the type of augmentation employed. His indiscriminate use of exact and inexact forms of augmentation in the same work is not consistent with the stylistic practices of

either Karṇāṭak or Hindustani music. Messiaen's augmentations are both distinct from, and in accordance with, the genera of the five jātis of the Karṇāṭak system. They are congruent because his *augmentation inexacte* alters some values, while leaving others as they are; but they are distinct because the expansion does not always occur in units of the same value.

Messiaen does not adhere to the articulation traditionally associated with certain beats. There is no consistent distinction between the stressed *tali* and unstressed *khali* beats of the tāla. He is inconsistent in his indication of the tāla's principle beat, *sam*, suggesting that the underlying stresses, in keep with the styles of Hindustani and Karṇāṭak music, are ignored. Moreover, Messiaen's music is missing the chironomy used to mark the silent beats (*kalās*) of the bar. In Karṇāṭak music, these are called *niḥśabda*, and are indicated by hand movements 'to point out rhythmical structure' (Nijenhuis, 1974: 61).

Rangaramanuja Iyengar (1978: 193) notes that similar systems were used in 'ancient times' and continue to be used in Indian classical music today.³¹

Messiaen (Messiaen and Samuel, 1994: 67) regards rhythm as 'the ordering movement', a description that has its roots in Platonic *kineseos taxis* (Plato, 1926: 128–9). Messiaen's definition of rhythm encompasses duration, intensity, density, tempo, and includes extra-musical sounds such as the motion of waves, the shape and texture of mountains and flowers, and even some of the spatio-temporal aspects of dance. It is curious, however, that the concept of ordered motion is never explored in terms of physical movement in his music.³² Messiaen

³¹ In Appendix L, the Śārṅgadeva rhythms showing under brackets, such as *siṃhanandana* (35) and *karaṇayati* (84), have *niḥśabda* beats.

³² Physical movement by the ensemble is something I explore in Act II of my ballet *Black Orpheus: II/V. Night Games...* and II/VII. *Carnival of Earthly Delights*.

(1994: 258) was aware of the Indian performance practice of hand gestures to mark out the silent beats, which was also marked by singing:

With the gestures of *tāla* he regulates the illusion of outer time with its gross divisions and audible forms, while with the controlled emission of vocal sounds he manifests the true, continuous inner time [...] the exact rendering of the hand gestures, durations, and proportions of the music was considered a matter of greater importance than the correct delivery of the poetic text. (Rowell, 1992: 186)

The closest Messiaen gets to exploring physical movement in his music is in his notation of conductor beat symbols in *Poèmes pour Mi* (1936–37). Messiaen's third notation arises from the impracticality of larger ensembles coping with constant changes of time signature. This also extends to the difficulty of effectively conducting metrical changes that switch between beat and division level.

In Indian classical music, *tālas* are typically divided into smaller units and dissolved into organised sets, marked by the stressed and unstressed accents. As a result, they are not necessarily heard as a surface rhythm, but serve as the metrical undercurrent in the music. In this respect, there are commonalities between Messiaen's textural concealment of *deśītālas* and their typical function in Indian music, submerged among other rhythms, melodies, and harmonic elements. However, the *tali*, *khali*, and *sam* are often missing in Messiaen's music, which further serves to obfuscate the underlying pulse of the *tāla*.

Messiaen's *chromatisme des durées* was inspired by *deśītālas* that gradually increase in duration: the *tribhinna* (21) and, despite the lack of consensus over the precise length of its final the duration, the *lakṣmīśa* (88).³³

³³ The last value of *lakṣmīśa* (88) is a guru in (Grosset, 1913) but appears as a pluta in (Śārṅgadeva *et al.* 1943).

However, the increase of duration tends to occur in sets of two, as in the case of *dīpaka* (56) and its retrograde, the *sārasvati kanthābharanatāla* (115), rather than the incremental increase by successive values. Alternatively, the durational increase tends to be uneven. *Vardhana* (92) was renamed ‘vardhana (l’augmentation)’ by Messiaen (1994: 297), who considered it a crescendo of values because the durations increase in length. This is in contrast to the gradual augmentation exhibited by the chromatic durations employed by Messiaen in works such as *Livre d’Orgue* (1951). The overall contours of a tāla play a role in Messiaen’s development of techniques, but he does not adhere to their specific ratio relationships.

Lastly, Messiaen considers rhythm to be the essential aspect of music (Samuel, 1994: 67). However, unlike the *mārgatālas* and *deśītālas* of India, his rhythms are not intended to be a piece of music in their own right; the importance of tāla in Indian music go beyond their hierarchical pre-eminence within a sonic texture, because they are also the foundation for rhythmic improvisation throughout the musical work. Indian classical compositions will often feature *solī* passages with variations based on the tāla, played on a percussion instrument such as the *ghaṭam* or *tablā*:

In India, [the performer] does not merely beat the *sarva laghu*, but provides a cross rhythmical accompaniment based on the style, movement and rhythmical construction of the pieces rendered. (Sambamoorthy, 1966: 18)

The improvisatory nature of Indian music has given rise to a complex list of names describing the structures and performance procedures associated with certain types of composition (Rowell, 1992: 24). Common motifs, such as the

mukrah and *mohra*, are associated with particular tālas and used to replace parts of the standard phrase, or *theka*, during improvisation (Nijenhuis, 1974: 60). Tālas are also used to signify certain musical forms in both Hindustānī and Kārṇāṭak music. Conversely, in Messiaen’s works, the same tālas are used in pieces with very different character and tempi. For example, *simhavikrama* (8) is played at a lively tempo in *Cinq Rechants* No. 5, *modéré* in the contraltos of the 1st *Rechant* (from b. 19). However, some tāla combinations are often associated with specific moods and tempi. For instance, the rhythmic pedal built from three tāla—*Rāgavardhana* (93), *Candrakalā* (105), and *Lakṣmīśa* (88)—is marked *bien modéré* in several works, including *Liturgie de cristal*, played pianissimo and *en poudrolement harmonieux* [in harmonious haze]; and as a pedal in *Chant d’amour 2* from *Turungalīla-Symphonie* (1946–48). Although it is marked ‘*plus lent*’ in *Arc-en-ciel d’innocence* of *Chants de Terre et de Ciel*, it is again clothed in a resonant harmony, marked ‘*chantant et sonore*’ [singing and sonorous].

3.3 Summary

In spite of the theoretical accuracy of Messiaen’s research, his account of Indian performance practice is relatively sparse. Messiaen’s explanation of deśītālas in *Saṅgītaratnākara* (c. 1240 CE) includes mistranslations of Indian notation, some of which were inherited from earlier musicological works, and misreading of the Hindu symbolism. Ironically, given his fascination for birds, the most glaring error is in his mistranslation of the Lord Brahmā’s mount—*haṁsa*. Moreover, the sweet voice of *kaladhvani* (113) is not assigned to the Indian cuckoo.

His use of Indian rhythm differs from Indian classical music in its instrumentation, its absence of improvisation, and the abandonment of Indian musical forms and performance practices. Aspects of Indian music adopted by Messiaen include the use of cyclical rhythms and permutation.

A number of Messiaen's horological concerns are akin to ideologies within Indian classical music, these include the existence of different time streams, arising from the synchronous nature of the macroscopic and microscopic, which are reflected in the multi-layered infrastructure of rhythm, and also the distinction between materially divisible 'states' from indivisible states. However, for Messiaen's internal psychological time is not the indivisible time of the Hindu *ātman*, nor does it bring forth perpetual inconstancy. Messiaen's state of immutability is simply the absence of time, located in an eternity beyond, and outside of, our universe. Messiaen's symmetrical permutations and non-retrogradable rhythms, signifies both the end of time and the immutability of timelessness. Conversely, the palindromic symmetry, apparent in some of the *mārga* and *deśitālas* are a Hindu symbol for the continual cycle of creation.

Messiaen's research shows an understanding of the compositional practices employed in Hindustānī and Karṇāṭak music, and while parallels can be drawn between Messiaen's rhythmic techniques, particularly in relation to the improvisation of the early *mārga* system, his innovative appropriation of Indian rhythm necessitates an abandonment of many of its traditional performance and compositional practices. In Chapter 4 I analyse Messiaen's appropriation of Japanese subjects in his gagaku inspired work, *Sept haïkai*.

Chapter 4

Analysis of Cultural Appropriation in *Sept Haïkai* (1962)

4.1 Introduction

In this chapter I will discuss: (1) aspects of cultural appropriation most relevant to Messiaen's *Sept haïkai* (2) general artistic trends internal to Japan and in its relationship with Western Japonism (3) representations of Japan in *Sept haïkai* (4) depictions of Japan through dynamics and textual layering (5) the use of Greek metre in *Le Parc de Nara et les lanternes de pierre* (6) process and birdsong in the central movements of *Sept haïkai* (7) Messiaen's impressionistic expressions of the Orient (8) Messiaen's strategic location to the orient (9) the use of *desītālas* in *the Introduction* and *Coda* (10) the religious symbolism of Messiaen's 'shakti' rhythms.

4.2 Cultural Appropriation and *Sept Haikai* (1962)

In my first chapter, I discussed several criteria by which a work can be considered an unethical act of cultural appropriation. Appropriation can be unethical if deemed harmful to the insider culture (Young and Bunk, 2012: 274). According to Feinberg's offence principle, profound offence is defined as that which causes outrage on grounds independent of its effect on oneself, and as such, constitutes a form of harm (Feinberg, 1988: 57). Cuthbert (1998: 258) argues that misrepresentation is one of the ways cultural appropriation can be considered harmful.

Messiaen's *Sept haïkai* (1962) is a potential candidate for the kind of cultural misrepresentation discussed by Cuthbert, given that one of Messiaen's

movements takes the name of the style of elegant imperial court music—gagaku. While Messiaen's research of imperial court music—namely, his written descriptions in the score, as well as his use of gagaku inspired instrumentation, timbres and performance techniques—shows evidence of an authentic intention, and suggests *Sept haikai* was intended to be a representation of gagaku, albeit through a western filter.

The dynamic inequality between cultures is essential in determining whether a case of cultural appropriation can be considered unethical (Ziff and Rao, 1997). Cuthbert (1998: 257) claims that appropriation can occur irrespective of any dynamic inequality, but remarks that the misrepresentation of an insider culture can be particularly damaging if a power disparity exists between them. Harm in this case refers not to the kind of cultural annihilation described by Churchill (1998), or even to cultural erosion, but rather to profound offence or damage to reputation, a symptom of which may be, Cuthbert argues, the insider culture's unsuccessful attempts at refutation (Cuthbert, 1998: 258). The damage caused by misrepresentation can be greatly magnified if a power disparity exists between the outside culture and the culture being portrayed.

A case in point could be the centuries long disparity of power between Japan and the West; examples would include, the 'unchallenged Western dominance' of the Portuguese during the 16th century (Said, 1977: 73), as well as the pressure placed on Japan by the US to sign the Shimonoseki treaty, and the opening of its ports during Commodore Perry's expedition to Japan in 1853 (Sullivan, 1973: 115), swiftly followed by trade agreements with the British, French, Dutch and Russians (Cortazzi, 1993: 26). The latter events were

significant with respect to the exposure, and subsequent treatment of, Japanese subject matter by Western artists during the mid-19th and early 20th centuries.

4.3 Sullivan's Japonism: Contextualising *Sept haikai* (1962)

Messiaen's visit to Japan in 1962, and his subsequent depictions in *Sept haikai*, occurred towards the end of a 100-year-long period of Japanese imitation and exploration in Western art through, for example, the *Portrait of Émile Zola* (1868) by Édouard Manet, Monet's *La Japonaise*, (1876), and Whistler's mural art *Harmony in Blue and Gold: The Peacock Room* (1876-7). Van Gogh's *The Flowering Plum Tree* (1887) and *Almond Blossoms* (1890) were both inspired by Japanese wood-block prints.

Musical examples include Gilbert and Sullivan's subject appropriation of Japan in the setting of *The Mikado* (1885); Jones and Monckton's *The Geisha* (1896); Puccini's *Madam Butterfly* (1904), based on a short story of the same name by John Luther Long; Debussy's use of Katsushika Hakusai's *The Great Wave off Kanagawa* on the original dust jacket of the piano score of *La Mer* (1903-5); and the pentatonicism used in his Oriental depictions in *Estampes* (1903) for piano (Lambourne, 2005: 139-151).

Irrespective of power dynamic, Europe's steady exposure to Japanese art did little to reduce the superficial representations of Japanese culture—described by Sullivan (1989: 209) as 'Japonerie'—nor those merely aiming for a Japanese effect without engaging in Japanese compositional techniques, 'Japonaiserie'. However, Europe's steady exposure to oriental art did lead some Western artists to engage with and assimilate 'Japonisme': Japanese pictorial techniques (Sullivan, 1989: 209).

Musical works that go beyond the surface representations or ambiances and instead utilise Japanese techniques with a serious concern for sonic elements rarely occur until after the turn of the 20th century. For example, the authentic source material of Stravinsky's *3 Japanese Lyrics* (1913), based on Japanese haiku poetry (each movement is named after a Japanese poet) and translated into Russian, is distinct from the generic markers and signifiers of exoticism evident in the pentatonicism and instrumental timbres of *Madam Butterfly*, which is distinct again from the exterior exoticism of the subject, characters and setting of *The Mikado* (1885) (Steadman, 2009). This rarer form, Japonisme, is evident in Manet's *Olympia* (1863), Degas's *Bains de Mer* (1866-7) and Van Gogh's *Fishing boats on the beach* (1888). Here, the influence of Japan is not always immediately apparent as these works draw not simply on Japanese materials, but adhered to some compositional principles too (Sullivan, 1973: 200-1, 234). A convincing assimilation of Japanese techniques seems to emerge once the artist has recognised its value, which occurs, all too often, only after a period of surface exploration.

Artists that did not extent their explorations of Japanese subjects to encompass Japanese artistic techniques were doomed to create works whose expressions signified little more than a brief fetish for the Orient. The tendency for artists to engage in surface explorations of oriental subjects was limited not only to countries, such as India, where an obvious disparity of power dynamic existed, but extended to a variety of non-Western nations that similarly served to provide a sense of "otherness". The potential for misrepresentation, inherited from the "us-them" paradigm of the colonial era, extends not only to countries that were directly colonised by Europe, but also the neighbouring nations.

However, the negative effects on Japanese culture arose not from Western misrepresentation, but from a surge of Western influence during the Meiji restoration (1868-1912). Japan's rise as a first-class industrial power was achieved through the acceptance of Western ideals. The emergence of a Western-style painting by Japanese artists arose from the high demand for Western culture and artefacts. However, by end of the 19th century, a distinction arose between the degree of Japanese acceptance of Western values and the acceptance of Western art (Miki, 1964: 393). Fuelled by ultra-nationalism, a backlash ensued, led by artists such as Heihachi Hashimoto, which drew on the artwork of the Nara period (710-794), as well as, ironically, a pro-Japanese movement led by the American historian Ernest Fenollosa (1853-1908) (Sullivan, 1973: 116-24). Nevertheless, an enthusiasm for Western art continued, enabling Japanese students to study and replicate European techniques with precision, first at private schools and later with the support of the government-founded Kōbu Art Academy in 1876 (Miki, 1964: 395-7).

Lambourne (2005) notes the foreign influence in Japanese art can be seen prior to the Meiji restoration and is evident in the Nagasaki woodblock prints of the Edo period, where foreign items were taken as the subject matter. Japan's fascination with the outside world encouraged many Nagasaki artists to produce prints depicting foreigners, using a foreign style distinct from the traditional prints and paintings of the Ukiyo-e genre (Lambourne, 2005: 24, 26).

However, in spite of the Dutch influence a century before, and the influx of Western art by way of China during the seclusion period, European-style fusion paintings of the Edo period were not widely accepted by the general public, nor by the upper classes (Miki, 1964: 390, 393)

Conversely, during the Meiji era, the European enthusiasm for Japanese art provided an opportunity for manufacturers to capitalise on the high demand for ceramics, fabrics, furniture and interiors by European audiences. The flood of mutual interest in the “other” led to a cross-pollination of influence; for example, the Japanese style of Royal Worcester wares was re-copied by the Japanese (Lambourne, 2005: 72). Europe’s insatiable appetite for Eastern artefacts gave rise to eastern imitations, known as ‘Japanning’, while Japan’s fascination with the West resulted in the assimilation of Western themes, as well as an industry of products designed specifically *for* Western audiences to satisfy the high demand from Europe.

This fascination with “the other” had a negative impact on traditional Japanese artists who found it difficult to compete in a market obsessed with Western art:

Not only were contemporary works of traditional schools considered worthless, but the very tradition itself was in danger. Paintings by the great early Kanō masters were going begging; temples were being not merely neglected but in some cases pulled down, their treasures thrown out or sold to foreigners, and their sculptures chopped up for fuel. (Sullivan, 1973: 118)

Sullivan’s example undermines Ziff and Rao’s (1997) claim that harm from assimilation is minimised in the absence of a discernible power inequality, as evidenced by the affects of Western assimilation on traditional Japanese artists. Despite the fact that this transaction was, on the whole, consensual—consent widely considered a marker of equality—the Japanese assimilation of Western art was not without harm.

Young (2010: 274) describes the harmful consequences arising from the appropriation of Japanese art by European artists, the effects of which on the

Kanō masters was economic and/or educational deprivation. Furthermore, the perception by those living under powerful nations of the threat of cultural pollution or loss of identity had some basis in reality for Japanese artists during the Meiji restoration, prompted by the deprivation of economic opportunities.

The influx of Western influence had the opposite effect on Imperial court musicians, whose music had steadily fallen out of favour since the Heian period (794-1185 AD) as shown by Garfias (1975: 33).¹ Japan's engagement with outsiders gained a renewed interest in ancient gagaku, which paralleled the heightened fascination with Western art and culture (Togi and Malm, 1971: 133-35). The desire to replicate Western art was not limited to the visual arts, but also extended to the musicians of the imperial court, who were among the first to learn, perform and subsequently teach Western music (Garfias, 1975: 26-7). This was considered to be a prestigious task and resulted in a renewed respect, and curiosity, for the ancient musical form:

Along with the newly formed military bands the Gagaku ensemble gained great prestige through its ability to play marches and polkas, and the musicians were in great demand as teachers and performers of eastern music as well as Gagaku. (Togi and Malm, 1971: 9)

While the possibility of economic deprivation posed comparatively less threat to Japanese gagaku musicians, because of their longstanding attachment to the imperial court,² the assumption that gagaku itself was ever in danger of cultural pollution is also problematic. Gagaku is itself a hybrid, a product of cultural

¹ However, there were notable exceptions: gagaku briefly gained popularity during the Kammu Restoration (1334-36); the ten volume gagaku treaties *kyokunsho* (1233) by Koma Chikazane helped maintain interest in the style for a further century; and the gradual revival of gagaku during the Edo period (1603-1865) see Togi, Kenny and Malm (1971:128, 130).

² Garfias (1975: 28) notes that the maintenance of the gagaku tradition by the nobles during the Meiji restoration was not prevented by the influx of Western influence.

influences from India and the Near East dating back to the T'ang dynasty of the 7th and 8th centuries A.D (Garfias, 1975: 3-4): 'Asian culture, so to speak, piled up in Japan like water behind a dam' (Togi and Malm, 1971: 6). The influx of outside influence came to an end during the 9th century, resulting in fewer opportunities for interaction with other Silk Road cultures, leaving gagaku persevered and in relative isolation for several centuries (Garfias, 1975: 15). On the one hand, gagaku is a part of Japanese artistic tradition, whose performers are deemed sacred artefacts by the government; on the other, it is the earliest and most significant examples of cultural transmission in Japan, a snapshot of Asiatic history, whose very existence is the result of outside influence and cultural assimilation.

There is also the question of how successfully gagaku musicians have been in maintaining their ancient performance practices, given the imperfect replication that results from oral transmission. This is most evident in the noble's overly simplistic string-performances (on the biwa), the intricacies and complexities of which are evident from the old notations, but which have clearly been lost over time Garfias (1975: 28). The renewed interest in gagaku during the Meiji restoration forced together musicians whose styles had evolved independently as a result of the 600-year seclusion period.³ The unification of styles meant that differences of interpretation of songs and melodies had to be rectified, and this was often decided by the senior ranking court musicians, a process, that led to the loss of much performance practice (Garfias, 1975: 27).

³ From Iwashimizu Hachim Shrine at Fushumi; Kōfukuji Buddisht temple at Nara, Tennōji temple in Osaka (Garfias, 1975: 24)

In 1955, seven years before Messiaen's *Sept haïkaï*, the Japanese authorities officially recognised the musicians of the Imperial Household Agency's gagaku troupe, as 'important, intangible cultural properties' (Togi and Malm, 1971: 195-6). However, the diminishing numbers of performers and steady decline in the size and complexity of repertoire is a concern shared by the court musicians themselves (Garfias, 1975: 4). Today, the board of ceremonies, a division of the post-war agency overseeing the affairs of the Imperial family, has a Vice-Grand Master, whose responsibility includes the maintenance and survival of gagaku music of the imperial court (Cortazzi, 1993: 212).

In light of its hybridity, arguments against the appropriation of gagaku by outsiders such as Messiaen based solely on period authenticity grounds will be deficient. However, regardless of any success or failure by gagaku musicians to preserve exactly the authentic performances of their ancestors, the continuation of gagaku nevertheless represents a significant cultural tradition that is under threat as a result of its shrinking repertoire, ever dwindling number of musicians, lack of investment, and the relatively low levels of exposure it receives in Japanese schools compared to Western classical music—all of which makes misrepresentation more likely, and repudiation all the harder.

4.4 Analysis of *Sept Haïkaï* (1962)

Named after the traditional Japanese Haiku poetry, *Sept haïkaï* exhibits two types of artistic appropriation: first, through the content appropriation of Indian *deśī* *tālas*, which form the rhythmic foundation of the work's outer movements, as well as the use of Greek metre and Japanese compositional principles, derived

from Messiaen's experiences with traditional gagaku music; secondly, by means of subject appropriation, through the depiction of Japanese landscapes and wildlife. Messiaen intended the work to be an innovative tribute to Japanese traditions and landscapes, but also 'to the Japanese soul' as perceived by the composer (Messiaen and Samuel, 1994: 101).

The movements of *Sept haïkai* portray the subject of Japan in different ways, some though impressionistic portrayals intended to evoke striking images, moods and colours of Japanese atmospheres and scenery, others through a more direct engagement with its traditions. *II. Le parc de Nara et les Lanternes de Pierre*, *III. Yamanaka – Cadenza*; *V. Miyajima et le Torii dans la mer*, and *VI. Oiseaux de Karuizawa* are examples of the former, portraying Japan's colourful flowers and wildlife by way of colour chord techniques: contracted resonance, rotary chords and chord reversals.

The fourth movement, named after the music of the imperial court, is a tribute to the musical form and instrumentation found in Japanese gagaku, and borrows heavily from its compositional techniques. The piece is also a representation of Messiaen's experiences of ancient gagaku music. However, several of the devices found here occur in the central movements as well, particularly the imitation of the Japanese shō, played on divisi violins in the second and fifth movements. The fourth movement demonstrates a serious concern for gagaku compositional principles akin to the japonisme described by Sullivan (1989).

The outer movements are more abstract still, named after their structural relationship to the work as a whole; the bell-like sounds of the metallic percussion evoking an image of a Buddhist temple, while the symmetrical form

of both movements symbolise the statues often found guarding the archways of a temple's entrance. Moreover, the subject appropriation of concepts and deities derived from Hinduism feature heavily in the work's outer movements.

Although Indian and Greek rhythms are used throughout the work, each is assigned a separate movement: Greek metres appear in the second, fifth and sixth movements, whereas the *deśītālas* are employed in the outer movements only. However, rhythms resembling the proportions of *deśītālas* occur throughout the work. For instance, in the score of *Les Oiseaux de Karuizawa*, the percussion entries between rehearsal numbers 4 and 5 bear a striking resemblance to *Siṃhavikrama* (8); and in the third movement, *Yamanaka-cadenza*, a retrograde of *Jhampātāla* (76), appears in the rhythm of the Japanese blue flycatcher (*Ôruri*), played on the xylophone, four bars after the first piano cadenza (Fig. 4.1)⁴:

Fig. 4.1 *deśī tālas*: *Sept haïkaï* (1962)

III. Yamanaka-cadenza

Jhampātāla (76)
(retrograde)



VI. Les Oiseaux de Karuizawa

Siṃhavikrama(8)



Cenc.
Crot.
Cloches

⁴ The *tālas* labelled in the example above appear in Messiaen's score.

Neither rhythms were originally derived from the Śārṅgadeva tālas. However, Messiaen (2000b: 475) confirms the latter appears as part of the natural rhythm of the Ôruri bird (blue flycatcher). The application of Greek *métabole*, which occurs in the outer movements—in the marimba and xylophone, from b. 13 of the *Introduction*, and from b. 9 of the *Coda*—is used as a means of modulating between tālas (26a) and (8). Miśra varṇa (26a) and Siṃhavikrama (8), played on the wooden percussion and marked ‘forte’, are the most prominent tālas in the textures of the *Introduction* and *Coda*; while Sama tāla (53), played on the piano, and the woodwinds in retrograde, is the rhythm most often repeated.

Despite the composer’s intention, *Sept haikai* is not without aesthetic “errors”; the combination of Indian and Japanese subject matter, as well as the use of Indian content in service of Messiaen’s musical language, is indicative of the kind of inevitable aesthetic error that results from cultural inexperience, as described by Goodman (1976). This unusual mixture of cultural elements highlights the importance of personal authenticity (a term previously discussed in chapter one referring to an artist’s self-identity) above and beyond any concern the composer may have had for period authenticity. Nevertheless, aesthetic errors arise from the work’s musical hybridity, particularly his practice of using the Hindu symbolism of deśītāla to help portray a Buddhist temple. *Sept haikai* contains a blend of Indian and Japanese subjects; the result is a ‘cocktail’ of foreign artefacts used as a surrogate for Japanese symbolism, imagery and scenery created by an outsider, and foreign to both cultures.

Many of the rhythms in *Sept haïkai* were selected for their apparent genericism and malleability and, in the case of the *deśītālas*, for their religious symbolism as well. With the notable exceptions of *Siṃhavikrama* (8) and *Mīśra varṇa* (26a), most of the *deśī tālas* are unnamed in the score. Although there is no suggestion that they are of Japanese origin, his use of Indian *tālas* in place of traditional Japanese rhythm constitutes a cultural displacement of materials, whereby the rhythm derived from one culture is substituted for another.

In the outer movements, the symbolism associated with the Hindu *deśītālas* is instead used to signify Buddhist imagery and Japanese scenery. Moreover, in the fourth movement, traditional gagaku rhythms are replaced by Greek metre, and permutations of chromatic duration, derived from Messiaen's exploration of serialism in the 1940s.

4.5 Dynamics and Textual Layering in Sept Haïkai (1962)

Although the rhythms in the *Introduction* and *Coda* are of Indian origin, the timbre produced by the family of metallic percussion have more in common with the metal and stone instruments found in traditional Japanese music. The similarity between the use of percussion in *Sept haïkai* and those found in some forms of Japanese gagaku lie in Messiaen's reliance on bells, and the resulting indefinite pitch produced by their overtones. Many of the instruments featured in Japanese court music are without definitive pitch, although different pitches can be acquired by hitting different parts of the instrument (Miki and Regan, 2015: 156). The sound of chromatic cowbells and tubular bells are similar in timbre to the *atarigane*, a cylindrical percussion instrument used in folk dances

and festival music. The metallic percussion, consisting of four players in total, is intended to portray the bonshō bells (tsurigane) of Buddhist temples.

The combination of xylophone and marimba, particularly the rhythmic unison passages throughout the first, sixth and seventh movements, produces a timbre similar to that of the Sanukite.⁵ The bamboo, wood and membrane percussion families of Japanese instruments, a core feature of gagaku, are absent from Messiaen's sound canvas,⁶ and have instead been substituted for metallic percussion due to the composer's preference for bells (Messiaen and Samuel, 1976: 92).

This is an unusual omission given that several of the membrane percussion instruments—such as the tsuzumi family, used predominantly in the Korean-influenced komagagku—have their origins in Tibet and India (Miki and Regan, 2015: 156). The addition of membrane percussion to Messiaen's sonic landscape would have been an appropriate choice, especially if they were assigned Indian rhythms, and would serve as a demonstration of the composer's knowledge of both the origins and influences of traditional gagaku music.

In the metallic percussion parts, Messiaen shows considerable restraint in his use of dynamics, not unlike the elegant use of dynamics often employed by gagaku percussionists. In the outer movements, each member of the metallic percussion is assigned a different dynamic marking throughout; the layered

⁵ However, this instrument did not come into common use until the early 20th century (Miki and Regan, 2015: 200)

⁶ Furthermore, the sound of violin snap pizzicatos would have been an effective replacement for the distinctive clicking sounds produced by the Japanese lute (biwa) — not to be confused with the wooden slaps of the shakubyoshi—featured in the work *Ise no Umi* (伊勢の海, Sea of Ise) performed by the Gagaku Shigen Kai of Japan.

dynamics and rhythmic unison passages imitate the timbre of the bonshō, the large bell found at Buddhist temples. In the fourth movement, the dynamics of the tam-tam, cymbals and gongs are raised slightly above the other percussion, in order to make distinct its rhythm of triplet and quintuplet quavers from the chromatic permutations in the crotales, cowbells and tubular bells. The role of the fourth percussionist is also a practical one: in certain bars, it is the only instrument playing on the downbeat (such as b. 5), and it also articulates the semiquaver rest in the winds in bar 6; moreover, the falling quintuplets in bars 9 and 16 (and the versions of descending crotchet and quaver triplets) are an augmentation of the rapidly descending quintuplet demisemiquavers in bars 11, 21 and 33 of the piccolo flute and E♭ clarinet (Fig. 4.2):

Fig. 4.2 Descending motif in *Gagaku: Sept haikai* (1962)

The figure displays five musical excerpts from the score for *Gagaku: Sept haikai* (1962), illustrating a descending motif. The excerpts are labeled (a) through (e).

- (a) bs. 8-10: Features Piccolo and Clarinet in E♭. The Piccolo part includes a descending quintuplet marked with a '5' and a 'ff' dynamic. The Clarinet part also features a descending quintuplet marked with a '5' and a 'ff' dynamic. The C. G. C. T. part shows a descending motif with a triplet marked '3' and a 'Lent (♩=50)' tempo marking.
- (b) bs. 16-19: Features C. G. C. T. with a descending motif marked with a '5' and a '3'.
- (c) bs. 21: Features Picc. and E♭ Cl. with descending motifs marked with a '5' and a 'ff' dynamic.
- (d) bs. 26: Features C. G. C. T. with a descending motif marked with a '3' and a '7'.
- (e) bs. 33: Features Picc. and E♭ Cl. with descending motifs marked with a '5' and a 'ff' dynamic.

In the fifth movement, *Miyajima et le Torii dans la mer*, the dynamics are used to distinguish foreground from middle and background layers; the tubular bells are assigned dynamics corresponding to the *mf* strings, while the cymbals and gongs are paired to the dynamics of the winds, ranging from *mf* to *ff*. A third layer, marked *p*, consisting of triangles, crotales and chromatic cowbells is distributed between two percussionionists, adding overtones to the percussive piano chords (Fig. 4.3):

Fig. 4.3 Percussion (bs.12-14) in *Miyajima et le Torii dans la mer*, *Sept haïkaï* (1962)

(a) V. Miyajima et le torii dans la mer (bs. 12-14)

The musical score for Percussion (bs. 12-14) in *Miyajima et le torii dans la mer* consists of three parts: Piano, Trgl. Crotales, and Cencerros. The Piano part is written for two staves, with the upper staff in treble clef and the lower staff in bass clef. The Trgl. Crotales part is in 2/8 time. The Cencerros part is in 2/8 time. The score includes various musical notations such as triplets, sixteenth notes, and dynamic markings like 'mf' and 'p'.

The metallic percussion has more dynamic variation in the sixth movement than in previous movements, especially in its deployment of crescendos and decrescendos in the last eight bars.

In the third movement, *Yamanaka – Cadenza*, the metallic percussion section play pianissimo throughout. The layered dynamics, particularly of the bird calls in the woodwind, bring clarity to an otherwise dense texture; the movement is a rather impressionistic snap shot of the forest of Yamanashi, at the foot of mount

Fuji, near lake Yamanaka (Messiaen, 2000b: 474; Messiaen and Samuel, 1994: 136). Messiaen's depiction of the forest extends not just to the birds, but also to the distant toll of Buddhist temple bells represented by pianissimo crotales, tubular bells, tam-tam and exotic cymbals. Most of the bird materials featured in this movement are based on transcriptions taken at Yamanashi forest, over a 6-hour period, in the morning of July 13th 1962. Other parts of the kikitaki theme, the Japanese name for the Narcissus Flycatcher, used in the first piano Cadenza are based on birdsongs gathered from Karuizawa (Messiaen, 2000b: 479, 481). The bird dictations acquired elsewhere are documented in Messiaen's own analysis of *Sept haïkai* in volume 5 of *TRCO*, with the accuracy and precision of a serious birder.⁷

Messiaen creates textual variety between each of the tutti sections of *Yamanaka – Cadenza* in the following ways:

1. By using the same birds, but different materials, such as the torculus motif of the Kuro tsugumi in the first oboe. The motif does not occur until the last bar of first tutti, but is the opening material at the start of the second tutti section (b.44).
2. By using the same bird materials but on different instruments. For example, the xylophone takes up a variation of the aoji material in the third tutti (b.76), derived from the piccolo melody of bar 1; the kikitaki

⁷ Messiaen embarked on bird watching sessions in Subashiri, as well as in the woodlands of Lake Yamanaka, Japan. In one such session, on the 13th of July in the forest of Yamanashi, he acquired much of the bird material for his third movement. Several days were spent bird watching at Karuizawa, including the 23rd and 24th June (Messiaen, 2000b: 474, 481; Messiaen and Samuel, 1976: 93-4). He was accompanied by a Japanese ornithologist during bird watching sessions (Messiaen and Samuel, 1976: 92).

bird in the flute and clarinets in the first tutti is joined by the second oboe in the second tutti (bar 48).

3. Using a completely different combination of birds. For example, the ruribitaki (Siberian blue-tail) and sendai mushikui (Temminck's crowned willow-warbler) does not emerge until the final tutti, their material appears in the flute and E $\flat$ clarinet (b73).⁸
4. By using subtle layers of dynamics.

The layering and interchange of dynamic markings between instruments place several of the eleven bird themes into the foreground and middle ground of the texture, while other birds (such as the second oboe's Mejiro call in the first orchestral tutti) are assigned quieter dynamics that place them further back in the texture. The pianissimo dynamics place the metallic percussion further in the background still, and are intended to represent the distant ringing of temple bells. Messiaen transports the listener to the Yamanashi forest by establishing a three-dimensional space. Two birds in particular cut through the busy texture, the uguisu (Japanese bush warbler) played on the trumpet (from bar 6), and the kibitaki (Narcissus flycatcher) theme, first heard on the second clarinet (b.1). The orchestral tuttis are brought to a close each time by the distinctive torculus motif of the trumpet, while the repeating flourish of the kibitaki bird is taken up by the flute, piccolo and first clarinet, and then by more instruments in the second orchestral tutti (b.44). Finally, in the third and final tutti section (b.73), the Narcissus flycatcher material is taken up by the marimba and first clarinet.

⁸ The translation of bird names are from 21, 29 (Hachisuka, 2015: 21, 29).

However, the familiar motifs of the kibitaki and uguisu are still present. The three piano cadenzas, which occur after each orchestral tutti, are based on a different birdsong. The first piano cadenza takes much of its rhythm from the kibitaki bird; the second features the hôaka (chestnut-eared bunting), which is interrupted by the hibari (skylark) from the change of tempo at bar 61. The Kuro-Tsugumi (the grey thrush) is the subject of the final cadenza. Throughout Messiaen's score the bird names are placed above the corresponding material.

4.6 Greek Metre and Permutation in *Le Parc de Nara et les lanternes de Pierre*

Le Parc de Nara consists of several rhythmic layers of distinctly different character:

1. The transformation of Greek metre into irregular rhythm in the winds.
2. The bird melody derived from the French nightingale, played on marimba.
3. Symmetrical permutations of duration played on metallic percussion and assigned to the rotation chords of the divisi violins.
4. The 12-tone contrapuntal writing in the piano.

The rhythmic complexities are such that the movement is gathered into regular metre, categorised in *Technique* as the fourth, and least desirable form of rhythmic organisation because the time signature contradicts the metres employed by the composer (Messiaen, 1966: 29). The 4/8 time signature in *Le Parc de Nara* is a 'fictitious' measure of time with respect to the rhythms being employed (Messiaen, 2000b: 468). Primarily, this is done to accommodate the

irrational rhythms in the piano and clarinets, as well as the marimba's stylised bird solos. This movement contains some of Messiaen's most experimental work on irrational rhythms, particularly in his transformation of Greek rhythm to a point almost beyond recognition.

Despite the diversity of rhythmic materials, the sonic texture is less congested than the previous movement, primarily due to the careful use of rests in the marimba and clarinets, contrasting with the *perpetuum mobile* effect produced by the bells and piano. The rhythmic structure of the bass clarinet consists entirely of Greek feet confirmed by the Messiaen's (1996) own analysis, with the exception of a single cretic foot (in bar 15), all feet appear in the form of irregular rhythms (Fig. 4.4):

Fig. 4.4

Bass Clarinet, Analysis of Greek rhythms:

II. Le Parc de Nara et les lanternes de pierre, Sept haïkaï (1962)

1st Cretic tetrameter
Anacrusis /Cretic Amphimacer | Cretic Amphimacer | Molossus

Clarinet Basse

2nd Cretic tetrameter
1 Cretic Amphimacer | Pæonic | Dissoved Pæon | Dactyl

3rd Cretic tetrameter
11 2 Cretic | Pæon I | Pæon IV | Molossus

15 Cretic

Phalæcean
Spondee | Dactyl | Trochee | Trochee | Trochee | Trochee | Dactyl

20

Phalæcean
Trochee | Molossus | Dactyl | Trochee

24

5 Adonic
Trochee | Dactyl | Trochee

28

Whilst the upper clarinet voices are not strictly inexact transformations of Greek metre, some arise due to their imitation of the rhythmic character of the bass clarinet; the cretic amphimacer in bar 4 is shadowed by a rhythm with similar long-short-long proportions in the first clarinet, while the forte entry of the piccolo clarinet, in bar 23, could similarly be credited as a variant of pæon I (Fig. 4.5):

Fig. 4.5 Clarinets, irregular rhythms:

II. Le Parc de Nara et les lanternes de pierre, Sept haïkai (1962)

The figure shows a musical score for three clarinet parts. The top staff is for Cl. I, the middle for Bass Clarinet, and the bottom for Clarinet in Eb. Above the Cl. I staff, a 'Cretic Amphimacer' rhythm is indicated with a long dash, a short dash, and a triplet of eighth notes. Above the Bass Clarinet staff, a 'Pæon IV' rhythm is indicated with a long dash, a short dash, and a triplet of eighth notes. The Clarinet in Eb staff shows a forte entry in bar 23, marked with a 'f' and a '11'.

Although Greek metre occurs in several of the composer's earlier works (see graphic analysis of *Le Tombeau resplendissant* (1931) and *Les Offrandes oubliées* (1930) Appendix D), much of it is limited to the smaller units of feet. However, the practice of combining small metric feet can be traced to his orchestral works of the 1930s. *Le Parc de Nara* is one the few works to employ larger metrical feet from the get-go: Phalæcean (with a spondaic base) (bs.20-22); Pherecratien (bs. 23-25); Phalæcean (with a molossus base) (bs.26-28); and Adonic (bs. 29-30) indicated above the bass clarinet.

In the marimba, the spring mating call of the Japanese bush warbler (Uguisu) is substituted for the melodious sound of the French nightingale. The marimba birdsong appears as foreground melody, distinct in texture due to its short durations and rests, as well as its compound major seventh tessitura, lying at the centre of the work's overall range, beneath the ringing of tubular bells and above the murky timbre of the bass clarinet. The strings and crotales play in rhythmic unison throughout and consist of chromatic durations (one to 32 demisemiquavers) organised using the fifth permutation from the composer's table of 36 symmetrical permutations (see Messiaen, 1996: 18), devised during the composition of *Chronochromie* (1960). At rehearsal number 3 of the score, the string chord, carried over from the previous bar, is cut short in order to make way for the marimba's second stanza (Fig. 4.6). However, the chord's durational value (i.e. 20 demisemiquavers) is maintained in accordance with Messiaen's permutation table:

Fig. 4.6 Violins and marimba (bars 16-7):

II. Le Parc de Nara et les lanternes de pierre, Sept haïkaï (1962)

(a) II. Le Parc de Nara et les lanternes de pierre (bs. 16-17)

Accords Tournants: **16**

8 Violins

Duration: **20** ————— **21**

Marimba

ff *g* *f* *g* *pp* *poétique*

Second sentence

Messiaen's symmetrical permutation technique arose from his experimentation with serial principles at the turn of the 1950s, and is central to the rhythmic organisation of *Mode de valeurs et d'intensités* from *Quatre études de rythme* (1949-50) and in *Soixante-quatre durées* of *Livre d'orgue* (1951) through the alignment of durations, dynamics and articulations by means of numeral organisation. In *Mode de valeurs et d'intensités*, this organisation takes the form of a chromatic arrangement of 24 incremental increases of duration, each of which are assigned pitch, dynamics (intensités), and articulation (attaques). The chromatic durations are distributed freely, into layers of smaller sub-groups, each consisting of 12 durations superimposed against one another in the upper, lower, and mid-ranges of the piano.

Although a similar superimposition of rhythmic layers occurs in *Le Parc de Nara*, the durations have been re-organised by means of a systematic process—symmetrical permutation. The resultant effect is a much more stable and static rhythmic discourse between the crotales and strings, and the tubular bells (Fig. 4.7):

Fig. 4.7 Symmetrical permutations in bars 1-4 of

Le Parc de Nara et les lanternes de pierre, Sept haïkai

Modéré ♩=100

Permutation 5:

Crotales

Permutation 4:

Cloches

10 28 1 12 3 29

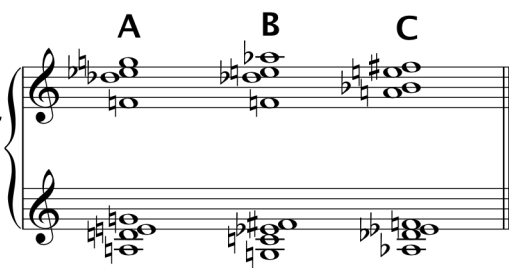
26 2 10 31

pp *p* *mf*

The strings in *Le Parc* are based on rotational transposition of three “colour” chords. These same chords are used during the opening of *Strophe I* from *Chronochromie* (1960), distributed throughout the upper and lower strings. Each chord is constructed from three octatonic⁹ scales, which are chromatic in quality. In the composer’s own analysis of *Chronochromie*, these chords are labelled A, B and C (Messiaen, 1996: 85). Messiaen, (2000b) provides a more detailed description of the chord colours in his *Sept haïkaï* analysis (see Appendix F), reminding us of his propensity for synaesthesia (Fig. 4.8):

Fig. 4.8 Accords tournants

‘Effet coloré global: jaune pâle, rayé de blanc, de noir, et de gris, avec des taches vertes.
Dominante: JAUNE PALE’
(Messiaen, 2000b: 464)



The figure shows three chords, A, B, and C, in a grand staff. Chord A is in the treble clef, Chord B is in the treble clef, and Chord C is in the treble clef. Chord A is a triad of G, B, and D. Chord B is a triad of A, C, and E. Chord C is a triad of B, D, and F. Below these chords is a scalic arrangement of chord B, which is a scale of eight notes: A, B, C, D, E, F, G, and A.

Scalic arrangement of chord B



The scalic arrangement of chord B is shown in a single staff, starting on A and moving up stepwise to A, with a final octave displacement.

Translation: [Overall colour effect: pale yellow with white stripes, black, and grey, with green spots. dominant: PALE YELLOW]

These chords are the result of a somewhat arbitrary displacement of notes up and down the octave, followed by a transposition onto one of three possible bass notes, corresponding to the three parent chords. Messiaen’s selection process is intuitive, determined by the colouristic qualities brought

⁹ I use the term octatonic to describe an eight-note scale rather than a scale of alternating tones and semitones or Messiaen’s second mode of limited transposition.

about by each “rotation”. After the chord is rotated, it is then re-transposed onto the same bass note as its original parent chord. The bass note of parent chords ‘B’ and ‘C’ are, respectively, a tone and semi-tone below the initial chord ‘A’. The change of bass notes in the chord progression of *Le Parc* plays an important role, as this provides a degree of colouristic variety to an otherwise homogenous sounding progression of chord clusters.¹⁰ This variety is also aided by subtle changes in the distribution of chord tones between the 8 violins. For example, the third chord in bar 3, the last chord in bar 6 and the final chord that closes the movement are the same chord, designated ‘chord 19’ (Messiaen, 2000b: 267) (Fig. 4.9). Furthermore, the crotales, played by the second percussionist, are given notes belonging to the rotation chords, helping to bring out the pitches considered to be of significance.

Fig. 4.9 Cluster chords and durations in bars 3 and 6 of

Le Parc de Nara, Sept haïkai (1962)

Accords				
Tournants:	18	19		
Durations:	1	12	11	18
			5	2
				17

¹⁰ Technically, not all of these are “cluster” chords as some do not contain three adjacent tones or semitones.

4.7 Process and Birdsong in the Central Movements of *Sept Haïkai*

The Accords tournants (see Appendix F) are used in all of the central movements.

In *Yamanaka – Cadenza* and *Les Oiseaux de Karuizawa*, they are used to harmonise parts of the birdsongs, and during the passages that link original bird sentences, often composed in a similar bird style (Fig. 4.10):

Fig. 4.10 Accords tournants, *Yamanaka - Cadenza*, *Sept haïkai* (1962) (bs.50-51)

(a) III. Yamanaka - Cadenza 2 (bars 50-51)

4

Modéré (♩=76)
Hôaka

Piano

f

mf

ff

10B

12B

13B

8^{va}

11B

Accords Tournants: 8B

Messiaen emphasises the characteristic features of the birdcalls in one of three ways:

1. Transposing the original birdsong down one or more octaves (such as the hotoguisu birdcall from bar 11 of the bassoons of *Les Oiseaux de Karuizawa*).
2. Harmonising some aspects of the birdcall as a means of enunciating certain timbral qualities of the birdsong. For example, the first part of the kibitaki bird theme in the first cadenza, particularly the harmonisation of its torculus motif (bs.19-22).

3. Exaggerating the rhythm of the original call. Messiaen's own example of this is the notated *accelerando* in of the kubitaki (from bar 21 of *Les Oiseaux de Karuizawa*), played by four clarinets in rhythmic unison (Messiaen, 2000b: 528).
4. Dynamics and articulation. For example, the extremes of dynamic used to exaggerate the komadori's distinctive downward leap in *Les Oiseaux de Karuizawa* (bar 8); the crescendo leading up to uguisu's torculus motif, first heard on the trumpet in bar 6 of *Yamanaka – cadenza* (bar 6).

In the first piano cadenza of *Les Oiseaux de Karuizawa*, a transposition of chord 14C (see *Appendix F*) is used to harmonise the repeated piano notes in the second sentence of the binzu (Hodgson's pipit) melody (Fig. 4.11a). The same chord also appears in Bar 90, transposed down a fifth, phrased once again as an amphibrach (Fig. 4.11b).¹¹ In the second cadenza, the rotary chords make up much of the musical interludes that break up the melody of the oriental reed warbler (known as the Ô-yoshikiri). The interlude borrows heavily from the birdcall's distinctive iambic pattern (Fig. 4.11c):

¹¹ Both of these rotary chords are designated 2C and 9C in the *explanation, table and couleurs* chapter of Book VII (Messiaen, 2002).

Fig. 4.11 (a-c) Accords tournants, *Les Oiseaux de Karuizawa*, *Sept haïkaï* (1962)

(a) VI. Les Oiseaux de Karuizawa - Cadenza 1 (bars 69-71)

Pæon IV
8va
mf ff
Climicus resupinus
Piano
p ff
Accords Tournants:
14C
Pæd.
Pæd.
Bacchius
f ff
Pæd.
Porrectus

(b) VI. Les Oiseaux de Karuizawa - Cadenza 1 (bars 90-92)

Amphibrach
p ff
Accords Tournants:
14C
Pæd.
Bacchius
f ff
Bacchius
f ff
Pæd.
Pæd.

(c) VI. Les Oiseaux de Karuizawa - Cadenza 2 (bars 138-142)

Un peu vif (♩=126)
Accords Tournants:
7A
f ff
Pæd.
lamb
f ff
Pæd.
lamb
f ff
Pæd.
Anapæst (Cyclical anapæst)
sec 3A crie
f ff
Pæd.
Anapæst (Cyclical anapæst)
sec 3A crie
f ff
Pæd.
Porrectus

A similar process is used to create the chords in the wind and brass in the opening of *Les Oiseaux de Karuizawa*, providing colour and variety to the returning uguisu theme, first heard on the trumpet during the third movement (Fig. 4.12). In his conversation with Claude Samuel, Messiaen described *Les Oiseaux de Karuizawa* as ‘my most beautiful homage to Japan, to its birds, its landscapes, and its traditions—not to its traditions in the literal sense, but to the Japanese soul as I felt it’ (Messiaen and Samuel, 1994: 101):

Fig. 4.12 Uguisu theme, *Yamanaka - Cadenza, Sept haïkaï* (bs.6)

2

(a) III. Yamanaka - Cadenza (b. 6)

(b) VI. Les Oiseaux de Karuizawa (bs. 1-2)

Un peu vif (♩=126)

Ho-kekyo! theme (Reduction)

L'accord á renversements

3B (r) w.w brs. pp

8D (r) 3D (r) 8C (r) ff

Harmonics: Δ⁷ #13 7

8^{va} #9 11 13 3

(r)* These are L'accord á renversements, labelled by Messiaen (2002) in Book VII of TRCO.

These chords are created in a similar fashion to the accords tournants: by the octave displacement of chord tones, and then transposing the chord inversion on to the same bass note as the original. L'accord á renversements—a technique that generated the harmony of the chorale theme in *Miyajima et le torii dans la mer*—is derived entirely from the appoggiatura version of Messiaen's chord on the dominant (Fig. 4.13). In both movements, the chords appear re-orchestrated, and with added notes that enhance (or detract) from the harmonic intensity of the original. The added notes, which essentially function as chord extensions, are mostly pitches a minor or major seventh degree above the root of each chord. However, the torculus motif of the uguisu theme in *Les Oiseaux de Karuizawa* consists of a more diverse mixture of extensions and added notes:

Fig. 4.13 Chorale theme, *Miyajima et le torii dans la mer*, *Sept haïkai* (1962) (bs. 5-8)

7A (r)*

Chord of the dominant

1 (a) V. Miyajima et le torii dans la mer (bs. 5-8)

Modéré (♩=76)

Harmonics: 7 7

w.w brs.

Chorale theme (Reduction)

w.w brs.

3D (r) 8C (r) 3B (r) 3C (r) 3D (r) 5B (r) 3B (r) 8D (r)

L'accord á renversements

(r)* These are L'accord á renversements, labelled by Messiaen (2002) in Book VII of TRCO.

** Added notes = ∞

In the fourth movement, rotary chords are played on divisi strings and used to represent the timbre of the Japanese mouth organ (Shō), one of the main wind instruments of the imperial court. In this case, the chords are organised by way of symmetrical permutation. The divisi strings in the fifth movement continue the shō effect. However, in *Miyajima et le torii dans la mer*, the strings repeat only a transposition of the three parent rotary chords throughout (Fig. 4.14):

Fig. 4.14 Accords tournants, *Miyajima et le torii dans la mer*, *Sept haïkaï* (1962) (bs.1-3)

(a) V. Miyajima et le torii dans la mer (bars 1-3)

The musical score is for Violins, divided into 8 parts. The tempo is 'Modéré (♩=76)' and the time signature is 3/8. The dynamics are 'mf' and 'vibrato'. The score shows three measures of music. The first measure is marked '1A', the second '8B', and the third '14C'. The music consists of rotary chords played on divisi strings, with some parts marked 'vibrato' and 'mf'.

In the fifth movement, the rotary chords are rhythmatised using Greek metre predominantly based on Epitrites I and III, and organised into five separate strophes, the last of which is incomplete. The Greek rhythms help enunciate the rotary chords, distinguishing it from the faster moving ornamental counterpoint and stylised bird figures in the marimba and xylophone, and flute and piccolo. At the same time, the Greek rhythm provides a suitable rhythmic counterpoint to the wind's chorale theme.

Messaien created seven transpositions of the first chord, six of the second, and six of the last chord. The majority of parent chords featured in the second

movement are rotations and transpositions of chord C (eighteen derived from chord C; seven chords A; seven chords B) (Fig. 4.15):

Fig. 4.15 Table of permutations and rotations: 8 violins in *Le Parc de Nara, Sept haïkai* (1962)

Bars	1	2	3	4	5	6			
Chord Rotation (Original chords)	C	C	C	C	A	C	B	C	C
Chord permutations/ Colour chord transpositions	14	17	18	19	5	16	11	18	19
Chromatic durations (in 32 nd notes) (Permutation 5)	10	28	1	12	3	29	5	2	17

Bars	7	8	9	10				12	13	14-15
Chord Rotation	B	B	C	C	C	A	A	C	C	
Chord permutations/ Colour chord transposition	11	9	16	18	19	4	3	14	19	
Chromatic durations (in 32 nd notes) (Permutation 5)	26	8	9	16	6	4	30	14	23	

Bars	16	17	18	19-21	22	23-24	25	26	27
Chord Rotation	C	A	A	C	C	B	A	B	B
Chord permutations/ Colour chord transposition	16	4	3	19	16	10	6	11	9
Chromatic durations (in 32 nd notes) (Permutation 5)	20	21	19	31	32	25	18	7	27

Bars	28	29	30-31	32	33
Chord Rotation	A	A	C	C	C
Chord permutations/ Colour chord transposition	5	7	14	16	19
Chromatic durations (in 32 nd notes) (Permutation 5)	11	22	24	13	15

There is a distinction between the harmonic layers of the “colour” chords in the strings, and the twelve-tone counterpoint of the piano, which creates a contrast not just of colour, but also of mood. Messiaen considered most serialism to be black and grey (Messiaen and Samuel, 1994: 241). The greyness of the piano writing has the effect of sullyng the vibrancy of the colour chords in the strings. The contrast of colour is very much intentional; the dodecaphony also serves to represent the grey stone lanterns amidst the vibrant colours of a Japanese garden, a somewhat impressionistic representation of the landscape.

4.8 Messiaen’s Impressionistic Expressions of the Orient

Messiaen’s use of metallic percussion is one of his most ostentatious representations of the Orient. In *Sept haïkai*, the tam-tams, gongs, and Chinese and Turkish cymbals are intended to give the impression of Japanese Buddhist temple bells (Messiaen, 1966), whereas in the *Turangalîla-Symphonie* (1946–8), tam-tams and Chinese and Turkish cymbals are used to build a vague impression of South East Asia:

It seems to me that a lot of the writing, not only for the vibraphone but the rest of the percussion, has this rather hypnotic, repetitious effect as if he is trying to create some other sound, some other culture. (Corkhill, 2008)

A review by Roger (1949) of the premier in the *Christian Science Monitor* notes:

Many of its movements have strong popular appeal. The composer makes brilliant use of percussion and the gamelan, an Oriental gong orchestra consisting of glockenspiel, vibraphone, piano, and celesta. His exotic rhythms are Hindu in origin as are the modes he chooses for melody. (Roger, quoted in Simeone and Barber, 2002: 118)

Despite the Indian-influenced title and extensive use of tālas, other percussion instruments are used in such a way that they evoke other parts of South East Asia. The repeating patterns of celeste, glockenspiel, vibraphone, and piano, notably in *Turangalīla 1*, carrying over the bar line, evoking the gamelan ensembles of Bali and Java in Indonesia:

Fig. 4.16 Tuned percussion, bars 24-25, *Turangalīla 1*

2 **Bien modéré** (♩=100)
m.d. (effet: 8ve sup.)
m.g. (effet: 8ve sup.)

24

Célesta *ff*
 (effet: 2 8ves au dessus)

Timbres *ff*
 (effet: 8ve sup.)

Vibr. *ff*

Piano *ff non legato*

ℳℳ ℳℳ ℳℳ ℳℳ ℳℳ

Furthermore, Corkhill (2008) believes that Messiaen's use of woodblock in *Turangalîla* denotes the sound of a Shinto temple.

Messiaen's percussion writing is an example of the vaguely Oriental effect described by Sullivan (1989). Given the vague allusions to various South East Asian countries, the percussion throughout *Turangalîla-Symphonie* creates a more generalised impression of the Orient. In *Sept haikai*, metallic percussion are used to evoke impressions in a similar fashion; however, within each movement there is an attempt to engage with the sonic or technical elements of Japanese music.

4.9 *Gagaku*: Messiaen's Strategic Location to the Orient.

When a Western author has as her subject the Orient, she inevitably establishes a strategic location with respect to the material she is writing about. In particular, it is the author's exteriority to the material, revealed by her attitudinal stance (i.e. by what she says about the Orient), that places her well outside of it, and often in a position of superiority to it (Said, 1991: 7, 20-1):

Everyone who writes about the Orient must locate himself vis-à-vis the Orient; translated into his text this location includes the kind of narrative voice he adopts, the kind of structure he builds, the kinds of images, themes, motifs that circulate in his text—all of which add up to deliberate ways of addressing the reader, containing the Orient, and finally, representing it or speaking in its behalf. (Said, 1991: 20)

Messiaen's strategic location with respect to Japan can be established by addressing the following:

1. Whether Messiaen's engagement with the appropriated materials reveals an authentic intention.

2. Whether he expresses an exterior interest in the culture (i.e. displaying a curiosity about the people, history, practices, and ideology outside the immediate field of study), either through his writings or his actions.
3. What he says about the material he is appropriating.

In addressing these, his strategic location to the Orient is revealed via

- Interviews;
- His analytical/pedagogical writings;
- His performance notes and explanatory prose in his scores;
- An exegesis of his music.

I will analyse Messiaen's appropriation of gagaku traditions according to several themes:

1. The role of instrumentation;
2. Textures and timbres;
3. Techniques and performance practice.

Messiaen's *Gagaku* should be regarded as an appropriation of style, borrowing heavily from Japanese instrumental and compositional principles. It is the clearest example of Sullivan's japonisme within Massiaen's work, showing a serious concern for sonic elements comparable to the appropriation of style in Delage's *Quatre poèmes hindous* (1912-13).

In fact, several parallels exist between the two: both are named after poems or musical forms, both are pieces resulting from a direct engagement with

the culture, both draw on the timbres and textures (techniques) inspired by the original music, and both are depictions of the East through a Western filter. Furthermore, both composers adopted Eastern techniques through a form of innovative appropriation—namely, a non-derivative treatment of materials that cannot be characterised as provenance or period-authentic; or where they may show period or provenance-authenticity, as in the case of Messiaen's inclusion of *deśītālas*, the content does not derive from the principle subject (i.e. culture) being portrayed.

However, there are differences in the way both composers make use of insider materials and subjects. For example, despite Delage's attraction toward Indian inspired vocal timbres, *Quatre poèmes hindous* is not intended to represent a specific Indian musical form, ensemble or tradition. On the other hand, Messiaen's *Gagaku* movement is meant to preserve some of the formal and structural aspects that he considered of fundamental importance to the ancient Japanese style, which is achieved through his attentiveness to its musical form, techniques, timbres, instrumentation, and orchestration. It is in his study of Japanese music, his engagement with gagaku musicians, as well as his interest in its history and knowledge of its various musical forms, evident in his analysis in *TRCO*, that Messiaen's authentic intention is most apparent. His appraisal of gagaku in *TRCO* clearly demonstrates an understanding of the role typically employed by each instrument; the kakko, for instance, is described as the 'tambour horizontal joué par le chef d'orchestre' (Messiaen 2000b: 516).

However, his characterisation of the instruments also highlights his exteriority to the Japanese culture, in spite of any authentic intention and his efforts to recapture his experiences of gagaku whilst in Japan. The Japanese

instruments are understood in relation to Western counterparts, which are assigned the task of mimicking the Eastern instruments through exaggeration and distortion, in much the same way as Messiaen exaggerates birdsong. Nowhere is this more evident than in his commentaries on two of the three principal wind instruments used in *Togaku*: the *hichiriki* and the *shō*.

The *hichiriki* in particular—whose timbre Messiaen (2000b, 493) considered ‘acidic’, ‘vinegary’, and ‘difficult for the European ear to tolerate’—is described as a ‘primitive and extremely shrill oboe’ (Messiaen and Samuel, 1994: 93, 100). Although he describes in *TRCO* an extraordinary and deeply expressive instrument, the *hichiriki* is often discussed in terms of its shortcomings when compared to Western instruments (the trumpet, oboe and *cor anglais*). The tone quality of the trumpet is described as ‘évidemment plus noble, majestueux (et nostalgique aussi), que le Hichiriki japonais’ [obviously more noble, majestic and nostalgic than the Japanese *hichiriki*] (Messiaen, 1962: 46). In an attempt to relegate the trumpet’s timbral qualities to a status of lesser nobility, in keeping with its Oriental cousin, the *cor anglais* and oboe are added to play in unison with the trumpet throughout the fourth movement (turning solo into soli) with the express purpose of adding vinegar to its timbre (Messiaen, 1962: 46). The performance notes of *Sept haïkai* instruct the trumpet to exaggerate its dynamics, in keeping with the alluring, yet strident, super-expressiveness of the *hichiriki* (Messiaen, 1962: 46).

Similarly, the *shō* is portrayed by the distinctly expressionless ‘grating sounds’ of the forte violins, marked *sul ponticello* and non-vibrato. In order for the violins to accurately reflect the sonority of the *shō*, Messiaen believed he was required to treat them ‘with total contempt’ (Messiaen and Samuel, 1976: 93;

1994: 137), the result of which is an ‘inexpressif, fort, cuivré, vinaigré, désagréable’ sonority (Messiaen 2000b: 500).

Messiaen (2000b: 493) believed that Western composers would be drawn to gagaku precisely because of its abundant use of harmony—exemplified by the static shō chords—a seemingly Western trait, atypical within other Eastern styles of music that, according to Messiaen, are principally comprised of melody and rhythmic accompaniment. Harmony, recognised as a key feature of Western music, becomes the principal criterion that sets gagaku apart from the music of others. However, Messiaen asserts that the harmony found in gagaku itself is not Western: ‘Encore faut-il se hâter d’ajouter que c’est une harmonique qui n’a rien à voir avec la nôtre’ [It is still necessary to add that this is a harmony that has nothing to do with ours] (Messiaen, 2000b: 493).

The ‘grating sounds’ set gagaku apart from other Oriental music because of its similarity to Western music, but also for its preceived inferiority to it. In spite of these perceived limitations, however, the combination of rotary chords with symmetrical permutations is used to realise both the timbre and role of the shō in gagaku (both functioning as exclusionary criteria, matching the limited number of chords playable by the Japanese mouth organ), and should, therefore, be considered a tribute, and a means of asserting that the traditional Japanese harmony should be respected:

On doit respecter scrupuleusement ces indications d'accords, quant à leur genre et quant à leur place, quelles que soient les dissonances qui en resultent. [We must scrupulously respect these chord indications as to its kind and about their place, whatever the dissonances that result.] (Messiaen, 2000b, 494)

The central movement of *Sept haïkai* (1962) was not intended as an authentic facsimile of eighth-century gagaku music. However, given the work's title, adherence to Japanese compositional techniques, as well as his descriptions on instrumentation, Messiaen's movement is clearly intended to be an approximation of gagaku, inspired by his visit and encounters with the music and musicians of the Imperial Court, Tokyo. Further, Messiaen's discussion of *Nō* theatre in *Music and Color* shows a wider interest in artistic Japanese forms. His personal admiration for Japanese society, and their ability to coexist with cultural aspects that Messiaen considered 'ancient' and 'modern' denotes an interest in Japanese culture outside the immediate field of study (Messiaen and Samuel, 1994: 99-101, 104).

In his analysis, Messiaen (2000b: 493) discusses the history and influences of the two principal forms of gagaku: togaku, which originates from China and South East Asia, and komagagku, principally derived from Korea. However, his overview does not extend to a detailed exposition of Japanese music theory—i.e. its six keys, their seasonal relationship, the ryo and ritsu (similar to the major and minor modes) applied to particular musical forms—nor are there mention of the major gagaku repertoire, Shikano Taikyoku. Messiaen (2000b) provides insight into the typical combinations of instrumental sections (reeds, strings and percussion) used in some of the major forms of kangen music. He correctly notes that three flutes are often used together, but labels them only as 'ryūteki' and does not specify the names or ranges of the other members, komabue and kagurabue. He describes the upwards bend of the hichicki after its initial attack on each note, demonstrating knowledge of performance techniques, the

distinctions in timbre between the high and low notes of the flutes, and the overall tessitura of some of the principle instruments (Messiaen, 2000b: 493).

In practice, Messiaen's innovative realisation is achieved by dividing the orchestra into four groups (1. piccolo and E♭ clarinet; 2. oboes, cor anglais and trumpet; 3. the eight violins; 4. metallic percussion) and using them as substitutes for traditional Japanese instruments. According to Johnson and Rae (2008: 162), it is common for specific instruments (normally the *ôteki* (*ryûteki*), *hichirik* and *shō*) to be assigned the melody, countermelody and harmony, respectively. Messiaen's efforts are a considered, yet period-inauthentic, rendering of mosaic structures, indicative of traditional Japanese *gagaku*, but culminating in a collage of Messiaenesque sonorities and textures. In addition, two important timbres are missing, which further render his depiction period-inauthentic. In his performance notes, Messiaen (1966: 46) acknowledges the inability of the ensemble to exactly mimic the mouth organ-like quality of the *shō*: first, in his acknowledgement that the violins are an attempt to replicate the timbre and, secondly, in his admission in the preface that the *shō* and *hichiriki* timbres are missing altogether.

Messiaen portrays traditional *gagaku* instruments by organising the orchestral families to correspond with the instruments of the imperial court. This is not simply a case of assigning like-for-like families of woodwind, percussion and strings. Messiaen is not simply striving to mimic the timbres, but also to highlight the roles played by each of the family members. For instance, in the Japanese musical form, it is common for the *ryûteki* and *hichiriki* improvisations to be based on the same melody. When combined, their subtle differences in rendition and timbre produce a variety of melodic style. In

Messiaen's *Gagaku*, the flute and E♭ clarinet unisons are derived from the solo trumpet, cor anglais and oboes, sharing much in common with both the rhythmic and melodic contour of its melody. Although they echo fragments of the trumpet line, very often their phrases end together (Fig. 4.17):

Fig. 4.17 Themes, *Gagaku, Sept haïkai* (1962)

(a) (bars 7-8)

(b) (bars 14-16)

The melodies are clearly related to one another, although the contrapuntal writing makes them a little too distinctive, lacking the nuance of gagaku melodic style.

Another example of his representation of traditional instruments can be found in his attempts to convey the technical limitations of the Shō mouth organ by restricting the number of rotation chords to thirteen (one less than in *Le Parc de Nara*), as well as reducing the number of durations to twelve (Fig. 4.18):

Fig. 4.18 Strings:

Accords tournants and durations, *Gagaku, Sept haikai* (bs.1-4)

Accords		17	18	19	17
Tournants:		14	18	20	10
Durations:					

Lent ♩=50

Violons 1-9

non vibrato *f aigre*
sul ponticello

sul ponticello
non vibrato *f aigre*

non vibrato *ff*
non ponticello

Unlike the thirty-two chromatic durations in the strings of *Le Parc de Nara* and the permutations in the metallic percussion (Fig. 4.19), whereby each value occurs only once in the entire movement, the rhythmic durations of the shō are not organised by permutation (Appendix H), but instead make up rhythmic groups, which roughly correspond the phrases of the chord progression:

Fig. 4.19 Percussion:

Symmetrical permutations of 32 durations, *Gagaku, Sept haikai* (bs.1-4)

Cenc. 19 Duration: 3 8 5 30 7

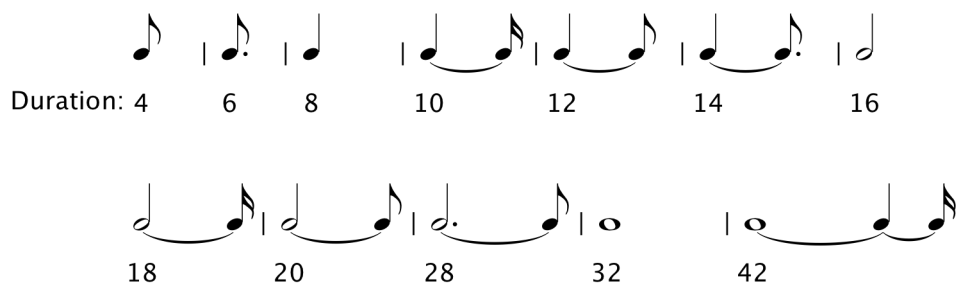
Cloches 20 Duration: 5 2 7 14 26

C.G.C.T. 21 Duration: (11)* 28 26

Anacrisus* *pp*

Arranged in ascending order, the values that make up the violins' rhythm produce a series of even numbered durations which increase by two demisemiquavers, with the exception of the notated *rallentando* of the last three beats (Fig. 4.20):

Fig. 4.20 12 durations of the strings used in Messiaen's *Gagaku, Sept haïkai* (1962)



In traditional gagaku, it is common practice for the bass notes of the shō chords to correspond with the melody note (Togi, Kenny and Malm, 1971: 21). While this principle is not carried over exactly into Messiaen's score, there are parallels between this practice and his chord rotation technique, which transposes each rotation in unison with the bass note of the original chord.

The sentence of rotation chords produces a ternary structure: first period begins from the middle of bar one, the second period begins the bar after rehearsal letter three, and the third period towards the end of rehearsal letter six (Appendix. H), the shorter chord sequence of the central section is repeated twice and prolonged before reaching something of a resolution at rehearsal figure six. The differences in the two A sections are predominantly rhythmic, although the rotation chord (labelled 11 in Messiaen, 2000b) functions as a dominant compared with the resolving effect of the final chord (chord 19) at the end of movement. The first chord of each period has different durations, and the

last five durations of A1 provide rhythmic variety, not dissimilar to the variety provided by the last five durations that close the central section. The phrase rhythm produces an overall structure, similar to the (-U U-) durations of the choriambus, mirroring the symmetrical proportions of the outer movements.

Although each sentence consists of thirteen chords, the durations assigned to each section means that the ternary form of the periods correspond somewhat to the Haiku proportions of the trumpet melody—first period, thirteen-bars; second period, nine-bars; and third period, thirteen-bars—each group (of chords and melody) occurring within two beats of each other.

4.10 Rhythmic Analysis of the *Introduction* and *Coda*

The opening texture is made up of five rhythmic pedals: the unison violins; rhythms marked 'Shakti' played by the brass and metallic percussion (bells, tam-tams, Turkish and Chinese cymbals); wooden percussion, alternating between the two most prominent *deśi tālas*; and two pedals from the superposition of a rhythm upon its retrograde in the woodwind and piano. The latter is a rhythmic canon with the '*comes*' distributed throughout the entire woodwind section, played in retrograde to the '*dux*' by the piano (Fig. 4.21):

Fig. 4.21 *Deśī tālas: I. Introduction, Sept haikai* (1962)

WW: (b.3) Vijaya^r (51) Sama^r (53) Siṃhavikrama^r (8) Sama^r (53) Vijaya^r (51) Jagajhampā^r (77) Sama^r (53) Candrakalā^r (105) Jagajhampā^r (77) Lakṣmīśa^r (88) Sama^r (53) Sama^r (53) Jagajhampā^r (77) Sama^r (53) Vijaya^r (51) Jagajhampā^r (77) Sama^r (53) Siṃhavikrama^r (8) Sama^r (53) Vijaya^r (51) Sama^r (53)

PIANO: (b.3) Sama (53) Vijaya (51) Sama (53) Siṃhavikrama (8) Sama (53) Jagajhampā (77) Vijaya (51) Sama (53) Jagajhampā (77) Sama (53) Sama (53) Lakṣmīśa (88) Jagajhampā (77) Candrakalā (105) Sama (53) Jagajhampā (77) Vijaya (51) Sama (53) Siṃhavikrama (8) Sama (53) Vijaya (51)

Although the other rhythmic pedals are displaced, beginning at different beats of the bar, the superimposition of a rhythm upon its retrograde begins and terminates on the same beat. This feature takes on greater significance in light of the work's overall form. In the coda, all five rhythmic pedals are reversed: the woodwind strophes play the rhythm in normal order, while the piano plays the rhythm in retrograde. When placed next to one another, the structure of the outer movements resembles the symmetry of a non-retrogradable rhythm, functioning as bookends to the work's inner movements. The coda, which is a reversal of the *Introduction*, is distinctly antistrophic in gesture, reminiscent of a Greek chorus moving across the stage in opposition to the strophe. The cretic-like proportions of *Sept haikai* mirror the proportions, albeit enlarged, of a seventeen syllable Haiku poem, whose first and last five syllables lines are shorter than the seven syllables at the centre. The movement is a synergy of moving parts, an exemplar of the 'collage structures of all [Messiaen's] mature work' (Johnson and Rae, 2008: 162). In *Quatuor pour la fin du temps* (1941), the changeless nature of this texture is intended to signify eternity in a way that can be comprehensible in the minds of those 'existing in the present world' (Griffiths, 1985: 102; Johnson in Bruhn, 1998: 127). The symbols used to signify time's

end—non-retrogradable rhythms and superposition of rhythmic pedals—are to be found here. Their presence coincides with the Hindu shakti rhythms, which signify the cyclic nature of eternity, placed at the beginning and end of the work.

The performance instructions (on page 1 of the score) explain that the eight violins should not be considered a melody, but rather a static entity coinciding with other events of equal importance (Messiaen, 1962: 1). This explanation implies the absence of a hierarchical relationship between foreground melody and supporting harmonies, in favour of mosaic layers. However, the instructions in the performance notes also state that slight prominence should be given to the piano, winds and wood percussion. Furthermore, the dynamic markings, assigned to each of the layers, are somewhat inconsistent with the description in the preface: woodwind, xylophone, marimba, and piano are marked *forte*; the layers of brass and bells are marked *piano*; and the unison strophe—*mezzo forte*. There is a clear sonic contrast between the homo-rhythms of each family, and the eight violins playing in perfect unison. The result is, perhaps, a greater textual variation than the composer intended, and in spite of the *mezzo forte* dynamic, the unison line of the violin strophe stands out from the other timbral elements.

In every sense the structure of the violin melody is a strophe: first period (bs. 2-14), the antistrophe (bs.14-26) and the epode commences at bs.26-36. The antecedent of each period (bs.7-11, 17-26, 32-36) consists of a repeated phrase, loosely based on the mode 3¹ of limited transposition, ending in a melodic cadence, in keeping with Messiaen's view that the natural tendency of the tritone is to resolve downwards (Messiaen, 1966: 32-3). However, each antecedent is accompanied by a consequent with a much stronger cadential ending, resolving

in the opposite direction to the antecedent in the first and second period (Fig. 4.22). The two forms of cadential ending function as plagal and imperfect cadences, respectively, with a final “perfect” cadence (the resolution from D $\flat$ -C) at the end of the epode.¹² The interval of the final cadence (in b.36), which should resolve downwards (by semitone), is displaced by one octave, combining the upward gesture of the earlier consequent with a downward motion of Messiaen’s tritone cadence, its strength rendered somewhat weaker by the octave displacement. Furthermore, the tonal centres of the melody imply the kind of symmetrical relationships found in Ernő Lendvai’s axis system (Lendvai, 2001). The material in each consequent is slightly more chromatic than the antecedent. The first consequent emphasises E $\flat$ as its centre having departed from C. The cadence resolving to D $\flat$ (rehearsal number 2) is a dominant substitution according to Lendvai’s system; the consequent of the antistrophe, beginning with B $\flat$ (b.17), is a dominant substitution— $\flat$ VII7, which resolves to the tonic (bar 20) and then to A (tonic substitution); the last verse of the antistrophe begins on the dominant (b.23) and ends on a D $\flat$, the tritone substitution of the dominant (b.26). The consequent of the epode is based on Messiaen’s seventh mode of limited transposition, although the resolution to the modal final is somewhat undermined by the melody’s major seventh leap upwards.

¹² D $\flat$ -C implying a tritone substitution: (bII7-I).

Fig. 4.22 Graphic analysis of violin strophes I. Introduction, Sept haïkai

Strophe.
Violin I.
(tous les 8)

2 antecedent. *mf*

1 bIII (I)

I. (VI) bIII consequent.

7

2 bII (V) $f \rightarrow pp$

Antistrophe.

mf

3 bIII (I)

II.

17 ff sfz $\rightarrow$ pp *mf* (V)

4 I VI (I) VI (I) sfz $\rightarrow$ pp

5 bII (V) $f \rightarrow pp$

23 *mf* (V)

Epode.

1 pp (I)

6 bIII (tous les 8) (I)

III.

VII *mf* (IV)

(V) bII I (V)

The figure displays a musical score for Violin I, divided into three main sections: Strophe, Antistrophe, and Epode. Each section contains numbered measures (1, 2, 3, 4, 5, 6) and is annotated with interval names (e.g., bIII, bII, V, VI, VII) and dynamic markings (e.g., mf, ff, sfz, pp). The score is written in treble clef with a key signature of one flat. The notation includes various musical symbols such as notes, rests, and slurs, along with graphic annotations like boxes and arrows indicating specific musical features.

By contrast, the woodwind and brass articulate the start of each note, their full duration replaced with rests, mimicking the natural sound decay of the bells, all of which helps to accentuate the timbre of the sustained violins. During the final *Coda* movement, the melody returns, in retrograde form, acting as the recapitulation to the exposition.

Fig. 4.23 *Strophe I (bs.2-7): I. Introduction, Sept haïkai (1962)*

The musical score consists of two staves. The top staff is for 8 Violons (1 à 8) and the bottom staff is for Cencerros. The Violons part starts with a *mf* dynamic and includes markings for 'tous les 8' and 'V'. The Cencerros part includes rhythmic notation and numerical values (7, 7, 6, 6, 5, 5, 4, 4, 3, 3) below it, with a bracket labeled (b₂). Brackets and labels (a), (b), (b₁), (c), and (b₁) indicate specific rhythmic patterns and transformations across the measures.

The first period of the strophe contains a transformation of the *Siṃhavikrama* (8) rhythm by means of inexact diminution (Fig. 4.23). This *Siṃhavikrama tāla* also contains several repetitions of *Caturtharka* (4), and its retrograde form, the *Aḍḍatāla* (108) (labelled *b* and *b¹*), which are elongated in bars 2 and 3 of the bells and brass. The rhythms of the first period are derived from the long-short-long proportions of *Vijaya* (51), *Dheṅkī* (58), and the tail end of *Siṃhavikrama* (8).

Several of the Messiaen's rhythmic transformations can be traced to his study of south Indian *jāṭis*. However, Messiaen admits that most of his techniques arose from an intuitive exploration of north Indian *tāla*, prior to his discovery of *karṇāṭic* rhythmic techniques (Messiaen, 1994: 332). The five *jāṭis* are a series of inexact rhythmic augmentations similar to the transformations that occur throughout the *Introduction* and *Coda*. The seven *suddatālas* comprise of a base number (typically 2 *drutas*), which remain unaltered by the *jāṭis* augmentations. Applied to the seven *suddatālas*, the five augmentations produce thirty-five individual rhythms (Nijenhuis, 1974: 68-9).

The material played by xylophone and marimba is based on *miśra varṇa* (26a) and *siṃhavikrama* (8) in normal order. In addition, a technique is applied to the *tāla*, inspired by Greek *métabole* (b.13). While its name implies a gradual metamorphosis, Messiaen takes a great deal of liberty with its interpretation. This device was used in ancient Greek music briefly to alter the rhythmical species of a phrase of feet (Williams, 2009: 184). In Western classical music, it is commonplace for triplets to be superimposed over even metres, whereas in the music of ancient Greece, the bars (or feet) would typically alternate between triple and duple metres. The effect of this on works such as *Pindar's First Pythian Ode* was a perceptible change of *ethos*, possibly to signify the commencement of a dance (Williams, 2009: 76). Given the multi-layered textures in the *Introduction* and *Coda*, Messiaen's version of *métabole* is not especially perceptible.

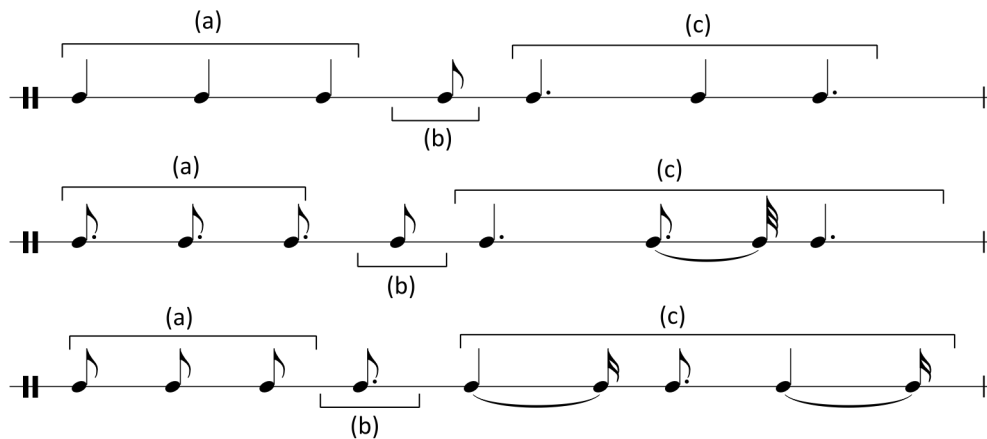
Conversely, the role of *métabole* is to forego the potential monotony of repeated *Śārṅgadeva* rhythms; by developing the rhythms, Messiaen succeeds in forgoing the monotony of repetition because the layers are not solely heard in terms of process. The work strikes a balance between the self-contained elements, indicative of mosaic textures, and the fluid interaction between each of the layers.

Métabole is applied to the rhythms in the xylophone and marimba, as a means of modulating imperceptibly between the different *tālas*. From bs. 13-19, the device is applied to produce two variations of *siṃhavikrama* (8) and two of *miśra varṇa* (26a) from bs.19-28. (Fig 4. 24) Typically, Messiaen will divide the *siṃhavikrama* (8) into three groups, with the central quaver acting as the body to the rhythm's wings, emphasising the structure of this multi-valued non-retrogradable rhythm. The first variation (Fig 4. 24) is diminished by means of a

withdrawal of one quarter of the values; and the second, in b.17, is exposed to withdrawal of the dot (withdrawal of one-third of the values). Meanwhile, the second wing (c) is exposed to *diminution inexacte*: first, by a reduction of the central value by one-eighth, and then (in bs. 18-19) the first and second beats are diminished by withdrawal of one-sixth and one-seventh the values, respectively.

Fig. 4.24 Métabole, *Siṃhavikrama* (8) I. Introduction, *Sept haïkai* (1962)

(8) *Siṃhavikrama*:



The first portion of the rhythm is exposed to classic diminution while the second is inexact throughout; in each case, the device exaggerates the proportional characteristics of the rhythm. The sameness of the first wing is exemplified through a gradual but consistent decrease of values, while the central value (of the second wing) is diminished at a faster rate to exaggerate the long-short-long proportions. By contrast, the central quaver is increased by half its value. With each new transformation, Messiaen emphasises the different characteristics of each branch.

Both of the *tālas* used by the xylophone and marimba are made up of several other smaller *deśī tālas*: *siṃhavikrama* (8) contains *tālas* (23), as well as

(71) and (97) (Fig. 4.25). Furthermore, *miśra varṇa* contains thirteen distinct *tāla* patterns (Fig. 4.26), including *dheṅkī*, which Messiaen (1994: 288) considered to be the oldest and most natural form of non-retrogradable rhythm.

The *dheṅkī* rhythm, featured throughout the *Introduction* and *Coda* movements, is identical to the cretic amphimacer, also used by Messiaen, which appears in its irrational form throughout the sixth and second movements. However, despite their proportional similarity, the irregular transformations in *Le Parc de Nara et les lanterns de Pierre* and *Les oiseaux de Karuizawa* belong not to *dheṅkī*, but to the Greek cretic amphimacer. In the second movement, the amphimacer is used in conjunction with several other Greek rhythms, and in the sixth movement functions as a rhythmic pedal (b.37), underneath a texture of Japanese birdsong.

Although each movement contains a mixture of materials from different countries, there are relatively few instances of hybridity occurring within a single voice or instrumental family. Restraint is shown in Messiaen's mix of Indian, Greek and Japanese materials, which are typically placed in different movements. When rhythmic materials of different origin occur in the same movement they do not appear in the same instrument; in this regard, each rhythm is given its own cultural domain.

Fig. 4.25 *deśī tālas: II. Introduction, Sept haīkaī* (1962)

(8) Simhavikrama: (23) Raṅgodyota (71) Abhaṅga & (97) Utsava (65b) Samakaṅkala (augmented Caturthaka) (12) Vijaya

(81) Pārvaṭīlocana: (Dissolved)

(26a) Mīśra varṇa: g.(67) c.(5) i.(86) d.(7), (79) a.(1) h.(82) b.(3), (95) f.(59) j.(102) e). (58), (38g) (Cretic amphimacer)

Fig. 4.26 *Deśī tālas from the sub-groups of Mīśra varṇa*

<u>Tālas</u>	<u>Notation</u>
(1) Ādi tāla	<i>I</i>
(3) Tṛtīya (95) Antarakṛīḍa	<i>ooò</i>
(5) Pañcama	<i>oo</i>
(7) Darpaṇa (79) Madana	<i>ooS</i>
(58) Dheṅkī (38) Eighth Maṇṭha (ragaṇa)	<i>SIS</i>
(59) Viṣama	<i>ooooò ooooò</i>
(67) Ekatāli	<i>O</i>
(82) Ratitāla	<i>IS</i>

(86) Gārugi	oooo
(102) Karaṇa	S

4.11 The religious symbolism of Messiaen's Shakti rhythms

In b.1 of the *Introduction*, 'rythmes des 3 Shakti' is placed above the brass, and metallic percussion, drawing on the symbolism of deśītālas (81), (88), and (115). These tālas are named after the wives of the Trimūrti: Brahmā, Viṣṇu, and Śiva (Messiaen, 1994: 327-9). The term 'shakti' refers to the cosmic energy and dynamic forces of the Hindu trinity of the formless God; Sārasvati, Lakṣmī, and Pārvatī are the eminent goddesses of the tridevī.

Sārasvati kanthābharana (115) refers to the necklace worn by the goddess of culture, Sārasvati. She is the wife of Brahmā, who was present during the creation of the cosmos (Bunce, 2000a: 477). Lakṣmīśa (88) symbolises Viṣṇu's consort Lakṣmī, the goddess of fortune and beauty, whose four arms are represented by the tāla's four different durations. Pārvatīlocana (81), meaning 'the eyes of Pārvatī', is a reference to Śiva's wife, the mountain goddess, who symbolises the inner eye of enlightenment (Messiaen, 1994: 294). In this piece, pārvatīlocana is not used in its original form but is instead substituted for siṃhavikrama (8), which is used to signify Śiva. The two rhythms have a total of fifteen mātrās and are almost identical; the last beat of Siṃhavikrama tāla is dissolved to create pārvatīlocana (Fig. 4.27). According to Messiaen (1994: 327), tālas (8) and (81) are interchangeable, both rhythmically and symbolically:

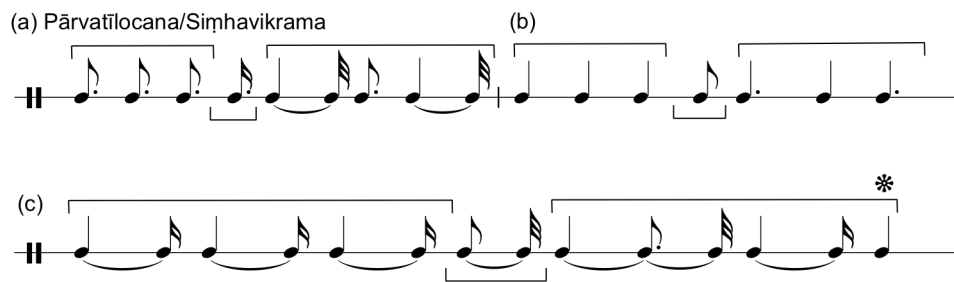
Pārvaṭī is the energy manifestation of the divine entity of Lord Śiva, and thus is, symbolically, a suitable substitute for him.

Fig. 4.27 Pārvatīlocana (81) and Siṃhavikrama (8):

Throughout the movement, tālas (88) and (81) are exposed to a series of inexact transformations. Their proportions, however, are maintained with relative consistency. Lakṣmīśa (88) occurs four times in the movement, first in its original form (on the seventh demi-semiquaver preceding b.11), followed by three inexact augmentations in bs.11, 23, and 25 (Fig. 4.28). Whereas pārvatīlocana (81) occurs three times, first in diminished form (from the middle of b.6), then in its original form (bs.14-17), and finally in augmented form, from the quaver anacrusis into (b.34)(Fig. 4.28).

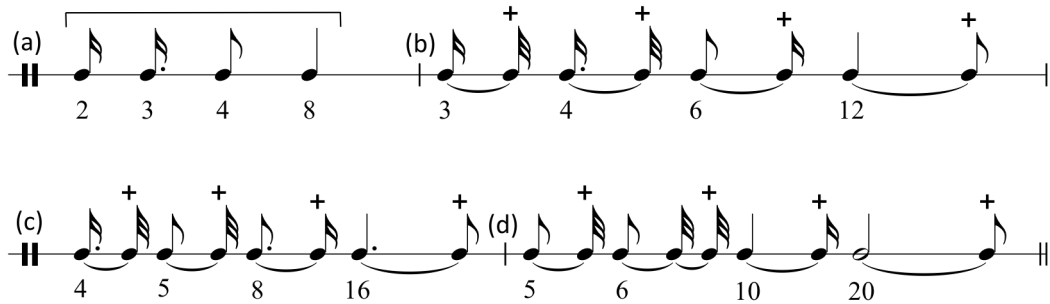
caturaśra; while the last version of pārvatīlocana has a base number of five, and belongs to jāti-khaṇḍa. The final beat of the last version, which would otherwise carry over into the next movement, is prematurely brought to a close in alignment with the movement's end. The effect of each jāti creates a version of the tāla that is an inexact alteration of the original rhythm: the first three beats, as well as the penultimate beat, increase by a semi-quaver (i.e. two 32nd notes); the central value by a single demi-semi-quaver; and the third and final notes of the tāla by three 32nd notes.

Fig. 4.28 Pārvatīlocana (81) tālas: *I. Introduction, Sept haikai* (1962)



Discounting the final guru value, which is twice the length of the previous laghu, lakṣmīśa (88) is essentially, a notated rallentando; Messiaen described its gradually increasing durations as 'parfaitement chromatique' (Messiaen 1994: 329). With each repetition, the proportions of lakṣmīśa (88) are elongated by means of inexact augmentation: the first two values increase by a demi-semi-quaver, the third value by a semi-quaver, and the last value by a quaver.

Fig. 4.29 Lakṣmīśa (88) tālas: I. Introduction, Sept haīkaī



The rallentando gesture can also be observed in the gradual decreasing pattern of irrational quavers in the cowbells, throughout the orchestral tuttis of the third movement, *Yamanaka - Cadenza*; the rhythmic groups in the first two tuttis of the cencerros decrease from ratios 9:6, 7:6, 4:3, eventually resolving onto regular group of eight-note quavers. In the third and longest interlude, the irregular group of quavers begin from a ratio of 11:7 (b.75). A progressive rallentando is also used to signify the tani-watari theme featured in *Les Oiseaux de Karuizawa*. Tani-watari is the ornithological name given to the secondary song of the uguisu, which consists of a series of repeated minor thirds (Messiaen, 2000b: 515).¹³

The notated accelerando of tāla (88) moves in opposition to the gradually decreasing values of *sārasvati kanthābharana* (115) (Fig. 4.30). Unlike tāla (88), which appears once in its original form, *sārasvati kanthābharana* (115) undergoes a more radical transformation.

¹³ The theme is used at the work's climax (from b.216, three bars after rehearsal figure 26), to bring the sixth movement to a close.

Fig. 4. 30 Sārasvati kanthābharana (115) and Lakṣmīśa (88) tālas:



The original tāla, which consists of a spondee repeating at half the value of the previous foot, is replaced by a group of spondees, gradually decreasing in value until the foot is reduced to two semiquavers. Messiaen takes a great deal of licence with sārasvati kanthābharana. His interpretation of it is more gestural than anything else and bears little relation to its original. This is especially evident when compared with his transformations of lakṣmīśa (88) and pārvatilocana (81). In their analysis of *Sept haïkai*, Johnson and Rae (2008: 164) identify this as a ‘typically Japanese rhythm’, most likely referring to the accelerando of the nagashi, part of the katarai technique of the kakko. Messiaen considered the characteristic repetition of nagashi to be ‘difficult for the European ear to tolerate’ (Messiaen and Samuel, 1994: 100).

The altered sārasvati kanthābharana (115) is repeated three times during the first movement; at the opening (bs.1-5); once in retrograde, mid-way through the movement (bs.19-23); and again, in normal order (bs.28-32) towards the movement’s close (Fig. 4.31). Unlike tālas (88) and (81), which are altered by means of inexact augmentation throughout the movement, Messiaen’s version of sārasvati kanthābharana remains proportionally fixed throughout.

Fig. 4.31 Sārasvati kanthābharana (115), bs. 28-32: I. Introduction, Sept haikai

6

The Shakti rhythms, altered by *personnages rythmiques*, have much in common with the characters of *Joie du Sang des Étoiles*, as both seem to be derived from the procedures of inexact augmentation inspired by the karṇāṭic jātis: one value (or group of values) remain fixed in duration, while the base numbers increase or decrease, corresponding to the jātis (Fig. 4.32). Messiaen extends the principle by applying it to several tālas at one, whereby the proportion of one remains fixed, in this case the sārasvati kanthābharana (115), while the others undergo augmentation and diminution. Each variation is separated by five pauses in the form of sustained notes by the metal percussion, or by rests in the brass, lasting for seventeen and twenty-one semiquavers, allowing the other rhythmic pedals to emerge from the texture.

Fig. 4.32 The five Jātis of Dhruva Tāla in Western notation:

Dhruva tāla:

(a) Tisra (b) Caturaśra (c) Khaṇḍa

(d) Miśra (e) Saṃkīrṇa

The overall symmetry of *Sept haikai*, created by the structural bookends of the *Introduction* and *Coda*, is itself intended to depict the grimacing Niō guards that stand on either side of the entrance to many of the Buddhist temples in Japan (Messiaen, 2000: 450). Although the overall shape of the work is similar to the short-long-short proportions of a cretic amphimacer (or the proportions of the multi-value, non-retrogradable version of the *Siṃhalīla* described by Nijenhuis (1992) (App. F)), the images evoked by Messiaen's description have much in common with the Indian statues of Jaya (28) and Vijaya (51) in the temple of Chennakesava, Karnataka; Viṣṇu's doorkeepers are standing guard on either side of the entrance.

'Shakti' is also used in Buddhism, and refers to the feminine aspect of Buddha, also known as the 'prajñās'. Although they play a minor role in Buddhism when compared to the role of the eminent goddesses of the tridevī in Hinduism, the prajñās are the female incarnations of Buddha, that is, the five embodiments, symbolising the union between energy and action. In Buddhism, however, the male and female roles denoting energy and power are reversed (Rubel, 1968: 19).

The similarities between the two religions are the result of several centuries of influence, cross-pollination, and cultural transaction. Many aspects of Buddhism—for example, the supreme but formless divinity represented by a celestial trinity; deities that manifest as fierce aspects counter to their benevolent forms; the manifestation of demons; and the cyclical nature of existence—were all adapted from the Hindu tradition. Several of the major Hindu deities are found in Buddhism, but are relegated in status. Viṣṇu and Śiva are considered intermediaries, for instance, whose purpose is to help mankind

ascend through the six spheres of existence to Nirvana. As lesser deities, they inhabit 'bodhisattva bodies', the intermediate form of existence; the trikāya lie below the pure, un-manifest forms of the divine Buddha-bodies, and above the earthly bodies inhabited by human beings (Rubel, 1968: 20-3).

In this piece, the Shakti signifies the separation of the whole, and the division of androgyny into constituent masculine and feminine elements. The *Introduction* and *Coda* have much in common with this concept in two senses: first, in the separation of a unified whole to form the outer movements that are essentially the same piece; second, the superimposition of rhythm upon its own retrograde between the wind section and piano—identical rhythms separated by retrogradation whose counterpoint forms a unified whole. Moreover, the Shaki are intended to signify the Hindu Tridevī and not the prajñās of Buddhism, but are, nevertheless, combined to form an image of a Buddhist temple in Japan. The five prajñās are replaced in favour of rhythms intended to symbolise the Hindu shaki. This conflation of religious symbolism demonstrates the author's exteriority in relation to Indian and Japanese culture, and places the artist firmly outside the boundaries of both.

Said (1978: 51) describes a similar conflation arising out of the French and German 'Orientalia' of the mid-18th century, where all things Asiatic were considered 'woefully synonymous with the exotic', and hence, irrespective of their relationship or lack thereof, were often considered interchangeable. In a sense, Messiaen's conflation of cultural religious symbols is itself a generalisation about the Orient, as well as a statement on the substitutability of Indian and Japanese religious symbolism.

If we take heed of Said's view on how an artist's representation of 'the other' should be assessed, then Messiaen's aesthetic errors should be judged not in terms of their stylistic faithfulness to a great original, their period-authenticity, or the extent to which they conform to the stylistic idiosyncrasies of Japanese gagaku, but on the author's strategic location to the work in question, and the comments made by the author that separate him from the culture. Therefore, the most egregious aesthetic error in the *Introduction* and *Coda*, and *Sept haïkai* as a whole, is not the extraction of the *deśitālas* from their original musical context, but the aesthetic errors created by the depiction of Buddhism with Hindu symbolism.

4.12 Summary

Sept haïkai exhibits two kinds of appropriation: content appropriation, through its use of ancient *deśi tālas* and Japanese compositional techniques derived from Messiaen's study of gagaku; and the use of subject appropriation, by way of impressionistic depictions of Japanese landscape and wildlife. These structural bookends, of which one is the retrograde of the other, are portrayals, albeit abstract, of Japan, relying on Hindu rhythms to aid in the depiction of a Buddhist temple.

Messiaen shows his knowledge of traditional performance practice through his measured use of percussion dynamics and his layering of dynamics overall, which serve a dual function: first, to accurately portray the instruments of the imperial court and, second, to aid in the depiction of landscapes through the layering of foreground and background mosaics.

Messiaen's exteriority to Japan is demonstrated in three ways: first, through his conflation of Hindu and Buddhist symbolism, inherent in the deployment of Hindu shakti rhythms in the *Coda* and *Introduction* movements; second, via the usage of foreign artefacts to aid in the depiction of Japanese scenery; third, in Messiaen's characterisation of traditional gagaku instruments, whose perceived timbral idiosyncrasies and shortcomings are consistently measured against European standards.

However, the most problematic example of Messiaen's exteriority to the Orient is his conflation of religious symbolism through his deployment of Śārṅgadeva rhythms, labelled 'rythmes des 3 Shakti', in spite of their symbolic, historical genealogy. Conflating Buddhist and Hindu symbols represents Messiaen's most egregious aesthetic error.

Messiaen's gagaku meets the *Japonisme* criteria set down by Sullivan (1989). *Sept Haikai* and especially *Gagaku* show serious concern for traditional Japanese techniques. Messiaen's authentic intention is most evident in his study of the roles of instruments, such as the biwa, shōko and taiko, which have no direct representation in *Sept haikai*. His genuine fascination with other artistic forms, such as Noh theatre, denotes an interest in Japanese culture beyond what is of immediate use to him as a composer. His exploration of the history of imperial court music—yet again signifying a genuine interest in Japanese culture—does not however, extend to a detailed investigation of its theoretical principles, unlike his study of Karṇāṭic and Hindustani music, making any efforts at a period-authentic rendering of gagaku unlikely.

Messiaen's affinity for Japan, unlike India, was not limited to the ancient and extended to contemporary culture too; he was impressed by its people and

their apparent ability to coexist with a world that he considered to be both ancient and modern (Messiaen and Samuel, 1994: 101). For Messiaen, the sonic landscape of gagaku music exemplified this notion of coexistence between ancient and modern worlds. This idea resembles the hybridity of Messiaen's own ancient yet modern sounding musical language, evident both before and after his encounters with the music of the Imperial court. Nowhere is this ethos more apparent than in the co-habitation of ancient Greek metre with the pallet of rotary chords, chromatic durations, birdsong, and dodecaphonic passages of the second movement.

Lying at the heart of *Sept haïkai* is a tribute to the music of the imperial court. Messiaen pays attention to the sonic elements, instrumental combinations and performance practices essential to traditional gagaku, while maintaining a respectful distance by way of an innovative portrayal of its style. The work is the culmination of Messiaen's direct engagement with a culture, through his interactions with both the people and music at the Tokyo imperial court.

Conclusion

Messiaen's authentic intention is evident in his careful study of non-Western content. Even though the materials are often recontextualised in his music, he cares enough about the style to ensure its accuracy where possible. However, it is worth considering whether the care given to the study of non-Western content, such as his dedication to the study of Indian rhythmic theory, is enough to excuse the act of appropriation if the principles arising from them are abandoned in practice.

It is also worth considering whether the harm caused by Messiaen's appropriation of Indian *tāla* has diminished with time, or whether his appropriation of content and subject remains problematic. Does the harm depend on whether the artefact is still considered to be of value? Is the harm diminished if the society in question has largely abandoned using the artefact? If so, then Messiaen's appropriation can be regarded as relatively benign in its harmfulness. If not, his actions could be construed by the insider society as a kind of archaeological desecration.

If we consider cultural value within the context of Western music copyright law—which expires, depending on the country, in the fifty to seventy years after the composer's death—the implication might be that artworks relegated, or liberated, into the public domain have diminished in cultural value compared to those still in copyright. However, 'value' should not be confused with 'relevance' or monetary worth. Artworks considered to central to a culture are often out of copyright. For instance, the U.S. national anthem, *Star Spangled*

Banner—emblematic of patriotism—is in the public domain, for use by all US citizens. Furthermore, the ruling by Chief United States District Judge George H. King for the Central District of California in the case of *Clayton F Summy Co Rupa Marya, et al. v Warner/Chappell Music, Inc., et al.* (2015: 41) denying ownership of the melody *Good Morning to All*—also known as *Happy Birthday to You*—by Mildred and Patty Hill (1893), suggests that public domain should not be considered a metaphor for obscurity.¹

The key concern in assessing Messiaen's appropriation lies in the potential for misrepresentation, particularly in relation to the impact of his appropriation on Western perceptions of Hindustani classical music in the twentieth century. Also, if the *deśitālas* are deemed intangible cultural artefacts or are revealed to have spiritual, religious, or cultural symbolism, often woven into the fabric of Indian classical music (Rowell, 1992: 32, 38), their appropriation could be considered a form of desecration. Messiaen offers substantial creative justification for the use of foreign artefacts throughout his analyses in *Technique de mon langage musical* (1944) and *Traité de rythme, de couleur, et d'ornithologie* (1949–92). However, the ethical implications of cultural appropriation are absent from his discussion.

The level of offence caused by the treatment of cultural artefacts determines whether its usage can be shown to be 'unethical' in some respects (Young and Brunk, 2012: 5). If the appropriated material is exploited in such a way as to negatively misrepresent or undermine the culture of origin, then a

¹ The creator of the lyrics of *Happy Birthday* has yet to be confirmed. The earliest report of *Happy Birthday* and *Good Morning* having the same melody is in the *Inland Educator and Indiana School Journal* of 1901. However, Patty Hill later claimed in a deposition that she wrote the lyrics to *Happy Birthday to You* around the same time as *Good Morning to All* (*Rupa Marya et al. vs. Warner/Chappell Music, Inc., et al.* (2015: 4)).

violation has occurred. If, however, little offence has been caused, then the appropriation can be determined as relatively benign in its impact on the insider culture.

Resolving the ethical question of Messiaen's appropriation of content also involves assessing the level of consideration given to its subject, reflecting what Kivy (1997) referred to as the 'author's authenticity *as* intention'. For example, mixing several tālas that originate from different regions of India—such as combining Hindustani and Karṇāṭak styles as Messiaen himself does in the central tutti of *Oiseaux exotiques* (1955–6)—may raise stylistic objections from the insider culture, highlighting the author's negligence in the treatment of the subject, which in turn signifies the artist's indifference toward the insider culture. Similar failures might arise from the inappropriate mixing of old and new styles, particularly in musical forms where period authenticity has authority. Rowell (1992: 7) observes this phenomenon in the history of performance practice of Indian classical music, where the boundaries of innovation are restricted due to the reliance on oral tradition. Shruti Jauhari, a performing artist and historian of Hindustani classical music, expresses similar sentiments,² asserting tradition over innovation, emphasising the importance of an artist's strict adherence to traditional performance practice. She implies that innovation, at the expense of period authenticity, is often a sign of the performer's inexperience:

² Personal correspondence; Dr Jauhari was kind enough to grant me an hour-long Skype interview on the 4th of August 2016. She has been performing Indian classical music for thirty years, as well as being a featured artist for All India Radio; she is a visiting faculty member in the Music Department of Madras University.

Indian classical music has so much refined material that only understanding it will consume the light. Forget adding on and creating your own; I don't think there is any need for it, unless these things are very accidental. Some new thing in art is always a possibility, otherwise art ceases to evolve, so it's not as if I'm against anything new. But at the same time, it doesn't happen the way the young brigade does it these days, where they are intent upon creating something new. I don't think lovely things and natural things happen like that, they just happen if they *have* to happen. We can't sit and plan something different and new. Whatever is there in the books is more than enough, and a lot of new things actually come about from there. (Jauhari, 2016: pers. comm.)

Displacing, co-opting, or extracting the inherent religious symbolism of content may also produce an aesthetic clash, raising objections from the insider society that the work is not in keeping with traditional practices. Mixing content or subjects from different cultures, whether by differentiation or conflation, intentionally or by accident, may speak to the author's broader attitude towards the appropriated culture, revealing, in Saidian terms, the author's strategic location, and possibly their exteriority to the insider society.

The most common argument about artistic appropriation, especially concerning intangible items, hinges on whether the subject or content—or in the case of the *Śaṅgītaratnākara* (ca. 1240 AD), a list of durations—can ever really be owned by a culture. Are our concerns appeased if duplicates of the item exist elsewhere, such as the proportional similarity between the Greek cretic amphimacer and Śārṅgadeva's dheṅkī tāla (58) (Fig. 1)? That is, does the existence of an item with similar properties, originating from a completely separate culture, make the appropriation acceptable? Furthermore, if an item has been used to the extent that it has itself become intrinsic to the outsider culture, does its continued use still raise ethical concerns? Questions of this nature are dependant on what is said, if anything, by the final artistic expression

about the culture from which the material originates. As I discussed in Chapter 4, attentiveness to placing cultural ‘duplicates’ within their correct context may provide insight into the author’s motivation, demonstrating their intentions regarding provenance authenticity.

Fig.1 *Dheñkī (58) S I S and Cretic Amphimacer*



An artist’s authentic intention may not, in and of itself, be enough to dispel every objection, or appease an insider’s profound offence; it is still possible to offend, or cause harm, irrespective of good intentions. However, the authentic intention of an artist is by no means inconsequential, and it can motivate her to strive for, and even gain, a deeper understanding of the insider’s culture and art. In turn, this may result in an artwork that is more authentic or, at the very least, renders the outsider artwork ethically benign. Authentic intention can be the means through which the artist produces artwork that shows genuine interest in the insider culture, that pays respect and avoids fetishisation or misrepresentation, irrespective of any resultant stylistic errors.

There are various means through which the outsider may chose to show respect to the insider culture, one of which is to proceed from a position of acceptance with respect to the inevitability of aesthetic failure, raising the question of whether faithfulness to an original, its period and provenance, is in fact the best indicator of good intentions vis-à-vis the insider society, or if serious study of the materials is enough.

In Messiaen's case, it is evident from his writings and interview with Claude Samuel (Messiaen and Samuel, 1994) that he considered non-innovative, provenance authentic reproductions of music by outsiders to be both disingenuous stylistically and creatively inadvisable. Messiaen was keenly aware of the inevitability of aesthetic failure in this regard, evidenced by his acknowledgment of the flaws in his interpretation of Hindu symbolism in *TRCO*:

Ces lectures m'ont seulement influencé, guidé dans le choix de tel ou tel commentaire. Ma vision des vérités cachées sous le symbole reste donc en partie Européenne, avec, sans nul doute, les quelques erreurs que cela comporte... (Messiaen, 1994: 264)

[These readings have only influenced and guided in the choice of this or that commentary. My vision of the hidden truths under the symbol remains in part European with no doubt, the few errors that are brought with it...]

According to Boulez (Nichols, 1986: 167), Messiaen's initial ignorance of the Eastern traditions led to the creation of music that was unfaithful to its cultural origin, which, he explains, was due in part to the lack of available recordings. However, even after extensive research, Boulez concedes the end result bears no resemblance to the original music: 'The more you know of Asian music, the more you can see Messiaen's music is different from it' (Nichols, 1986: 167).

Boulez's assertion may be correct, particularly with respect to the earlier works of Messiaen that give off a vague sense of the Orient—the Indian influences in *Turangalîla-Symphonie* (1946–8) are a noteworthy example. He evaluates Messiaen's musical appropriation in terms of its adherence to provenance authenticity, rather than for its innovative adaptation of materials. The similarity to specific non-Western styles may not be easily recognised on the music's surface. However, the composer's tireless exploration of certain Asian

styles, such as his study of Japanese imperial court music during the creation of *Sept haïkai* (1962), make them more alike than unlike. Furthermore, Boulez's inability to detect the non-Western techniques in several of Messiaen's later works and relate them to their place of origin is not an indictment of Messiaen's writing; rather, it reveals Boulez's inexperience with Eastern music.

Messiaen's concealment of foreign artefacts through textual obfuscation may be enough to quell insider objections and lay the debate to rest. The kind of profound offence caused by artistic cultural appropriation, as described by Feinberg (1987), requires that the act itself be recognised as either originating from, or in the very least attempting to resemble, the insider culture. Ironically, it is those artists concerned principally with creating provenance and period authentic artworks—in order to show reverence and respect to the original culture—who are as likely, if not more so, to succumb to aesthetic errors than those who engage in a radical transformation of 'exotic' materials by means of extraction beyond all contextual recognition. Messiaen's use of *deśītālas* is such an example as, more often than not, there is little chance of recognition, especially when the *tālas* are competing amidst a constellation of textures, whether as superimposed rhythmic pedals after the piano cadenza in the *Introduction of Turangalīla-Symphonie* (1946–8); in cases where the listener is blinded by the intensities of *l'accords tournant* in *Couleurs de la Cité celeste* (1963) and so too distracted to notice the *deśītālas* superimposed in the brass; or when *tālas* are marooned from their stylistic habitat or distorted to such a degree that they bear so little resemblance to the original that they cannot be easily recognised as appropriated, having been exposed to the characteristically Western technique of retrogradation.

However, Boulez is correct in one respect: While Messiaen's research into Indian music led to a deeper understanding of the Hindu symbolism, his use the *deśītālas* is inconsistent. He disregarded the symbolism when it failed to compliment the work's broader themes, such as in *Chocard des Alpes* from *Catalogue d'Oiseaux* (1956–8). He also used the Śārṅgadeva symbolism to convey aspects of his Roman Catholic faith, such as the *tālas* used to symbolise the apocalypse in *Couleurs de la Cité celeste* (1963), or the lion symbolism of *simhavikrama* (8), signifying the resurrection of Jesus Christ in *Et exspecto resurrectionem mortuorum* (1964) (Johnson and Rae, 2008: 44, 170–2). Hindu symbolism continued to be disposable in this fashion, long after Messiaen's exegesis of the *tālas* names. However, according to Rowell (1992), similar inconsistencies are evident in the systems underlying Indian musical thought:

It has often been pointed out that formal systems of Indian logic have never accepted the lack of the excluded middle (which holds that in the case of an apparent contradiction, a proposition either is or is not true), and hence Indian taxonomies seldom are arrayed in sharp dichotomies and exclusive categories. (Rowell, 1992: 25)

Lastly, we should address what was ethically permissible within the bounds of Messiaen's Roman Catholic faith, and the extent to which his appropriation of non-Western elements might be valid when used for what he would have considered to be a 'higher purpose'. From a religious standpoint, his appropriation is permissible when used to celebrate the majesty of God. Kierkegaard (2006) speaks to this idea in *Fear and Trembling*, showing us that the concerns we may have about the ethics of such an act can be justified and superseded by a true act of faith (for instance, Abraham acts morally when he

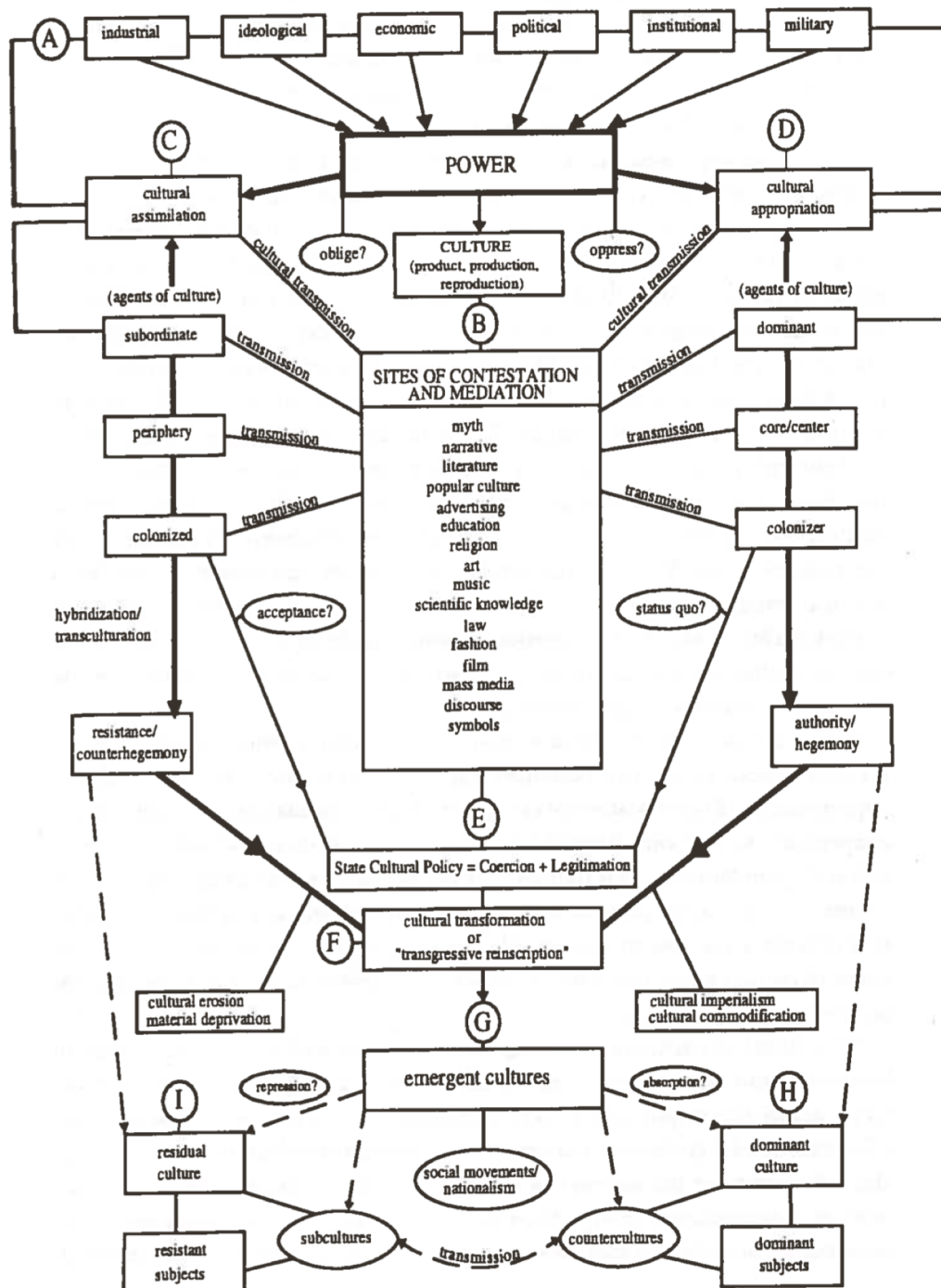
attempts to kill his son Isaac, because he was commanded to do so by God; faith overrides the normal ethical principle not to kill).

Messiaen is at his most confident when he is able to attach an artefact's ancient symbolism to his own religious faith, or to a broader musical or philosophical truth. The act of combining Eastern symbols and artefacts with those from the West reveals a philosophy based on universality, having much in common with the ideas expressed by Jauhari (2016: pers. comm.), namely, that artistic expression cannot truly belong to a culture because of the inevitability and necessity of artistic influence. The natural outcome of an expression of truth (or a truthful expression) *is* influence, occurring via an organic interrelationship of artworks—intertextuality. Beauty and truth know no cultural bounds and are accessible to all regardless of their origin.

(Appendix A):

A Structural Representation of Virtual Transmission
(Ziff and Rao 1997:6)

A Structural Representation of Cultural Transmission:
Appropriation or Assimilation?



Facsimile of a fragment of a letter by Messiaen addressed to Claude Rostand

HARAWI

Chant d'amour et de mort -

pour chant et piano -

(Poème et musique d'Olivier Messiaen)

"Harawi": prononce "harawé" (on dit Harawi en "quechua" et Yaravi en espagnol).
Le "Harawi" est un chant d'amour et de mort, fréquent dans le folklore du Pérou. Il s'agit d'un amour irrésistible et profondément passionné, qui va jusqu'à la mort des deux amants: comme dans l'histoire de Tristan et Yseult. Ici, l'Yseult s'appelle "Pizoutecha".

"Harawi" a été écrit en 1945. Il se divise en 12 chants. Il est bâti sur 2 thèmes d'amour, très mélodiques, que l'on entend souvent au cours des 12 chants. On y trouve des "canons rythmiques" (Canon rythmique rétrograde, canon rythmique par ajout du quart de durée), tous l'œuvre utilise des temps, un genre en durée, des rythmes non rétrogradables, 5 des premières pointées pour accomplir et amortir la thèse. On y trouve encore des chants d'oiseaux, et un langage harmonique qui mélange des modes chromatiques alternés ou superposés à des accords à résonance contractée.

I - La ville qui dormait, toi -

C'est le premier regard d'amour.

II - Bonjour toi, colombe verte -

Première apparition du 1^{er} thème d'amour, accompagné de chants d'oiseaux. La colombe verte, c'est la jeune fille aimée. (Dans le folklore péruvien, la bien-aimée est souvent appelée "colombe").

III - Montagnes -

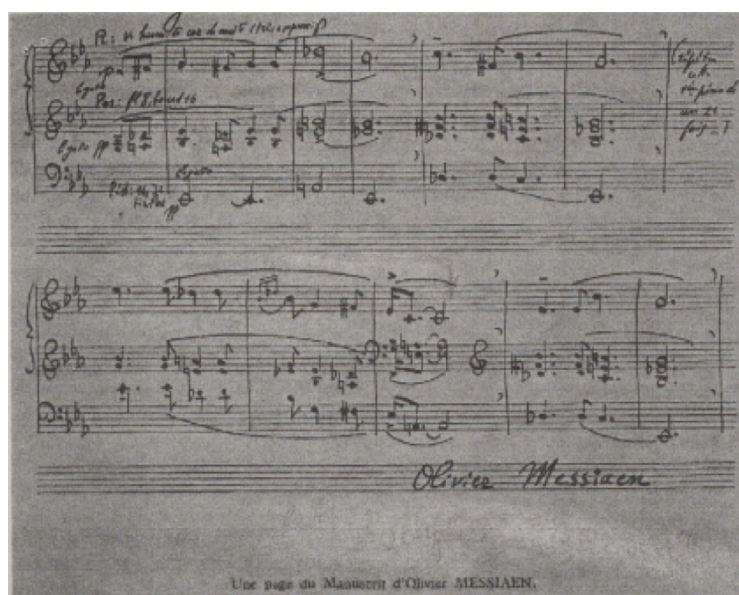
Nombreuses variations rythmiques. Au piano, canon rythmique rétrograde, évoquant les vibrations de l'atmosphère, en haute montagne. (L'auteur est un homme de montagnes, ayant passé toute son enfance dans le Dauphiné).

IV - Doundou tchil -

Danse chantée de Cuenca (Équateur) "Doundou tchil" est un onomatopée en langue "quechua", imitant le bruit des grelots attachés aux chevilles des danseurs. À la fin, tambour et chants d'oiseaux se superposent aux percussions de la voix.

(Appendix C):

i. The Evolution of the 'Thème d'Amour':



Programme notes: Partial Manuscript of Messiaen's incidental music to the play *Tristan et Yseult* by Lucien Fabre, Feb 1945.

(Simeone and Barber, 2002)

ii. The Evolution of the 'Thème d'Amour':

N° 67
DELIRIO.
Mode B.
Chanté par M. Duncker-Lavalle.
Arequipa (Pérou).
♩ = 66
Passionné et douloureux

Di - me mi bien has - ta cuan - do,
Ay! mi due - ño!
He de te - ner que a - go, tar

The opening period to *Delirio* by Peruvian composer M. Duncker-Lavalle taken from *Les Chants d'Amour* from *La Musique des Incas et ses survivances*

(d'Harcourt and d'Harcourt, 1925:332)

(Appendix D):

A graphic analysis of Greek and Indian metre in
Le Tombeau resplendissant (1931) and *Les Offrandes oubliées* (1930)

Greek metre feature heavily in Messiaen's early orchestral works; *Le Tombeau resplendissant* (1931) and the first two sections (La Croix and Le Péch ) of *Les Offrandes oubli es* (1930) both employ a combination of iambic, dactylic, and mixed species, derived from the composer's study of Greek metrics (Fig. a. 1-3):

Fig a. (1-3) *Les Offrandes oubli es* (1930)

(1) Bars 34-36:

Vif, f roce, d sesp r , haletant
(♩=144)

Flute
Vns. & Altos
C.B.

Arsis Thesis

ff

f cresc.

(2) Bars 24-28:

Vif, f roce, d sesp r , haletant
(♩=144)

Vns.
C.B.
Timp.

Bachius

Double Proceleusmaticus

f

p cresc.

fff p cresc.

Epitrate IV

Tribrach
(Dissolved trochee)

(3) Opening theme:

Très, douloureux, profondément triste (♩=44)

Measures 1-10 of the opening theme, featuring various metrical patterns and dynamics.

The overall form of *Les Offrandes oubliées* (1930) is a triptych, formed of the cross, the sin, and the Eucharist, with two wings denoting sacrifice and grace, placed either side of the central section, in similar fashion to the shutters of a triptych painting that help to frame its central image. The themes conveyed in *Les Offrandes oubliées* are similar those found in Rubens's *The Elevation of the Cross* (1610-11). However, in Messiaen's symphonic meditation, the Christian themes of sacrifice are placed on either end of the central subject, sin—reminding us of the intrinsic link between sacrifice, sin, and the recognition of God's grace.

In spite of its fierceness, flurry of orchestral colours, dynamic accents, rapid changes of time and tempo, the lively central section is essentially an elongated dominant pedal, which is ultimately resolved by the painfully slow strings of the work's final 'wing'. Each of the shutters comprises of three periods. The first section has two contrasting periods (I=bs. 1-5, II=bs.6-9) followed by a

parallel period (III-bs. 10-13), the latter shorter than its predecessor. The opening string theme, written in the second mode of limited transposition, consists of a pæonic dimeter: a bacchius foot preceded by a pæon III. Messiaen combines the pæonic feet to form a larger foot consisting of ten primary times, or metrons. The marking of duration, indicated by his use of conductor beat symbols, denote the influences of metric principles found in ancient Greek and Indian rhythmic forms. Furthermore, the underlying pulse is based on smaller units rather than larger ones (in this case, with quavers) in keeping with Greek and Indian rhythmic principles.

The pæonic-bacchius occurs twice in the first section (bs. 1 and 6 (fig. a. 3)), at the start of the first two periods. Unlike the bacchic rhythms, which are discussed at length by Messiaen (1994), the pæon III is referenced sparingly in his appraisal of Greek metre in Volume 1 of *Traité de Rythme, de Couleur, et d'Ornithologie* (1992). Messiaen suggests the anti-bacchius (the retrograde of the bacchius) is analogous to the symbol of a falling star, comparable to the malevolent spirit 'Cacodemon' (Messiaen, 1994: 76).

Conversely, the bacchius foot is ascribed an opposing symbol in the form of Agathodaimon, a benevolent divinity whose origins are in Ancient Greece and is celebrated with wine at the end of every meal (Smith, 1867: 65). Messiaen (1994) suggests that inverting the symbol will also result in a subversion of its meaning. Therefore, the bacchius represents a 'good god', a 'spiritual intoxication' who has been called upon to assist in the shaping of his unison melody (Messiaen, 1994: 76).

Throughout the first section, each foot is coloured by different members of the woodwind. The horns and clarinets dovetail with the bassoons and flutes,

and the exchange between the two groups subtly emphasises the *élan* and *repos* of each phrase. The phrase lengths of bar 2 and 3 are an augmentation and truncation of the opening bar, respectively. The first pæonic foot is repeated in the second bar, while the bacchius metre is restated with melodic embellishments at the start of bar 4. From this perspective, the second and third bars can be seen as a development by extension and contraction of the opening mixed-foot, a procedure that continues throughout the first section.

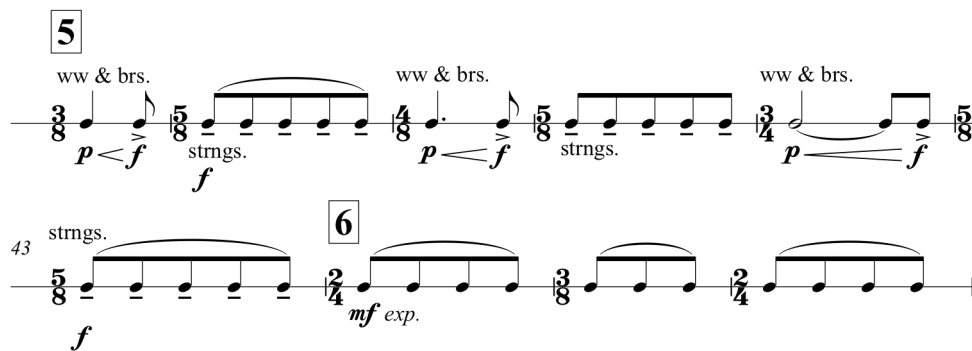
A pæonic metre is established in the opening section by its consistent restatement at the start bar 2, 5 and 6. However, the metre is disrupted in three ways: first, by alternating the pæonic rhythm with mixed metres of different length; second, through the redistribution of accents, known in Aristoxenian theory as ‘*diæresis*’ (evident in the off-beat accents and slurs of the first violin melody in bar 3, as well as the epitrite measure in bar 8); and third, by replacing an even foot at the end of bar 4 with an odd one. Every bar in the first period ends with a metrical foot of four short syllables (i.e. *proceleusmaticus*), with the exception of the fourth bar; the shortened iambic foot in bar 4 interrupts the metric discourse. The cadence at the end of the first sentence (b.5) is prolonged by the incremental expansion of rhythmic species (i.e. 2, 3, then 4 *métrons*). The expanding feet, combined with the contrary motion between upper and lower strings have the effect of prolonging the phrase, by means of a notated *rallentando*.

Throughout the first section, the theme is developed by way of elimination: the second sentence (in b.6) is shorter than its predecessor by one bar, and the final sentence (beginning bar 10)—consisting of a two bar phrase followed by an inexact repetition in the lower strings and bassoons—is

immediately interrupted by a dotted brass motif, signifying the commencement of the central section. Epitrites IV and I, which are metrical retrogrades (i.e. - - - U | U - - -), are placed alongside one another other. This has the effect of prolonging the cadence further, even though the second period is shorter than its predecessor.

(Fig. a.4) *Le tombeau resplendissant* (1931)

(4) *Second theme:*



Le Tombeau resplendissant

The ametrical metres throughout *Les Offrandes oubliées* (1930) and *Le Tombeau resplendissant* (1931) are often an indicator of Messiaen's technique of development by elimination and/or addition. The ametrical bars in fig. a.4 bear a striking resemblance to the qualities of the *siṃhavikrīḍita* (27) rhythm, one of the 120 *deśitālas* compiled towards the end of the 13th Century by the Hindu theorist Śārṅgadeva in his *Sanḡitaratnākara*, and described by Messiaen as the lion's leap (Messiaen, 1994: 279). In chapter 2 of *Technique*, Messiaen (1966: 9) notes an important proportional similarity between *Siṃhavikrīḍita* (27) and the alternating ametrical bars in *Danse sacrée* from Stravinsky's *Le Sacre du printemps* (1913) (fig.a.5):

(Fig. a.5) A Comparison between an except of *Danse sacr le*

from Stravinsky's *Le Sacre du printemps* and *Simhavikr dita* (27) (Messiaen, 1966: 9)



The rhythmic procedures encountered in Stravinsky's *Danse sacr le* bear a striking resemblance to the alternating units of the *Simhavikr dita* rhythm. Messiaen divides the Hindu rhythm into two groups. Group (B) has a constant value of a dotted crotchet, while the (A) group gradually augments and diminishes in length. The principle of expanding and contracting one unit out of two can also be applied to bars, phrases, and periods. In *Le Tombeau resplendissant* (Fig. a.4), the second theme, whose chords are derived from Messiaen's third mode of limited transposition, consists of exactly this, namely, a series of ametrical juxtapositions: an expanding foot (from b.38) in the form of an inexact augmentation juxtaposed against one that is fixed, in this case, a dissolved p onic rhythm. The contrast between the changing durations is underlined by the orchestral exchange between the wind and strings.

Messiaen (1994: 267) claims that the ancient Hindu rhythms anticipated the technique, 'Personnages rythmiques', used in the *Turangal la-Symphonie* (1946-8). While it is quite common for the vibhags (the equivalent of the Western bars) in Hindustani Sangeet to be made up of uneven durations, it is not especially typical for the overall phrase lengths to change in the way Messiaen's do, nor is it common for the rhythms to be altered through retrogradation.

(Appendix E):

An analysis of deśītāla
in Messiaen's *La Nativité du Seigneur* (1935)

Messiaen regards *La Nativité du Seigneur* (1935) to be one of his most important rhythmical works, which was written before the Second World War (Messiaen and Samuel, 1994: 80). In the introduction to the score Messiaen (1935) reveals that the pieces are divided into four books, each offering different perspectives on the score's main subject matter, namely, Jesus Christ. There are five theological themes in total—the predestination of man; God among us; the suffering of the Lord; the birth of the word, of Christ, and of Christians; the characters of the Christmas feast; and the maternity of the Virgin Mary—which are used throughout the nine meditations to explicate the subject matter of the life of/teachings of Jesus Christ (Messiaen, 2009).

Several aspects of this piece are unusual for a sacred work. Most notable is the use of poetical feet borrowed from Ancient Greek, and the use of Hindu deśītālas. The uneven metre, used extensively in the second theme of the second meditation of *Les burgers* (from b. 12, modéré, joyeux), gives rise to a rhythmical language reminiscent of the pagan music of the apostolic age, before the introduction of even note lengths by the early Christian fathers (Jones and Willard, 2006: 30).

Deśītālas feature heavily in the fourth, sixth, eighth, and ninth meditations, and, to a somewhat lesser extent, in the first; tālas (99) and (4) make up the rhythm of the *Boris theme* in the opening bars of *La vierge et l'enfant*.¹ This rhythm is also an inexact augmentation of *bhagna* (116) used in the opening of

¹ The theme is the melodic contour from Mussorgsky's opera *Boris Godunov*.

Meditation No. 6, *Les Anges*. Also, the pedal melody (from b. 16) begins on *niḥśankalīlatāla* (6), whose last three units form a distinctive antibacchuis rhythm (Fig. a.6):

Fig. a.6 (a–b) *La vierge et l'enfant* (c) *Les Anges*

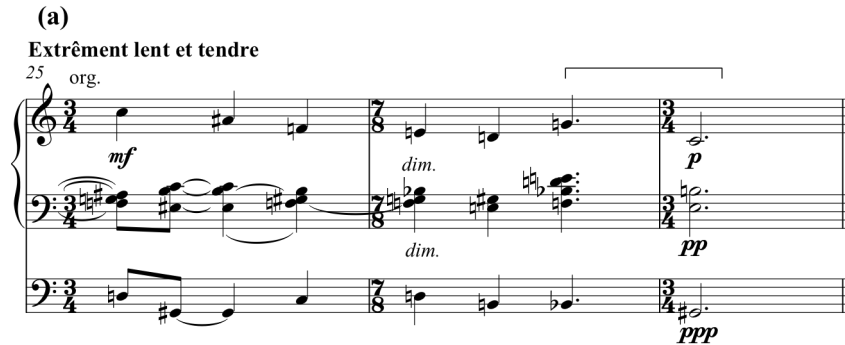
(a) **Lent** Gaja (99) Caturthaka (4)
mf

(b) **Un peu vif**
16
staccato f 7
Caturthaka (4)
Pedals legato Nihśankalīlatāla (6)

(c) **Vif et joyeux**
bhagna (116)
f

Desseins éternels (Meditation No. 3) is absent of Indian rhythm and is distinct from the other meditations because it is a reworking of an earlier piece—the finale of *Les Offrandes oubliées* (1930) (Milsom, 2008: 65). This movement has a compound duple metre, with occasional quaver displacements that enlarge and reduce the bar lengths by means of added and subtractive values. The addition of the dot, added to the rallentando in the penultimate bar results in a ‘retardation’ of the final cadence (Fig. a.7):

Fig. a.7 *Desseins éternels* (bs. 25–27)



This device is explored further in *Jésus accepte la souffrance* (Meditation No. 7), by way of polymodality; Mode 2: 1¹ in b. 18 and Mode 3: 1³ in b. 19 are superimposed on a chromatic scale in the left hand, prolonging the return of the *Boris* theme and the ‘trompette’ chords based on sub-mode (a) of Mode 2: 1² (see Oliver, Unpublished: 29). The rhythms of the six triumphant minor seventh chords that close *Meditation* No. 7 are an inexact augmentation of *vasanta tāla* (73).² The rhythm of the last three chords is an elongated of *ṭṛtīya* (3) and *antarakrīḍa* (95)—three drutas with a virāma (Fig. a.8). A diminution of this cell emerges in the pedal voice towards the close of the final meditation (b. 92), and at the final cadence of *Dieu parmi nous*.

² Dm7, Em7, F#m7, G#m7, Bm7, and C#m7

Fig. a.8 VII. *Jésus accepte la souffrance, La Nativité du Seigneur* (1935)

Très lent Vasanta (73) IIISSS

org. 29

mf

ff

trīya (3)

ff

In *Les enfants de Dieu* (Meditation No. 5) Greek metre replaces Indian rhythms. However, a dissolved *gajalīlatāla* (18) and *raṅgābharanatāla* (37) occur a few bars before the B major key signature change (bs. 24–25). The fact that the stresses denote the same proportions as these tāla appears to be entirely coincidental and is easily explained as a trochaic tetrapody, consisting of a tribrach and trochee (b. 24), followed by a double proceleusmaticus and trochee (b. 25). The meditation opens with two logaedic dipodies, followed by a pæon III and epitrite IV in bs. 6 and 7, respectively.

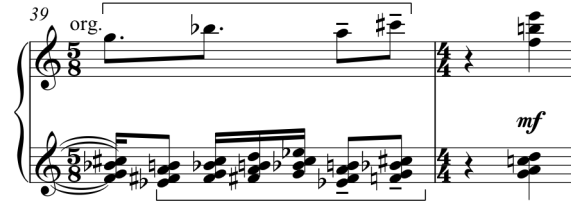
Les Mages depicts the three wise men from the east that visit the son of man in the Gospel of Matthew 2:1. The distinguished magi, most likely Persian astrologers (Barton, 2007: 124), are portrayed by the slow-moving bass melody, which evolves into a series of variations based on ‘le rythme qui donne le plus de vie au rāga’—*rāgavardhana* (Messiaen, 1994: 297). The *rāgavardhana* (93) rhythm runs throughout the work and is similar to the motivic development of tālas in Indian classical music.

In the fourth meditation, *Le Verbe*, *turaṅgalīla* (33) and *sārasa* (103) are superimposed to produce a nine bar polyrhythm (from b. 31), leading up to a reoccurrence of Messiaen's chord of the dominant (bs. 40, 41). Messiaen uses this passage in *TLM* (1944) to demonstrate the technique of superposing two rhythms of unequal length (Messiaen, 1966: 19) (Fig. a.9):

Fig. a.9 *Meditation No. 4, Le Verbe* (bs. 39–40)

Plus vif
molto rall. Modéré

Turaṅgalīla (33) *òòòò*

39 org. 

Sārasa(103) *loooll*

Both tālas complete their cycle, stopping together on the first beat of the next bar, which corresponds to a practice in Indian classical music where the players converge on the strong beat (*sam*) of the phrase. However, there are examples in other pieces where the tālas are incomplete, arbitrarily cut short before it has reached its conclusion (Johnson, 1998: 126). Examples of this include the rhythmic pedals in the piano part of *Liturgie de cristal*, from *Quatuor pour la fin du temps* (1949).⁴ Šimundža (1987: 139) notes an example in the third section of

⁴ Several tālas are combined to form a larger rhythmic sentence; *rāgavardhana* tāla (93); *candrakalā* (105); and *lakṣmīśa* (88). According to Šimundža (1987: 30) this combination of tāla occurs most frequently in Messiaen's opus. *Lakṣmīśa* (88) is the tāla closest the technique *chromatisme des durées*. This technique was inspired by Messiaen's exploration of Indian rhythm. However, there are no Śārṅgadeva rhythms with more than two values that have an incremental

the introductory movement of the *Turangalīla-Symphonie* (1946–48), where the rhythms are broken off midway through their cycle. There is also a coagulated version of *rāgavardhana* rhythm (93) in the opening (b. 1), which is coloured by the chord of the dominant on G.³ Dissolution and condensation of a rhythm are frequent procedures in the practice of Indian music (Šimundža, 1987: 122). The retrograde form of this tāla is a favourite of Messiaen's, and appears in several of his works. The dotted minim chords are used to support the expanded appoggiatura on E, in the melody, while the second half of the *rāgavardhana* tāla (93) is used as a responding phrase, prolonging the return of the appoggiatura figure (Fig. a.10):

Fig. a.10 *Meditation No. 4, Le Verbe* (bs. 1–2)

The musical score for *Meditation No. 4, Le Verbe* (measures 1–2) is presented in a multi-staff format. The tempo is marked **Modéré**. The organ part (org.) is marked **f** and **org.** and features a complex rhythmic pattern. The piano part (p) is marked **mf** and **staccato** and features a dotted minim chord. The pedal part is marked **mf** and **staccato**. The score includes the text **Rāgavardhana (33) oōoś** and **Rāgavardhana (33) oōoś**.

Vasanta tāla (73), the name of the Hindu demi-god and personification of spring (Bunce, 2000a: 618), forms part of the opening phrase in *Meditation No.*

durational increase. The tāla closest to his technique is *siṃhavikrīḍita* (27), which is interspersed with a consistent pluta.

³ One of Messiaen's cluster chords made up of the notes of the major scale, with the dominant as its root (Messiaen, 1966: 69)

6, *Les Anges*. The *vasanta* rhythm, in the third bar of the opening period, is in Mode 4: 6¹ of limited transposition (see Oliver, Unpublished: 163), preceded by a classic augmentation of *bhagna* (116) with the last beat partially dissolved. It is also feasible that the left-hand ostinato in b. 1 is a catalectic version of *janaka* (91) tāla, with the last two ‘*yatilagna* (17)’ values used as a motif, which interrupts the rhythmic discourse at b. 29, and then again at bs. 42–45. Interruption and rhythmic contrast is a feature of *Les Anges*, the first of which can be heard at the end of the first period in b. 6 (Messiaen, 1966: 11). The trills represent a departure from the rhythmic discourse of the opening passage, and also signify a departure from mode 4: 6¹ (Fig. a.11):

Fig. a.11 *Meditation No. 6, Les Anges* (bs. 1–3, 6, 29)

The figure displays three musical excerpts from *Meditation No. 6, Les Anges*. Excerpt (a) shows the opening of the piece, marked 'Vif et joyeux' and 'org. f'. It features a right-hand melody with a 'bhagna (116)' rhythm and a left-hand ostinato with a 'vasanta (73)' rhythm. Excerpt (b) shows bar 6, marked 'Org.', featuring a trill in the right hand. Excerpt (c) shows bar 29, marked 'pressez', featuring a trill in the right hand and a 'Yatilagna (17)' rhythm in the left hand.

Lakṣmīśa (88) and *rāgavardhana* (93) are the antecedent and consequent of the first of three themes of Meditation No. 9, *Dieu parmi nous* (God among us). Both are placed in different modes of limited transposition, *lakṣmīśa* (88) is assigned a series of descending drop chords in the mode 4: 1¹, and is followed by the *rāgavardhana* (93) played by on the pedal in mode 2: 1¹. The dotted value of

lakṣmīśa (88) in b. 1 of *Dieu parmi nous* has been partially dissolved in a manner similar to last two units of the *bhagnatāla* (116) in the first two bars of *Les Anges* (Fig. a.12):

Fig. a.12 *Meditation No. 9, Dieu parmi nous* (bs. 1–3)

Très modère
org. *Lakṣmīśa* (88) *oòIS*

Lent et puissant

fff staccato

staccato

fff

rāgavardhana (93) *oòoS*

The third theme, which begins in b. 8, reintroduces *candrakālātāla* (105) in b. 18, along with *turaṅgalīla* (33) and *sārasa* (103) (a permutation of *vasanta* (73)) that were explored in the previous meditations. Furthermore, a variation of the *Boris* theme occurs that is loosely based on the *bhagna tāla* (116). These rhythms are the source material for the two-part counterpoint of the section (b. 16). The consequent pedal melody (in b. 2) is a transformation of the *rāgavardhana tāla*; Messiaen (2009) identifies this *tāla* in the preface of the score. The original *tāla* undergoes a radical transformation, first through classic augmentation (addition of the values to themselves), then disassociation—whereby the longest value is dissolved—and retrogradation, followed by a withdrawal of the dot from the middle unit of the second set. The transformation itself produces a rhythm identical to the *vasanta tāla* (73) in retrograde form.

The tāla described by Messiaen as ‘le rythme qui donne le plus de vie au rāga’ (Messiaen, 1994: 297)⁴ is transformed into a symbol for spring.

While the nine pieces have similar religious themes, the *Meditations* are distinct from one another in mood, form, and tempo. For example, *Le Verb*, which takes ‘Christ as the word of God’ as its main the theological theme, is moderato in tempo. The form is based on a transformation of the sonata form, whereby the development is placed before the exposition. The final section is also a liturgical sequence; each period is heard twice and ends on the same note (Messiaen, 1966: 61). *Les Mages*, on the other hand, is monothematic, with a slow moving melody in the pedal part. It has an unusual timbral quality due to its sustained, drone-like harmony played on the bourdon 16’, and the upper structure triads, which sound an octave lower than written.

⁴ Translates: the rhythm that gives most life to the rāga

(Appendix F):

Explanation of Accords tournants taken from Traité de Rythme, de Couleur et d'Ornithologie (Volume V, Part II)

'Effet coloré global: jaune pâle,
rayé de blanc, de noir, et de gris,
avec des taches vertes.
Dominante: JAUNE PALE'
(Messiaen, 2000b: 464)

A **B** **C**

Prenons le 1er accord A, et disposons en gamme ses notes constitutives:

jaune pâle,
mauve.

État
fondamental

1

rose cuivré,
gris perlé.

mauve.

1er renversement
de A

jaune et gris.

rouge vif clair,
gris mauve.

Le même,
transposé sur
la bécarré

2

rouge brique,
clair, violet.

jaune pâle,
vert.

2e renversement
de A

bleu pâle,
gris rougeâtre.

orangé.

Le même,
transposé sur
la bécarré

3

gris rougeâtre,
violet.

jaune pâle,
mauve.

3e renversement
de A

blanc, avec
des dessins
gris et violet.

blanc, mauve
rougeâtre.

Le même,
transposé sur
la bécarré

4

rose et bleu.

gris jaune.

4e renversement
de A

gris violet,
bleu vert.

(Messiaen, 2000b: 464-5)

(Appendix F, Cont'd):

brun clair.
Le même,
transposé sur
la bécarré
doré, bleu.

5

gris mauve.
5e renversement
de A
*violet,
jaune.*

gris rose.
Le même,
transposé sur
la bécarré
*rouge cuivré,
bleu.*

6

gris et rose.
6e renversement
de A
*blanc jaunâtre,
violet.*

vert pâle.
Le même,
transposé sur
la bécarré
*violet pâle,
bleu.*

7

Prenons le 2e accord B, et disposons en gamme ses notes constitutives:

M3

chrysoprase
vert bleuté mat.
État
fondamental
*sardonyx noir,
blanc, et brun
rougeâtre — avec
du jaune pâle.*

8

*doré-blanc
et noir.*
1er renversement
de B
*vert foncé
avec des dessins
jaunes.*

8va

*brun rouge très clair,
blanc verdâtre.*
Le même,
transposé sur
sol bécarré
jaune d'or.

9

*vert bleuté,
jaune.*
2e renversement
de B
gris violet.

(Messiaen, 2000b: 465-6)

(Appendix F, Cont'd):

10

orangé brun.
Le même,
transposé sur
sol bécarré
bleu violet.

*gris rougeâtre,
violet.*

*gris, avec du
vert et de l'or.*
3^e renversement
de B
*bleu clair de
chartres, rouge.*

11

gris brun clair.
Le même,
transposé sur
sol bécarré
orangé.

rouge.

*gris, avec des
dessins mauves.*
4^e renversement
de B
*blanc, avec des
dessins vert
pâle et jaune.*

12

*mauve, sur
rouge brique
clair.*
Le même,
transposé sur
sol bécarré
*vert pâle
sur jaune.*

*gris bleu, avec
des dessins
rouges.*

*gris sable,
avec du
jaune clair.*
5^e renversement
de B
*gris pierreux,
avec du
bleu clair.*

13

*gris bleu, avec
des dessins
rouges.*
Le même,
transposé sur
sol bécarré
*gris jaune, avec
des dessins
verts.*

14

*cristal
de roche.*
État
fondamental
*œ de chat,
vert foncé
chatoyant.*

*gris violet
clair.*
1^{er} renversement
de C
*vert bleuté
bleu.*

Prenons le 2^e accord C, et disposons en gamme ses notes constitutives:

(Messiaen, 2000b: 466)

(Appendix F, Cont'd):

<i>bleu pâle, rouge cerise.</i> Le même, transposé sur la bélmol <i>vert pâle, bleu foncé veloute.</i>	15	<i>doré.</i> 2^e renversement de C <i>bleu.</i> <i>rouge brun.</i>	16
<i>or et rouge clair.</i> Le même, transposé sur la bélmol <i>bleu noir.</i>	<i>orangé.</i>	<i>bleu violet clair, un peu de rouge clair.</i> 3^e renversement de C <i>bleu saphir intense.</i>	17
<i>rouge mauve.</i> Le même, transposé sur la bélmol (ou sol dièse) <i>rouge flamboyant.</i>	<i>rouge et or.</i>	<i>bleu clair.</i> 4^e renversement de C <i>gris rouge, gris noir.</i>	18
<i>vert pâle.</i> Le même, transposé sur la bélmol <i>bleu noir.</i>	19	<i>nappe vert bleuté clair.</i> 5^e renversement de C <i>bandes verticales rouges et grises.</i>	19

(Messiaen, 2000b: 467)

Symmetrical Permutation of 32 durations

19

Duration: 3 8 5 30 7 32 26 11



Order: 3 28 5 30 7 32 26 2

Numbers: 1 2 3 4 5 6 7 8

Duration: 25 1 28 24 9 23 16



Order: 25 1 8 24 9 23 16

Numbers: 9 10 11 12 13 14 15

Duration: 17 18 22 21 19 20



Order: 17 18 22 21 19 20

Numbers: 16 17 18 19 20 21

Duration: 4 31 6 29 10



Order: 4 31 6 29 10

Numbers: 22 23 24 25 26

Duration: 27 2 15 14 12 13



Order: 27 11 15 14 12 13

Numbers: 27 28 29 30 31 32

20

Duration: 5 2 7 14 26 13 10 8



Order: 3 28 5 30 7 32 26 2

Numbers: 1 2 3 4 5 6 7 8

Duration: 29 3 11 6 25 31 17



Order: 25 1 8 24 9 23 16

Numbers: 9 10 11 12 13 14 15

Duration: 18 22 4 20 21 19



Order: 17 18 22 21 19 20

Numbers: 16 17 18 19 20 21

Duration: 30 12 32 15 1 27



Order: 4 31 6 29 10 27

Numbers: 22 23 24 25 26 27

Duration: 28 16 23 24 9



Order: 11 15 14 12 13

Numbers: 28 29 30 31 32

21

Duration: 7 28 26 23 10 9



Order: 3 28 5 30 7 32

Numbers: 1 2 3 4 5 6

Duration: 1 2 15 5 8 32 21 12



Order: 26 2 25 1 8 24 9 23

Numbers: 7 8 9 10 11 12 13 14

Duration: 18 22 4 30 19 20



Order: 16 17 18 22 21 19

Numbers: 15 16 17 18 19 20

Duration: 21 14 24 13 16 3



Order: 20 22 31 6 29 10

Numbers: 21 22 23 24 25 26

Duration: 27 11 17 31 6 26

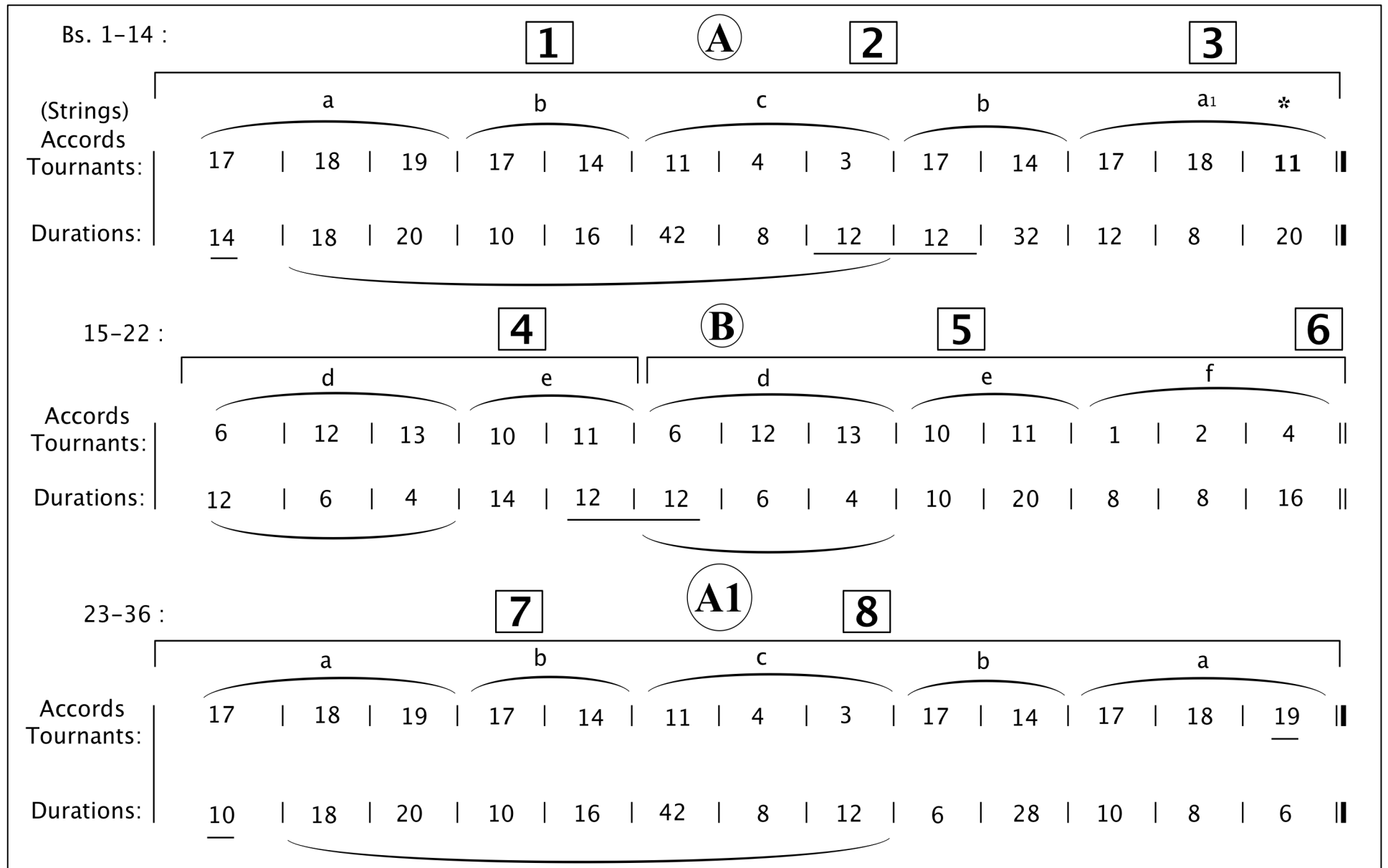


Order: 27 11 15 14 12 13

Numbers: 27 28 29 30 31 32

(Appendix H):

A Diagram of the Structure of Messiaen's *Gagaku, Sept haïka* (1962)



An extract from *Śaṅgītaratnākara*:

241

(Appendix J):

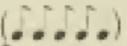
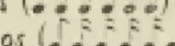
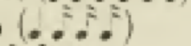
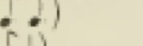
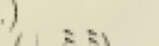
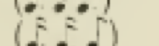
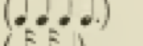
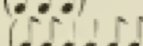
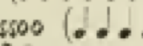
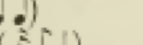
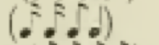
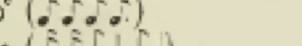
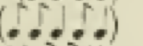
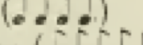
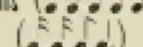
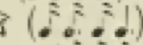
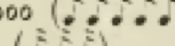
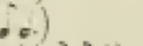
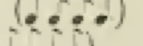
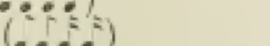
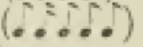
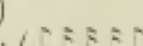
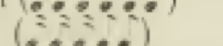
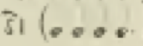
Śārṅgadeva's Table of 120 Deśitālas from *Encyclopédie de la musique et dictionnaire du Conservatoire* 1913-31:

[illegible]

(Appendix J, Cont'd):

N ^{os} n ^{om} bre	NOM DES TĀLAS	NOMBRE DES MĀTRIS	NOTATION
33	tarangallā.....	2 1/2	0° 0° 00 (♩ ♪ ♫)
34	carabhallā.....	6	0000 (♩ ♪ ♫ ♫ ♫)
35	cimhamandana.....	30	1555 1500 5015 15 018 X (♩ ♪ ♫)
36	bṛābhāngī.....	6	1555 (♩ ♪ ♫ ♫ ♫)
37	rangbhārana.....	9	5015 (♩ ♪ ♫ ♫ ♫ ♫)
38	manthā (1 ^{re}).....	8	58 X (♩ ♪ ♫ ♫ ♫ ♫ ♫)
—	(2 ^e).....	8	5018 X (♩ ♪ ♫ ♫ ♫ ♫ ♫)
—	mudrītā (3 ^e)....	8	5018 X (♩ ♪ ♫ ♫ ♫ ♫ ♫)
—	(4 ^e).....	8	501 (♩ ♪ ♫ ♫ ♫ ♫ ♫)
	[6 autres formes de man- thā, en tout 10.]		
39	kakitōpriyā.....	6	5015 (♩ ♪ ♫ ♫ ♫)
40	nibhadrūka.....	3	11° (♩ ♪)
41	vijavidyādharā.....	4	1500 (♩ ♪ ♫ ♫)
42	jayamangalā.....	8	5015 (♩ ♪ ♫ ♫ ♫ ♫ ♫)
43	malikāmodā.....	4	0000 (♩ ♪ ♫ ♫ ♫ ♫)
44	vijayānandā.....	8	5555 (♩ ♪ ♫ ♫ ♫ ♫)
45	kriśā [et] candanibhadrūka.	1 1/2	0° 0° (♩ ♪)
46	jayaçtī.....	8	5015 (♩ ♪ ♫ ♫ ♫ ♫ ♫)
47	makarandā.....	4	00111 (♩ ♪ ♫ ♫ ♫)
48	kirtī.....	10	15 5015 (♩ ♪ ♫ ♫ ♫ ♫ ♫)
49	çetkirtī.....	6	555 (♩ ♪ ♫ ♫ ♫)
50	prasthālā.....	2	100 (♩ ♪ ♫)
51	vijayā.....	8	5 555 (♩ ♪ ♫ ♫ ♫)
52	bīndumālī.....	6	500005 (♩ ♪ ♫ ♫ ♫ ♫ ♫)
53	sama.....	3 1/2	0° 0° (♩ ♪ ♫ ♫ ♫)
54	sandana.....	5	10055 (♩ ♪ ♫ ♫ ♫)
55	manthikā.....	5 1/2	5055 (♩ ♪ ♫ ♫ ♫)
—	[em].....	1 1/4	0° 0° (♩ ♪)
56	dīpakā.....	7	001155 (♩ ♪ ♫ ♫ ♫ ♫ ♫)
57	udākshana.....	4	5 (♩ ♪ ♫ ♫)
58	dhenakī.....	5	555 (♩ ♪ ♫ ♫)
59	vishama.....	4 1/2	0000° 0000° (♩ ♪ ♫ ♫ ♫ ♫ ♫ ♫ ♫ ♫)
60	varṇamanthikā.....	5	00100 (♩ ♪ ♫ ♫ ♫ ♫ ♫)
61	abhinanda.....	5	005 (♩ ♪ ♫ ♫ ♫ ♫)
62	aṅga.....	8	15 1155 (♩ ♪ ♫ ♫ ♫ ♫ ♫ ♫)
63	sāndī.....	8	1001155 (♩ ♪ ♫ ♫ ♫ ♫ ♫ ♫)
64	mallatālā.....	5 1/4	1000° (♩ ♪ ♫ ♫ ♫ ♫ ♫ ♫)
65	kankālā (1 ^{re}) pūrva.....	5	00005 (♩ ♪ ♫ ♫ ♫ ♫ ♫)
—	(2 ^e) khanda.....	5	00555 (♩ ♪ ♫ ♫ ♫ ♫)
—	(3 ^e) sama.....	5	555 (♩ ♪ ♫ ♫ ♫)
—	(4 ^e) vishama.....	5	155 (♩ ♪ ♫ ♫ ♫)

(Appendix J, Cont'd):

N ^o D'ORDRE	NOM DES TĀLAS	NOMBRE DES MĀTRAS	NOTATION
66	kandaka	6	IIIIS ()
67	ekshili	1 1/2	0 ()
68	kumuda	6	100IIIIS ()
	— [ou]	5	100000 ()
69	saṅsīla	3 1/2	5000 ()
70	dombali	3	I ^o ()
71	abhangā	4	I ^o ()
72	rāyavankata	6	5500 ()
73	vasantā	9	IIIISS ()
74	laghucckhara	1 1/2	I ^o ()
75	prāthacckhara	4 1/4	500 ^o ()
76	jhaṃpā	2 1/2	0 ^o I ^o ()
77	gajajhaṃpā	3 3/4	5000 ^o ()
78	caturmukha	7	I ^o I ^o ()
79	madana	3	005 ()
80	pratimantaka ou kollaka	8	IISSII ()
81	pūrvatilocana	13	555555500 ()
82	rahi	3	IS ()
83	ili	5 1/2	0I ^o ()
84	karasayati	2	0000 ()
85	lalita	4	00IS ()
86	gāruḡi	2 1/4	0000 ^o ()
87	rājānārāyana	7	00IIS ()
88	lakṣmīcā	4 1/4	00 ^o IS ()
89	lālīpāriyā	7	IIIS ()
90	cchinandana	7	5II ^o ()
91	janaka	14	IIIISSIIIS ()
92	vardhana	5	00I ^o ()
93	rāgavardhana	5 3/8	00 ^o 0 ^o ()
94	śatātilā	3	000000 ()
95	antarakridā	13 1/4	000 ^o ()
96	hamṣa	2 1/2	II ^o ()
97	utṣava	4	I ^o ()
98	vilekita	6	5005 ()
99	gaḡa	4	III ()
100	varasayati	3	II00 ()
101	simha	4 1/8	10III ()
102	karuna	2	5 ()
103	śrasta	4 1/2	1000II ()
104	candātilā	3 1/2	000II ()
105	candākalā	16	5555555555 ()

(Appendix J, Cont'd):

[illegible]

(Grosset, 1913: 301-4)

(Appendix K):

Animal tālas

V= Vāhana A=Avatar

Deśitālas	Bird	Bull	Deer	Elephant	Horse	Lion	Mythic	(?)
Gaja (99)				^v ✓				
Gajajhampā Jagajhampā (77)				^v ✓				
Gajalīla (18)				^v ✓				
Gārugi (86)							^v (?)	✓
Haṃsa (96)	^v ✓							
Haṃsalīla (19)	^v ✓							
Haṃsanāda (30)	^v ✓							
Kaladhvani (113)	^v ✓							
Kokilāpriya (39)	✓							
Nāndī (63)		^v ✓					^G ✓	
Rājamārtāṇḍa (118)			(?)					✓
Rājamṛgāṅka (117)	(?)							✓
Śārabhalīla (34)							^A ✓	
Sārasa (103)	^v ✓							
Siṃha (101)						^v ✓	^A ✓	
Siṃhalīla (10)						^v ✓	^A ✓	
Siṃhanāda (31)						^v ✓	^A ✓	
Siṃhanandana (35)						^v ✓	^A ✓	
Siṃhavikrama (8)						^v ✓	^A ✓	
Siṃhavikrīḍita (27)						^v ✓	^A ✓	
Turaṅgalīla (33)					^v ✓		^v ✓	
Total: 21	6/7	1	0/1	3	1	5	10	

(Appendix L):

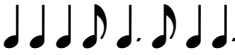
* D=Dilation/Coagulation (Temporal dilation symmetry) R=Rotational (Translational/Displacement)
N=Non-retrogradable (Planar) P= Permutational (set rotation)

A Table of Śārṅgadeva's hundred and twenty deśitālas

Tāla No.	Tāla Name	Notation	Proportion	Sanskrit Meaning	Indian values <i>laghu</i> (l) equal to one <i>mātrā</i> , <i>guru</i> (S)=2 and <i>pluta</i> (Ś)=3. (The <i>druta</i> (o) is half a <i>mātrā</i>) A <i>virāma</i> (') prolongs the note	Symmetry Field	Greek Equivalent
1	Ādi tāla (Also known as Rāsaka) (Nijenhuis, 1992: 325)		[1] 2/16 or 1/8	Translation: The root of Tālas. A single event in the Universe creates a before and after. (Messiaen, 1994: 273) Literally, "palm of the hand" or clap of the hand". A kind of measure (Monier-Williams, 2008)	I	N. P ⁽¹⁾	Primary Time ~
2	Dvitiya		[1-1-2] 2/4	Translation: The second (Messiaen, 1994: 273) Second, half of, companion, fellow (Monier-Williams, 2008)	o o l	P ⁽²⁾ (Low)	Anapæst (antidactylus) ~ ~ -
3	Tṛtīya (also known as Antarakṛīḍa (95)) (Nijenhuis, 1992: 325)	 when dissolved produces prime number 7 (Messiaen, 1994:274)	[1-1-1½] 7/32	Translation: The third (Messiaen, 1994: 274) The Third (Monier-Williams, 2008)	o o ò	P ⁽²⁾ (Low)	(Similar to) Tribach (with an ictus) last beat prolonged ~ ~ ~

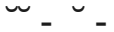
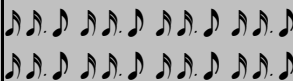
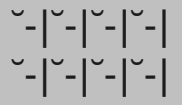
4	Caturthaka	 When dissolved produces prime number 5	[2-2-1] 5/16	Translation: The fourth (Messiaen, 1994: 274) Prime number 5 The 4 th , srut. Returning every 4 th day (a fever), quartan (aka malaria). (In music) a kind of measure. Its root derives from Catúr – meaning quartor or consisting of 4 parts (Monier-Williams, 2008)	<i>IIo</i>	P ⁽²⁾ (Low)	Antibacchuis (Pæonic) - - ~
5	Pañcama		[1-1] 2/16	Translation: The fifth (Messiaen, 1994: 274) Forming the fifth part (Monier-Williams, 2008) <i>Pancha</i> – refers to the number five, a mystic number in the Hindu tradition it is associated with the Lord <i>Shiva</i> , as well as <i>Panchabrahma</i> , <i>Panchakshara</i> and others. (Bunce, 2000b: 999)	<i>oo</i>	R. N. P ⁽¹⁾	Pyrrhichius (Proceleusmaticus) ~ ~
6	Nihśankalīla (Spelled Nihçankalīla) (Messiaen, 1994: 274)	 Prime number 11	[6-6-4-4-2] [3-3-2-2-1] 11/8 (3+3+2+3)	Translation: Audacious, fearless game in relation to the cosmos, creation, life, movement, rhythm. Rhythmic accelerando seen as ‘forces for an outburst’ (Messiaen, 1994: 274) Nihśanka was <i>Śārṅgadeva</i> ’s first name, it means: Secure, carefree, [and] free from fear of	<i>ŚŚSSI</i>	P ⁽⁴⁾	Spondee with an ictus on each value, followed by an Antibacchuis - - - - ~ Or coagulated tribrach followed by a dochmiac ~ ~ ~ ~ - - ~

Cont'd				risk, a kind of dance. (Monier-Williams, 2008) Lila—Effortless, purposeless, undirected play or actions that possesses the cosmic application. Creation, evolution and destruction are continuous, cyclical and impartial, without beginning, without end The term <i>Lila</i> is associated with <i>Shiva-Nataraja</i> in his association with creation perseverance and destruction. (Bunce, 2000b: 991)			
7	Darpaṇa (also known as madana (79)) (Nijenhuis, 1992: 325)		[1-1-4] 3/8	Translation: The Mirror (Messiaen, 1994: 274) ‘Causing vanity’, ‘a mirror’; or a measure (in music); of a mountain (seat of Kubêra); the eye; repetition; to represent a mirror (Monier-Williams, 2008). ‘The mirror symbolises the image of the void, indicates the transitory nature of material things. It is a device frequently associated with <i>Rati</i>, <i>Paravati</i> and others. When associated with the Lord Shiva, it symbolizes that all creation is but a	o o S	P (2)	Iambus with first beat dissolved ˘ -

Cont'd				reflection of him and his cosmic presence' (Bunce, 2000b: 978).			
8	Simhavikrama	 Greek Epitrite and Vijaya (51) (Messiaen, 1994)	[4-4-4-2-6-4-6] 15/8 (2+2+3+3+2+3)	Translation: The strength of the lion. The non-retrogradable rhythm is like two pillars surrounding strength (Messiaen, 1994: 274) <i>Courage of a Lion, Daring of a Lion</i> (Šimundža, 1987: 124) <i>Simha</i> – refers to a lion and symbolises bravery and eagerness of spirit of the believer. (...) It is the finest of the animal creation—the regal beast—or it may connote greed for food which ultimately leads to lust (Bunce, 2000b: 1008) <i>Vikrama</i> – aka <i>Vishnu</i> (“the one of vast stride”) (Bunce, 2000a: 637) Vishnu the Lion (?)	SSSIŚISS  (Nijenhuis, 1992; Śārṅgadeva. et al., 1943)	P ⁽⁴⁸⁾	Combination of Greek Epitrite IV + cretic amphimacer ---˘ -˘- Messiaen (1994) notes the similarity of the greek cretic amphmacer to the tāla vijaya (51)
9	Ratilīla		[1-1-2-2] 3/4	Translation: The game of <i>Rati</i>. <i>Rati</i> is the wife of <i>Kandarpa</i>, god of love. (Messiaen, 1994: 275) Based on sections of the niḥsāru Nijenhuis, E. (1992), p.325	IISS	D P ⁽⁴⁾	lonicus a <i>minore</i> ˘--

Cont'd				Rati: Love, pleasure, affection, delight Lila: Play, amusement, comeliness (Monier-Williams, 2008) The counterpart of <i>Kama</i>, god of love, <i>Rati</i> is also known as <i>Kandarpa</i> (Bunce and Capdi, 2000:1451) Rati's game (?)			
10	Simhalīla		[$\frac{1}{2}$-$\frac{1}{2}$-$\frac{1}{2}$] 3/16	Translation: The game of the lion (Messiaen, 1994: 275) A particular kind of sexual union; a kind of time (Monier-Williams, 2008) <i>Simha</i> – refers to a lion and symbolises bravery and eagerness of spirit of the believer. (...) It is the finest of the animal creation—the regal beast—or it may connote greed for food which ultimately leads to lust (Bunce, 2000b: 1008) The Lion's game (?)	<i>loool</i>  (Nijenhuis, 1992) <i>ool</i> (Śārṅgadeva. et al., 1943)	R.N.P ⁽⁴⁾	Tribrach 
11	Kandarpa (Also known as parikrama) (Nijenhuis, 1992: 325)		[1-1-2-4-4] [$\frac{1}{2}$-$\frac{1}{2}$-1-1-2-2] 3/4	Translation: The god of love [...] his other name is <i>Kāma-deva</i> (god of desire) (Messiaen, 1994: 275) God of Love, cupid, lust, penis (Monier-Williams, 2008)	<i>oolISS</i>	P ⁽⁴⁾	Bacchius with a dissolved anacrusis 

<i>Cont'd</i>				The counterpart of <i>Kama</i> , god of love, Kandarpa is also known as Rati and/or Reva. Often appears in a four-armed form (Bunce and Capdi, 2000: 1451).			
12	Vīravikrama		[2-1-1-4] 2/4	Translation: Hero's strength, warrior rhythm (Messiaen, 1994: 275). "Hero, (leader) <i>Vikrama</i>" (Dallapiccola, 2002). <i>Vikramāditya</i>, a legendary king, patron of the arts (Klostermaier, 1998). <i>Vira</i>—Brave, courage, valour, prowess, heroism (Monier-Williams, 2008) <i>Vikrama</i>—aka <i>Vishnu</i> ("the one of vast stride") (Bunce, 2000a: 637) Brave <i>Vishnu</i> (?)	<i>looS</i>	P ⁽²⁾	Dactylic dipody (last dactyl coagulated) - ~ - ~
13	Raṅga (Raṅgatāla)		[1-1-1-1-4] 2/4	Translation: The colour, the game. (Messiaen, 1994: 275) Playful activities, trick, performance. <i>Raṅga</i>—colour, paint, dye, hue. A place for public amusement or for dramatic exhibition, theater, playhouse, stage, arena, any place of assembly,	<i>ooooS</i>	P ⁽²⁴⁾	Spondee (First beat dissolved) - -

<i>Cont'd</i>				audience; (In music) a kind of measure. (Monier-Williams, 2008) <i>Ranganātha</i> aka <i>Vishnu</i> – used especially in the South of India. Lord <i>Vishnu</i> is shown in all black except his two hands and feet which are golden (Bunce, 2000a: 441).			
14	Śrīraṅga (Spelled Çrîraṅga) (Messiaen, 1994: 275)		[1-1-2-1-3] 4/4	Translation: (Lord of colour) is one of the names of <i>Vishnu</i>. (Messiaen, 1994: 275) Also a song in four raga (Nijenhuis, 1992: 612) Śrī—added before a name to show respect, adorning beautifying, radiant (Monier-Williams, 2008)	<i>IISIS</i>	P ⁽⁶⁾	Anapæst and an iamb (with an inctus).  Or (Pæon III, with a dotted duration)  A type of dochmiac
15	Caccarī	 Missing a laghu at	[1-1½-1-1½-1-1½-1-1½-1-1½-1-1½] 10/8 5/32 (x 8) 5/16 (x 4)	Translation: The Caccari is a percussion instrument from Southern India (Messiaen, 1994: 276) चाचरि <i>Cācari</i>—moving quickly	<i>oòloòloòloòloò</i> <i>loòloòloòl</i>  (Nijenhuis, 1992)	R.P (1625702400)	Similar to Iambic tetrameter (Messiaen, 1994:276) 

<i>Cont'd</i>		the end 'I' (Śārṅgadeva. et al., 1943)	Based on divisions of 5	(Monier-Williams, 2008)	oòoòoòoòoòoòoòoò I (Śārṅgadeva. et al., 1943)		
16	Pratyaṅga		[4-4-4-2-2] [2-2-2-1-1] 4/4	Translation: Body parts (Messiaen, 1994: 276) On every part or member of the body; for one's own person; for every part or subdivision (Monier-Williams, 2008) The root <i>Pratya</i> —refers to ritualised leg pose (?)	SSSII	P ⁽¹²⁾	Dactylic dipody (Spondee/dactyl) -- ~ Or dispondee (with last beat dissolved) -- --
17	Yatilagña Also known as rūpaka tāla and Caṇḍaṇiḥsārūka kṛīḍātāla by Dāmodara (Nijenhuis, 1974:66)		[1-2] 3/16	Translation: The right moment for stopping. Perhaps a rhythm-signal in an improvisation with two or more people. Indicating the end of the improvisation? (Messiaen, 1994: 276) <i>Lagña</i> — adhering or clinging to, clasping, consumed by, immediately ensuing, the moment of the sun's entrance, rising of the sun or of the planets. (Monier-Williams, 2008) <i>Yati</i> —one of Lord <i>Shiva</i> 's names (Bunce, 2000a: 441)	oI	D P ⁽¹⁾	Iambus ~ -

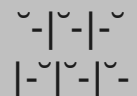
18	Gajalīla		[1-1-1-1½] 9/8 (2+2+2+3) Also: 4 which symbolises completeness, and the four yugas (world ages) (Zimmer and Campbell, 1963: 13)	Translation: The game of the elephant. Indra (“enlightened mind”) seated on an elephant (Messiaen, 1994: 276) The Elephant’s Step (Samuel, 1994:77) <i>Gaja</i> —The term refers to a <i>Vahana</i> , a vehicle or object upon which a deity sits. In this case, an elephant. (Bunce, 2000b: 980)	<i>III</i>	P (6)	Double proceleusmaticus (ictus on the last foot) 
19	Hamsalīla (Sometimes called Niḥsāruka (40)) (Nijenhuis, 1992: 325)		[1½-1½] 6/16	Translation: The game of the Duck (Messiaen, 1994: 277) Goose, swan, flamingo, envy, malice (Monier-Williams, 2008) The term (...) refers to a goose (or swan) and is frequently associated with the Lord <i>Brahma</i> , his <i>Vahana</i> , a vehicle or object upon which a deity sits. The goose is also associated with <i>Sarasvati</i> , <i>Chandra</i> , <i>Varuna</i> and others. It is symbolic of the sun, a male symbol associated with virility, divine knowledge and the ability of the mind to commune on all levels (earth, water, air). In	<i>II</i>  (Nijenhuis, 1992) <i>II</i> (Śārṅgadeva. et al., 1943)	R.N.P (2)	Proceleusmaticus (ictus on each value)  Or two coagulated tribrachs 

<i>Cont'd</i>				addition, the <i>hamsa</i> has the ability of separating milk from water and, therefore, symbolises wisdom, discrimination and knowledge of a spiritual nature, as well as the breath of life [sic.] and boundlessness (...) it symbolises the ability to discriminate between right and wrong. If seven swans (<i>hamsa</i>) are pulling the chariot for the Lord <i>Brahma</i>, they represent the seven sphere/worlds (Bunce, 2000b: 982). Game of the Swan (?)			
20	Varṇabhinna		[1-1-2-4] 2/4	Translation: Different colours (Messiaen, 1994: 277) Two kinds of measure, Different, alien, mixed or mingled (Monier-Williams, 2008) The term <i>varṇa</i>, which translates as “colour” refers to the various classes or castes within India. (Bunce, 2000b: 1016) The four castes (<i>varna</i>) are: <i>Brahmins</i>, <i>kshatriyas</i> (warriors) <i>vaishyas</i> (agricultural workers and traders), and <i>shudras</i>	<i>oolS</i>	P ⁽²⁾	Anapæstic dipody (Last beat coagulated) ~ - ~ -

<i>Cont'd</i>				(menial classes) (Dallapiccola, 2003: 7; (Noble and Coomaraswamy, 1913: 8- 10) Two kinds of colours (?)			
21	Tribhinna		[1-2-3] 6/8	Translation: Division into three (because there are three different durations) (Messiaen, 1994: 277) <i>Bhinna</i> —different <i>Tri</i> —three (Monier-Williams, 2008) Three different beats (?)	<i>ISS</i>	D P ⁽¹⁾	Iambic dipody (last beat coagulated) ~ ~ Also an enlarged cyclical anapæst ~--.
22	Rājacūḍāmaṇī	 Messiaen analysis: 	[1-1-2-2-2-1-1- 4] 7/8	Translation: King of kings (Messiaen, 1994: 277) 7+3 (Numbers) <i>Rāja</i> —King <i>Cūḍāmaṇī</i> —best of most excellent of; eclipse of the sun on a Sunday or an eclipse of the moon on a Monday; jewel worn by men and women on top of the head (Monier- Williams, 2008).	<i>oollloolIS</i>	P ⁽⁵⁷⁶⁾	Dissolution of two iambs with each second beat elongated (Messiaen, 1994:277) ~ ~ Double proceleusmaticus With a choeric anapæst ~~~~ ~
23	Raṅgodyota		[2-2-2-1-3] 5/4 (10/8) 2+2+3+3	Translation: Brilliant colour (Messiaen, 1994: 277) <i>Raṅga</i> —colour <i>Dyota</i> —brilliant, sunshine (Monier-Williams, 2008)	<i>SSSIŚ</i>	P ⁽⁶⁾	Epitrite IV with a dotted final duration (Two binary mutrons followed by Two ternary

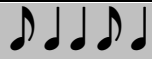
<i>Cont'd</i>				Brilliant colour (?)			Mutrons) Epitrite IV with a coagulated trochee --- ~
24	Raṅgapradīpa[ka] Raṅgapradīpa (Nijenhuis, 1992: 327)		[2-2-1-2-3] 5/4 (10/8) 2+3+2+3	Translation: luminous colour (Messiaen, 1994: 277) <i>Raṅga</i> —colour <i>Pradīpaka</i> —lamp (Monier-Williams, 1851)	<i>SSISS'</i>	P ⁽⁶⁾	Epitrite III (catalectic trichronos) --~ ~
25	Rājatāla		[4-6-1-1-4-2-6] 12/8	Translation: The kings rhythm (Messiaen, 1994: 277) <i>Rāja</i> —king (Monier-Williams, 2008)	<i>S'SooSIS'</i>	P ⁽⁸⁾	Dissolution of three binary metrons and two ternary metrons (Messiaen, 1994:277) --- -.--.
26a.	Tryaśra varṇa		[2-2-1-1-2-2] 5/8	Translation: Three colours (Messiaen, 1994: 278) <i>Tryaśra</i> —triangle, three <i>Varṇa</i> —colour (Monier-Williams, 2008) The term <i>varṇa</i> , which translates as “colour” refers to the various classes or castes within India. (Bunce, 2000b: 1016) <i>Tryśra varṇa</i> may refer to three castes rather than simply ‘three colours’. The	<i>IooII</i>  (or IooIIS)  (Nijenhuis, 1992) <i>IlooII</i> (Śārṅgadeva. et al., 1943)	N. P ⁽⁴⁸⁾	Greek Amphimacer (Dissolved) --~

<i>Cont'd</i>				non-retrogradable rhythm symbolises a sort of triangle (?)			
b.	Miśra varṇa		[1-1-1-1½-1-1- 1-1½-1-1-1- 1½-6-4-1-1-4- 2-4] 71/32 (9/32 + 9/32 + 9/32 + 6/8 + 5/8) 71 Prime number	Translation: A mixture of colours; rainbow of durations (Messiaen, 1994: 278) <i>Miśra</i> —blended, mixed <i>Varṇa</i> —colour (Monier-Williams, 2008) The term <i>varṇa</i> , which translates as “colour” refers to the various classes or castes within India. (Bunce, 2000b: 1016) <i>Miśra varṇa</i> may refer to someone of mixed caste rather than a rainbow. The rhythm is a mixture of rhythms from different classes.	<i>Oooò oooò oooò</i> <i>ŚŚ oo SIS</i>	Exhibits displacement, partially non- retro gradable. P (48) 71 (Prime number)	3 x double proceleusmaticus with last beat of each prolonged, Coagulated trochee and choreic dactyl followed by a cretic amphimacer 
c.	Caturaśra varṇa		[4-2-1-1-4] 3/4	Translation: Four colours (Messiaen, 1994: 278) Four-cornered, particular position of the hands, regular (Monier-Williams, 2008) The term <i>varṇa</i> , which translates as “colour” refers to the various classes or castes within India. (Bunce, 2000b: 1016)	<i>SlooS</i>	P (4)	Choriamb (Trochee + iamb) First beat of Iamb dissolved 

Cont'd				One of the <i>saṃyutta-hastāni</i> (Twenty-six combined Hands)—Caturaśra (square): <i>Kaṭaka-mukha</i> hands are held before the chest. Patron deity <i>Varāhi</i>. Usage: churning, <i>Jakkiṇī-naṭana</i>, holding, milking, covering with cloths, wearing pearls, dragging ropes, tying the girdle, tying the bodice, holding flowers, etc., plying the fly-whisk (Wisdom Library, 2016).			
27	Siṃhavikrīḍita <i>Personnages rythmiques</i> is derived from this tāla, as well as augmentation and diminution of a group of values over two notes	 This rhythm produces a pentameter, grouping the two trochees into a single foot (Messiaen, 1994: 279)	[1-3-2-3-3-2-1-2-3-1-3] (2 x 12/8)	Translation: The lion's leap. The dotted note possibly representing Krishna's granduer (Messiaen, 1994: 279) <i>Siṃha</i>—lion <i>Vikrīḍita</i>—Play with, having played (Monier-Williams, 2008) <i>Siṃha</i> – refers to a lion and symbolises bravery and eagerness of spirit of the believer. (...) It is the finest of the animal creation—the regal beast—or it may connote greed for food which ultimately leads to lust (Bunce, 2000b: 1008).	<i>ÍSŚ ÍŚŚ ÍŚŚ ÍŚ</i> (Nijenhuis, 1992) <i>ÍSŚ ŚŚŚ ÍŚŚ ÍŚ</i> (Śārṅgadeva. et al., 1943)	P (5760) (Subgroup: 3 non-retrogradable rhythm)	Variation of Iambic trimeter: 2 elongated iambs, two trochees (one coagulated), 2 elongated iambs 

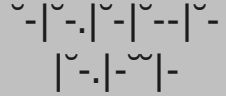
<i>Cont'd</i>				The lion's game (?) Play with the lion.			
28	Jaya (jayatāla)		[2-4-2-2-1-1-6] 5/4	Translation: Victory (Messiaen, 1994: 280) "The one who is victory" -- One of the two doorkeepers of <i>Vishnu</i> , the other is <i>Vijaya</i> . <i>Jaya</i> is also known as <i>Hiranyaksha</i> , <i>Madhu</i> , <i>Shishupala</i> (Bunce, 2000a: 230)	ISI looŚ (<i>"ISI" is called jagāṇa</i>)	P ⁽¹²⁾ (Partially non- retrogradable rhythm)	Iamb, trochee (dissolved), trochee (coagulation) ~ ~ ~ Catalectic choriamb
29	Vanamālī	 ooooolooS (Śārṅgadeva. et al., 1943)	[1-1-1-1-2-1-1-4] 3/4	Translation: He who wears a garland of wild flowers. Vanamālī is one of the names of <i>Vishnu</i> . 'He who assures the protection, the conservation, and the continuity of the cosmos, of the multiplicitous universe' (Herbert in Messiaen, 1994: 280). Garland of forest flowers, wild jasmine (Monier-Williams, 2008) One of the thousand names of <i>Vishnu</i> . "The one who is a garland of flowers" (Bunce, 2000a: 613)	ooooolooS (Nijenhuis, 1992) ooooolooS (Śārṅgadeva. et al., 1943)	P ⁽⁷⁵⁰⁾	Molossus (dissolved) ---

30	Hamsanāda		[2-6-1-1-6] 4/4	Translation: The voice of the Duck (Messiaen, 1994: 280) Sound, bellowing, roaring, nasal sound. Cackling or cry of a goose or swan (Monier-Williams, 2008) The term (...) refers to a goose (or swan) and is frequently associated with the Lord <i>Brahma</i>, his <i>vahana</i>, a vehicle or object upon which a deity sits. The goose is also associated with <i>Sarasvati</i>, <i>Chandra</i>, <i>Varuna</i> and others. It is symbolic of the sun, a male symbol associated with virility, divine knowledge and the ability of the mind to commune on all levels (earth, water, air). In addition, the <i>hamsa</i> has the ability of separating milk from water and, therefore, symbolises wisdom, discrimination and knowledge of a spiritual nature, as well as the breath of life [sic.] and boundlessness (...) it symbolises the ability to discriminate between right and wrong. If seven swans (<i>hamsa</i>) are pulling the chariot for the Lord <i>Brahma</i>, they represent the	<i>IṢoolṢ</i> (Nijenhuis, 1992) <i>IṢooṢ</i> (Śārṅgadeva. et al., 1943)	P ⁽⁸⁾	Iambic dipody with an ictus on the long beats ~ - ~ - Iambic monometer
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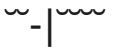
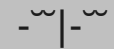
<i>Cont'd</i>				seven sphere/worlds (Bunce, 2000b: 982).			
31	Siṃhanāda		[1-2-2-1-2] 4/4	Translation: The voice of the Lion (Messiaen, 1994: 280) The lion's roar, recital of the Buddhist doctrine (Monier-Williams, 2008) <i>Siṃha</i>—refers to a lion and symbolises bravery and eagerness of spirit of the believer. (...) It is the finest of the animal creation—the regal beast—or it may connote greed for food which ultimately leads to lust. <i>Nāda</i>—sound (Bunce, 2000b: 1008; 2000a) In the Story of Queen Chudala, she uses Siṃhanāda in a vain attempt to wake her husband from a trance. (Narayan, 1990: 28)	<i>ISSIS</i>	P (12) (3+5 numbers)	First dochmiac (Iambus + cretic) (Williams, 2009) ~ - ~ - Two ternary metrons and one
32	Kuḍukka		[1-1-2-2] 3/8	Translation: A percussion instrument from southern India (Messiaen, 1994: 280). A measure of time (Monier-Williams, 2008)	<i>ooll</i>	D P (4)	Tribrach with the first beat dissolved ~ ~ ~ Pyrrhic with dissolved anacrusis ~ ~

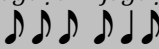
33	Turaṅgalīla (Second variety is called Turaṅgagati) (Nijenhuis, 1992: 605) gati—movement (Monier-Williams, 2008)		[1½-1½-1-1] 5/16	Translation: The galloping horse manifested in the game. Signifies the force of life. Messiaen is doubtful it is the name of a woman. The dual nature of the Centaur and the ascending movement of the arrow are contained in the word Turaṅgalīla (Messiaen, 1994: 280). Horses' game, thought game (Šimundža, 1987: 124) Līla: play/amusement Turaṅga: Horse, mind, thought, number 7 (Monier-Williams, 2008) Horse play (?) <i>Turaga</i> – refers to the white horse which emerged from the primordial churning of the oceans. It is associated with <i>Surya</i> (Bunce, 2000b: 1013). <i>Surya</i> – A <i>vasus</i>, the sun god, a very powerful and popular deity of the Vedic period. As the sun he is the source of both light and heavenly fire. The sun's position is pivotal, between the ethereal spheres and the real,	oòoo  2. Or ool (Nijenhuis, 1992) òòoo (Śārṅgadeva. et al., 1943)	D P ⁽⁴⁾	Double proceleusmaticus with first two beats prolonged  Resembles an <i>Ionicus a maiore</i> 
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Cont'd				palpable earthly spheres. By the 12th Century, CE, <i>Surya</i> lost his prominence to the level of a planet and one of the <i>Navagrahas</i>. His sphere is the sky (dyaus) and he is associated with the principle of the intellect. As <i>Navagrahas</i>, representing the sun, his position is in the centre, surrounded by other planets and is considered to be of the <i>Kshatriya</i> caste of <i>Kalinga</i>. <i>Surya</i> (aka <i>Ravi</i>) [is often] depicted on a one-wheel chariot (<i>ratha</i>) drawn by seven horses or a horse with seven heads (Bunce, 2000a: 556). The notion of 'mind' and 'seven' of <i>turaga</i> come from the association with <i>Surga</i>.			
34	Śārabhalīla (Similar to Bindumālī 52)		[1-1-2-2-2-2-1-1] 6/8	Translation: The passionate game, the swiftness of the game (Messiaen, 1994: 281) <i>Sharabha</i> is part-lion and part-bird beast in Hindu mythology. A magnificent eight-legged creature, more powerful than a lion or an elephant, possessing the ability to clear a valley in	<i>IlloooIl</i>	N. P ⁽⁵⁷⁶⁾	Choriamb (trochee + iamb) First beat of Iamb dissolved - ˘ -

Cont'd				one jump. In later literature, <i>Sharabha</i> is described as an eight-legged deer. (Pattanaik, 2006: 123-4). <i>Śārabha</i>—A fierce form of Lord <i>shiva</i>, part bird part animal, form (...) assumed by <i>Virabhadra</i> to subdue <i>Narasimhavatara</i> (...) This fierce deity is seen as an attempt to assert superiority of the <i>Shaiva</i> sect over the <i>Vaishnava</i> sect (...) lion like and bird like [in appearance] (Bunce, 2000a: 504). Sarabha's game (?)			
35	Siṃhanandana	 (Messiaen, 1994)  (Johnson and Rae, 2008)	[4-4-2-6-2-4-1-1-4-4-2 6-2-6-4-2-2-2-2-2] 4/4 (x 4) Phrased in 7+8=15 (x 2)	Translation: The lion's son (Messiaen, 1994: 282) By multiplying 5 (Siṃha's number), Messiaen suggests this tāla could be called Shivanandana. (Messiaen, 1994: 282) <i>Siṃha</i>—Lion <i>Nandana</i>—rejoicing, gladdening, son (Monier-Williams, 2008) <i>Nandana</i>—(aka <i>Vishnu</i>) (called "the one who is the cause of joy"). One of the thousand names of Lord <i>Vishnu</i>	SSIŚISooSSIŚIŚSI (I)(I)(I)(I) (Nijenhuis, 1992) <i>aśabda=silent laghu</i> SSIŚISooSSIŚIŚSIH X (Śārṅgadeva. et al., 1943) ISŚISooSSIŚIŚSIH X (Grosset, 1913) ISIŚISooSSISIŚSIH X (Messiaen, 1994) Tala in Johnson and Rae	P (3135283200) Subgroup: 5 non-retrogradable rhythms, 2 displacement symmetry	iamb /dotted iamb / iamb / transformed bacchius / iamb /dotted iamb / dactyl /final long / 

<i>Cont'd</i>				(Bunce, 2000a: 366). The rejoicing lion (?)	(2008) copied correct notation from Grosset (1913) even though the western notation does not correspond with Indian notation. Messiaen's version does not correspond to the western or eastern notation of Grosset.		
36	Tribhāṅgi	 (Messiaen, 1994) Messiaen suggests the name “cut in three” comes from the division of two iambs but it does in fact refer to the body pose which is flexed in three places.  (Johnson and Rae, 2008) (Nijenhuis, 1992) (Śārṅgadeva. et al., 1943)	[1-1-2-2] 3/4	Translation: Cut in three (Messiaen, 1994: 282) <i>Bhāṅgi</i> Breaking, wave (Monier-Williams, 2008) <i>Tribhāṅga</i> – The term refers to a body pose (<i>bhāṅga</i>) specifically held by Hindu deities. A standing body pose in which the body is flexed in three places—i.e., from head to shoulders, from shoulders to hips, and from hips to feet (Bunce, 2000b: 1012).	<i>IISS</i> (36) In Grosset (1913), the Indian notation is incorrect (<i>ISIS</i>) and does not conform to Śārṅgadeva. et al. (1943) original. Messiaen copied the notation based on the incorrectly transcribed Indian notation, even though Grosset's Western notation is correct. This shows some authenticity of intension on Messiaen's part, even though the end result is a provenance inauthentic tāla.	D P ⁽⁴⁾	Diiamb (Messiaen, 1994)  lonicus a minore ~-- (Śārṅgadeva. et al., 1943)

37	Raṅgābharāṇa		[2-2-1-1-3] 9/8 (2/4+5/8)	Translation: To fill with coloured water (Messiaen, 1994: 282) Raṅgā: colour Bharāṇa—maintaining, the act of carrying, bearing, supporting, sustenance (Monier-Williams, 2008)	<i>SS II Ś</i>	P ⁽⁴⁾	Ionicus a maiore and a coagulated tribrach 
38a.	Maṇṭha		[1-1-2-1-1-1-1] 4/4	Translation: The churning of butter, alluding to an ocean of milk, symbolising eternal existence (Messiaen, 1994: 283) Churning stick (Monier-Williams, 2008)	<i>IIS (I) (I) (I) (I)</i>	P ⁽⁷²⁰⁾	Anapæstic dipody Anapæst + double proceleusmaticus 
b.	(2) Maṇṭhaka	 (Grosset, 1913) (Messiaen, 1994) The Śārṅgadeva may have been mistranslated here because the length of the silent beats are equivalent to a guru and not aśabda (silent laghu) Grosset's Indian notation is correct but the Western notation is not.	[2-1-1-2-1-1] 9/8	[-] Churning (Monier-Williams, 2008)	<i>SII (S)(S)</i>  (Nijenhuis, 1992) <i>SII R X</i> (Śārṅgadeva. et al., 1943) (These two correspond)	P ⁽⁴⁸⁾ Subgroup: 2 non-retrogradable rhythms, 2 displacement symmetry	Dactylic dipody 

-	(3) Mudrita maṇṭha (Simply named 'Mantha 3') (Messiaen, 1994: 283)		[2-1-1-1-1-1-1] 4/4	[-] Mudrita—bound, intertwined in particular forms maṇṭha: churning (Monier-Williams, 2008)	SII (I)(I)(I)(I)	P ⁽⁷²⁰⁾	Dactylic dipody (Second foot dissolved dactyl i.e. Double proceleusmaticus) - ~ ~ ~
-	(4) Fourth maṇṭha (nagaṇa III) + jagaṇa (ISI)		[1-1-1-1-2-1-1] 4/4	[-] Churning (Monier-Williams, 2008)	III ISI (nagaṇa + jagaṇa)  (Nijenhuis, 1992) IIII SII (Śārṅgadeva. et al., 1943)	P ⁽⁷²⁰⁾ Is a permutation of Mudrita maṇṭha	Dactylic dipody (first foot dissolved dactyl i.e. Double proceleusmaticus) ~ ~ - ~
-	[There are six other forms of mantha]	[-]	[-]	[-]	-	-	-
-	(5). Fifth maṇṭha	[-]	[-]	[-]	ISI (jagaṇa or haṃsaka)	N. P ⁽²⁾	Amphibrach ~ ~ - ~
-	(6). Sixth maṇṭha	[-]	[-]	[-]	SII (bagaṇa)	P ⁽²⁾	Dactyl - ~ - ~
-	(7). Seventh maṇṭha	[-]	[-]	[-]	IIS (sagaṇa)	P ⁽²⁾	Anapæst ~ ~ - ~
-	(8). Eighth maṇṭha	[-]	[-]	[-]	SIS (ragaṇa)	N. P ⁽²⁾	Amphimacer - ~ - ~

-	(9). Ninth maṇṭha	[-]	[-]	[-]	IIİ (nagaṇa + virāma)	P ⁽²⁾	Tribrach ~ . Similar to: Anapæst ~ -
-	(10). Tenth maṇṭha	[-]	[-]	[-]	oòI	P ⁽¹⁾	Cyclical anapæst ~ .-
39	Kokilāpriya		[2-1-3] 6/8	Translation: The “Indian” Cuckoo (Messiaen, 1994: 283) <i>Priya</i>—loved, beloved <i>Kokil</i>—The female cuckoo (Monier-Williams, 2008) <i>Kokil</i>—The term (...) refers to a cuckoo, a bird whose song creates or promotes the feelings of love. It is associated with deities of love such as <i>kama</i> (Bunce, 2000b: 988). <i>Priya</i>—One of the numerous names (...) to describe the deity <i>Subrahmanya</i> [aka <i>Skanda</i> or <i>Kumara</i>], the son of Lord <i>Shiva</i> and <i>Parvatī</i>] (Bunce, 2000a: 426). <i>Subrahmanya</i> —Ancient Dravidian folk deity, closely related to the sun deity, a form of <i>Agni</i>, the Vedic god of all fire (Bunce, 2000a: 544;	ISŚ  or ooo (Nijenhuis, 1992) SIŚ (Śārṅgadeva. et al., 1943)	P ⁽¹⁾ or N. P ⁽⁶⁾	Trochaic dipody -~ -~

Cont'd				Dallapiccola, 2003: 8). The beloved cuckoo (?)			
40	Niḥsāruka (Sometimes called haṃsalila (19)) (Nijenhuis, 1992: 605)	 (Grosset, 1913) (Messiaen, 1994) Ḥ (Śārṅgadeva. et al., 1943)	[3-3] [1½ - 1½] 6/16	Translation: The cloud, the fog (Messiaen, 1994: 283) <i>Niḥsru</i> —means to disappear or be lost. Niḥsāra mean going forth or out, pithless, sapless worthless. Also refers to the <i>Musa Sapientum</i> (a wild banana plant) (Monier-Williams, 2008) <i>Niḥsārā</i> —(...) one of the thousand names of the goddess <i>Parvatī</i> , daughter of Himalaya and Menaka (Bunce, 2000a: 379). <i>Pārvatī</i> —(aka <i>Devī</i>) Upon the sacrificial (suicide) death of Lord <i>Shiva's</i> consort, <i>Satī</i> , (<i>Satiddevī</i>), in grief he carried her body around <i>Bharata</i> . Her body crumbled, with the help of Lord <i>Vishnu's</i> arrows. Where the pieces fell became places of pilgrimage (Bunce, 2000a: 405). In one of the legends immolates herself and <i>Shiva</i> retreats to the mountains. <i>Satī</i> is then reborn as <i>Pārvatī</i> .	Ḥ Variations: IIIooIIIoo looI (Nijenhuis, 1992) Ḥ (Śārṅgadeva. et al., 1943)	R. N. P ⁽²⁾	Two coagulated tribrachs 

Cont'd				Creation myth—‘As <i>Vishnu</i>’s raging fire (...) devours everything, a mass of clouds appears on the horizon’ (Dallapiccola, 2003: 19)—the clouds represent rebirth. <i>Pārvatī</i> is often depicted as elusive (fog/cloud?).			
41	Rājavidyādhara (A form of aḍḍatāla) (Nijenhuis, 1992: 283)		[2-4-1-1] 2/4	Translation: The knowing king (Messiaen, 1994: 283) <i>Rāja</i>—king <i>Vidyādhara</i>—A kind of supernatural (Monier-Williams, 2008) The <i>vidyādhara</i> (wisdom holders), are supernatural beings, who attend <i>Shiva</i>, and are considered demi-gods, spirits of the air in Hindu mythology (Monier-Williams, 2008: 963-4) <i>Vidyādhara</i>s—‘A sub-class of deities or demi-deities. Generally speaking, Hinduism recognises three classes of heavenly inhabitants: <i>Devas</i>, <i>Ganadevas</i> and <i>Upadevas</i>. The <i>Vidyadharas</i> are a member of the <i>Upadevas</i>	I S o o	P ⁽²⁾	Amphibrach (last beat dissolved) ~ ~ Or choreic dactyl with an anacrusis ~ - ~

<i>Cont'd</i>				who attend major deities. They are garland-wearers, live in the sky with the <i>Kinnaras</i> and frequently carry flowers, garlands, swords or staffs. Some refer to them as angels' (Bunce, 2000a: 632). The king of the wisdom holders (?) King of the angels.			
42	Jayamaṅgala	 Messiaen claims the anapæst was a powerful warrior rhythm. (Messiaen, 1994: 284)	[1-1-2-1-1-2] 4/4	Translation: The benediction of victory (Messiaen, 1994: 284) <i>Jaya</i>—Triumphant, victorious. <i>Maṅgala</i>—prosperity, good fortune, lucky (Monier-Williams, 2008) <i>Maṅgala</i>—(aka Angarka, Bhauma) (Called “the auspicious one”). A minor Hindu god, one of the <i>Navagrahas</i> (Nine planets). The <i>Navagrahas</i> are believed to influence not only individual lives, but also the course of nations. As one of the <i>Navagrahas</i>, <i>Mangala</i> represents the planet Mars and is considered to be of the Kshatriya caste of Avanti (Bunce, 2000a: 341). Triumphant <i>Maṅgala</i> (?) Wealth and prosperity (?)	<i>IISIIS</i> (2 <i>sagaṇa</i>)	R. P ⁽⁴⁸⁾	Anapæstic dipody ~ - ~ - or Anapæstic monometer ~ ~ -

43	Mallikāmoda		[2-2-1-1-1-1] 2/4	Translation: Jasmine scent. (The white Jasmine is <i>Vishnou's</i> favourite flower) (Messiaen, 1994: 284) <i>Malli</i>—Jasmine (Monier-Williams, 2008) <i>Vishnu</i> adopts the form of a beautiful women and <i>Vihunda</i>, son of the Demon <i>Hunda</i>, falls in love with her and wants to marry her. The lady agrees on one condition, he must worship <i>Śiva</i> with seven crores [ten million] of <i>kāmoda</i> flowers. (...) <i>kāmoda</i> flowers fall from the laughter of a lady named <i>kāmoda</i>, but when she cries a red odourless flower comes which should not be touched. <i>Nārada</i> convinces <i>Vihunda</i> that he need not go and collect the flowers but he could pick them up when they go floating in the <i>Gaṅgā</i>. <i>Nārada</i> made <i>Kāmoda</i> cry by telling her that the hermit <i>Bhrigu</i> had cursed <i>Vishnu</i> and changed him into a man. On hearing this <i>Kāmoda</i> started crying. Red flowers fell from her lips. <i>Vihunda</i> gathered them	<i>l l o o o o</i>	P ⁽⁴⁸⁾	Anapæst with last beat dissolved ~ -
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Cont'd				and went to the place of <i>Śiva</i>. <i>Pārvarti</i> saw the red flowers and did not like the red flowers being offered. It angered <i>Pārvarti</i> so much that she killed <i>Vihunda</i>. (Prasad, 2009: 301-2) Delightful Jasmine flowers (?)			
44	Vijayānanda	 Again, note the presence of the warrior anapæst (Messiaen, 1994: 284).	[1-1-2-2-2] 4/4	Translation: The pleasure of victory (Messiaen, 1994: 284) <i>Vijaya</i>—Triumph victory <i>Nanda</i>—Joy, delight (Monier-Williams, 2008) <i>Vijaya</i> is one of the two doorkeepers of <i>Vishnu</i> the other is <i>Jaya</i>. Hindu twin Goddesses, a form or manifestation of the deity Devi and related to the <i>Shaivas</i> (the worship to the Lord <i>Shiva</i>) as well as to the <i>Shakti</i> sect. <i>Vijaya</i> is a form of <i>Vishnu</i>. One called “Victory”. <i>Vijaya</i> is one of the <i>Ekadasha Rudras</i>. (Bunce, 2000a: 167, 230, 232) <i>Nanda</i>—(<i>Nandaḥ</i> aka <i>Vishnu</i>) the happy one. (Bunce, 2000a: 364)	<i>I I S S S</i>	P ⁽¹²⁾	Anapæstic dipody (Anapæst + spondee) ~ - --

45	Krīḍā [and] caṇḍaniḥsāruka	 (Grosset, 1913) (Messiaen, 1994)	$[1\frac{1}{2} - 1\frac{1}{2}]$ 6/32	Translation: Camphor scent (Messiaen, 1994: 284) Krīḍā: game Caṇḍa—fierce, violent angry Niḥsāruka—plant, to disappear or be lost Hide and seek (?) (Monier-Williams, 2008) <i>Niḥsru</i>—means to disappear or be lost. Niḥsāra mean going forth or out, pithless, sapless worthless. Also refers to the <i>Musa Sapientum</i> (a wild banana plant) (Monier-Williams, 2008) Caṇḍa—aka <i>Chanda Bairava</i> [Shiva], (<i>Chanda-Shiva</i>) called, “The Impetuous one”. Appearance: Head/face fierce, three eyes and twelve arms. <i>Niḥsārā</i>—(...) one of the thousand names of the goddess <i>Parvati</i>, daughter of Himalaya and Menaka (Bunce, 2000a: 379). Fierce <i>Parvati</i> (?) Camphor has some significance in Hindu rituals. A camphor lamp is	oò  (Nijenhuis, 1992) ìì (Śārṅgadeva. et al., 1943)	R. N. P ⁽²⁾	Pyrrhic with ictus on each beat 
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<i>Cont'd</i>				placed behind a crystal linga with a ruby image. The image glows as the lamp is shined through it. (Smith, 1996: 35)			
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46	Jayaśrī (Spelled Jayaçrī) (Messiaen, 1994: 284)		[2-1-2-1-2] 4/4	Translation: “The beauty of victory”. One of the names of <i>Lakshmī</i>, [...] goddess of opulence, beauty and harmony. (Messiaen, 1994: 284) Goddess of Victory Śrī—beautifying, splendid, radiant. (Monier-Williams, 2008) “The one who is victory” - - One of the two doorkeepers of <i>Vishnu</i>, the other is <i>Vijaya</i>. <i>Jaya</i> is also known as <i>Hiranyaksha</i>, <i>Madhu</i>, <i>Shishupala</i> (Bunce, 2000a: 230) Śrī—“The Beauteous One”—used to described the consorts of <i>Vishnu</i>: <i>Lakshmi</i>, <i>Devi</i>, <i>Shri-Devi</i>, and also <i>Vishnu</i> himself) (Bunce, 2000a: 522).	SISIS	N. P ⁽¹²⁾	Catalectic trochaic dipody - ˘ - ˘ - Or a dochmiac (3+5) ***Messiaen suggests some more unlikely alternatives*** - ˘ - ˘ -
47	Makaranda		[1-1-2-2-2] 2/4	Translation: Pollen (Messiaen, 1994: 284) <i>Makaranda</i>—Honey of flowers, flower juice (Monier-Williams, 2008) Nectar (?)	ooIIIS  (Nijenhuis, 1992) ooIII (Śārṅgadeva. et al., 1943)	P ⁽¹²⁾	Tribrach with an anacrusis  (Messiaen, 1994) Or: Double proceleusmaticus 

48	Kīrti		[1-3-2-1-3] 5/4	Translation: Reputation (Messiaen, 1994: 285) Fame, glory, temple (Monier-Williams, 2008) <i>Kīrti</i>—A goddess manifestation of <i>Pārvati</i>, <i>Devi</i>. Also, a goddess, the consort (<i>Shakti</i>), of <i>Keshava</i> (called “fame and glory”) and the personification of fame (Bunce, 2000a: 273-4).	<i>IŚSIŚ</i> or <i>IŚISIŚ</i>	P (4) Subgroup: 1 non-retrogradable rhythm)	Ternary dochmiach with prolonged thesis on second and fifth beats ˘ -. ˘-.
49	Śrīkīrti (Spelled Çrīkīrti) (Messiaen, 1994: 285)	 (Grosset, 1913) (Messiaen, 1994) <i>SSII</i> (Śārṅgadeva. et al., 1943)	[1-1-2-2] 3/4	Translation: Marvellous reputation (Messiaen, 1994: 285) Śrī: Majesty, splendid Kīrti: Fame, renown (Monier-Williams, 2008) <i>Kīrti</i>—A goddess manifestation of <i>Pārvati</i>, <i>Devi</i>. Also, a goddess, the consort (<i>Shakti</i>), of <i>Keshava</i> (called “fame and glory”) and the personification of fame (Bunce, 2000a: 237).	<i>SSII</i> (Nijenhuis, 1992)	P (4) (Some Temporal dilation)	Ionicus a <i>minore</i> ˘-- (Original is Ionicus a <i>maiore</i>) --˘
50	Pratitāla	 (Grosset, 1913) (Messiaen, 1994) <i>Ilo o</i> (Śārṅgadeva. et al., 1943)	[2-1-1] 2/8	Translation: The echo of rhythm Messiaen specifies each beat should be quieter than its predecessor (Messiaen, 1994: 285). <i>Prati</i>—gain, repeat (Monier-Williams, 2008)	<i>Io</i>  (Often thought to have two drutas) <i>Ilo o</i> (Śārṅgadeva. et al., 1943)	P (2)	The Dactyl -˘˘ Or Pyrrhic with last beat dissolved (Ionicus a <i>maiore</i>) --˘˘ (Śārṅgadeva, 1943)

<i>Cont'd</i>				<i>Pratima</i>—refers to the image, particularly of a divinity (Bunce, 2000b: 1002). Repeated rhythm (?)			
51	Vijaya	 (Grosset, 1913) (Messiaen, 1994) ŚŚŚI (Śārṅgadeva. et al., 1943)	[6-4-6] [3-2-3] 4/4 (8/8)	Translation: Victory. Messiaen is reminded of the <i>anjali</i>: “a movement of respectful salutation that is made by lifting two cupped hands” (Herbert in Messiaen, 1994: 285). ‘Victory’ (Johnson and Rae, 2008) Contest for victory, triumph (Monier-Williams, 2008) <i>Vijaya</i> is one of the two doorkeepers of <i>Vishnu</i> the other is <i>Jaya</i>. Hindu twin Goddesses, a form or manifestation of the deity Devi and related to the Shaivas (the worship to the Lord Shiva) as well as to the Shakti sect. <i>Vijaya</i> is a form of <i>Vishnu</i>. One called “Victory”. <i>Vijaya</i> is one of the <i>Ekadasha Rudras</i>. (Bunce, 2000a: 167, 230, 232) ‘Vijaya, the victor’ is the	ŚŚŚI (Nijenhuis, 1992)	N. P ⁽²⁾	Amphimacer - ~ - Trochaic dipody with prolonged arsis - ~ - ~ (Śārṅgadeva, 1943)

<i>Cont'd</i>				name of the hare in the story that outwits the elephant called 'The Hare Bluffs the Elephant' from the ancient book of stories in the Pañcatantra.			
				The one called victory (?)			
52	Bindumālī (Similar to Śārabhalīla 34)		[4-1-1-1-1-4] 3/4	(?) <i>Bindu</i> —point or coloured dot <i>Mālī</i> —possession, having, holding (Monier-Williams, 2008) <i>Bindu</i> symbolises unity and point at which creation begins (Shakya, 2000: 82-83). <i>Bindu</i> —(aka <i>bija</i>) refers to the essence of life, an offering (soma), and the male or virile essence (<i>vīrya</i>)—In the Hindu tradition it is associated the sacred Ganges which proceeds from the <i>linga</i> . It also refers to any liquid offering denoting the sacred, life-giving semen of the Lord <i>Shiva</i> (Bunce, 2000b: 974). The holder of the <i>bindu</i> possesses oneness/unity (?) The possessor of Oneness (?)	<i>S o o o o S</i>	N. P ⁽⁴⁸⁾	Choriamb (trochee + iamb) First beat of Iamb dissolved  Or molossus with middle value dissolved ---

53	Sama	 (Grosset, 1913) (Messiaen, 1994)	[2-2-1½-1½] 7/16 (2+2+3+3)	Translation: Equality (Messiaen, 1994: 286) Messiaen speculates because the durations are repeated twice. <i>Equal, same</i> (Monier-Williams, 2008) <i>Sama</i>—A melody that accompanied Ravana's prayer of relief to Siva. Sama is 'the origin of all musical sounds' (Narayan, 1990: 99). <i>Samadhi</i>—a state achieved in which all dichotomies are neutralized and transcended (Bunce, 2000b: 1005). <i>Samabhanga</i>—body pose held by the deities. A standing body pose in which the body is straight and not flexed (Bunce, 2000b: 1004). Symbolically, <i>Sama</i> implies, not equality but balance, perhaps signifying physical as well as spiritual balance (?)	<i>II o ò</i>  (Nijenhuis, 1992) <i>II ò ò</i> (Śārṅgadeva. et al., 1943)	D. P ⁽⁴⁾	Double proceleusmaticus with last two beats prolonged ~~~~ Resembles an <i>Ionicus a maiore</i> -- ~
54	Nandana		[2-1-1-6] 5/8	Translation: The infant, he who gives joy. "The infant is, for the Hindu woman, the crowning of her life...The first Hindu	<i>Io o Ś</i>	P ⁽²⁾	Pæon III (dissolved/contrete mps second beat and coagulated last three beats—

Cont'd				sacrament exists to sanctify conception in advance” (Herbert in Messiaen, 1994: 287) Nandana: rejoicing, gladdening, gladness a divine, son or daughter, Indra’s paradise, pleasure garden (Monier-Williams, 2008) The one who is the cause of Joy (...) One of the thousand names of the Lord Vishnu. (Bunce, 2000a: 366)			trichronos) ~ ~ - ~
55	Maṇṭhikā	 (Messiaen, 1994) In the Western notation of Grosset (1913) the dot is missing completely from the last beat, but the Indian notation has the virama.	[4-1-6] 11/16 (5/16+6/16)	Translation: He who churns butter. The churning of the ocean of primitive milk, symbol of Creation, represents for the Hindu’s “the projection of the multiplicitous universe outside the Undifferentiated” Herbert in Messiaen (1994: 287) Churning (Monier-Williams, 2008) <i>Samudrmathana</i>—refers to the churning of the primordial ocean out of which emerged <i>Kamadhenu</i>, <i>Uccaishravas</i>, <i>Airavita</i>, <i>Lakshmi</i> and <i>Dhanvantari</i> along with a vessel of amrita (the drink of immortality), (Bunce,	First: <i>Il ò o</i>  Second: <i>So Ś</i> (Nijenhuis, 1992) First: <i>So Ś</i> (Śārṅgadeva. et al., 1943)	P (1)	Two tribrachs Subjected to <i>vanadaddha</i>, and second foot is coagulated  <i>vanadaddha-the thesis is anticipated by a fraction, the opposite of Atīta</i>

<i>Cont'd</i>				2000b: 1005). The churning of the Ocean of Milk— <i>Mount Mandara</i> (or <i>Mandar Parvat</i>) was used as the churning rod, and <i>Vasuki</i> , the king of serpents, who abides on Shiva's neck, became the churning rope (Jones and Ryan, 2007: 25)			
-	Second Maṇṭhikā	 (Grosset, 1913) (Messiaen, 1994) II ò ò (Śārṅgadeva. et al., 1943) Appears as second Maṇṭhikā but should be written as 'either/or'	[1½-1] 5/32	[-] Churning (Monier-Williams, 2008)	Second: Soś  (Nijenhuis, 1992) II ò ò (Śārṅgadeva. et al., 1943)	D. P ⁽¹⁾	Pyrrhic with ictus on first beat 
56	Dīpaka		[1-1-2-2-4-4] 7/8 (3/8+4/8)	Translation: That which lights the fire. Messiaen associates this rhythm with <i>Agni</i> the devourer (aka God of fire—a god of importance and power during the Vedic period). Chromaticism of durations suggest the fire is becoming gradually diminished (Messiaen, 1994: 288) Kindling, illuminating (Monier-Williams, 2008) <i>Dipa</i> —refers to a lamp and	oolISS	P ⁽⁸⁾	Dissolved tribrach and a spondee  Or Ionicus a minore with an anacrusis 

<i>Cont'd</i>				is associated with religious ceremonies, a light of spiritual awareness, a symbol which calls deities and frightens away demons. In the Hindu tradition the dipa is most frequently associated with <i>Lakshmi</i> and <i>Gaja-Lakshmi</i> (Bunce, 2000b: 979).			
57	Udīkṣaṇa		[2-2-4] [1-1-2] 2/4	Translation: He who searches, searching (Messiaen, 1994: 288) The act of looking up, seeing, beholding (Monier-Williams, 2008)	IIS (sagaṇa)	P ⁽²⁾ (Low)	Anapæst (antidactylus) ~ ~ -
58	Dheṅkī The Denkī (I repeat with conviction) is the oldest, the simplest and the most natural of the non-retrogradable rhythms (Messiaen, 1994: 288)		[4-2-4] [2-1-2] 5/8	Translation: [...] a Bengali word signifying an apparatus that is used for shelling rice. [...] Handled by two women, one on the right, the other on the left, the apparatus between the two. (Messiaen, 1994: 288) Rural technology, operated by two women to produce rice. (Mazumdar and Forbes, 1989: 21)	SIS (ragaṇa)	N, P ⁽²⁾	Two limbed pæon Amphimacer (Cretic) - ~ -
59	Viṣama		[1-1-1-1½- 1-1-1-1½] 18/32 (9/32 x 2) 2+2+2+3 (x2)	Translation: What is not equal, what is not <i>Sama</i> (Messiaen, 1994: 289) Dangerous, abrupt, unequal (Monier-Williams, 2008)	o o o ò o o o ò	R. P ⁽¹⁴⁴⁰⁾	2 x double proceleusmaticus with last beat of each prolonged ~~~~. ~~~~.

<i>Cont'd</i>				<i>Vishama</i>—(Viṣama or <i>Viṣamah</i> aka <i>Vishnu</i>) (called “the one who is without equal”) One of the thousand names for <i>Vishnu</i>. This is a mistranslation (by Messiaen) as <i>Viṣama</i> stands for “One who is without equal” (Bunce, 2000a: 648) i.e. one who is unrivalled.			
60	Varṇamanthikā		[2-2-1-1-2-1-1] 5/8	Translation: Analysis of colour (Messiaen, 1994: 289) (Maybe) a coloured stick for butter (Šimundža, 1987: 124) Varṇa—colour, paint Manthikā—churning (Monier-Williams, 2008) Painted churn/coloured stick (?) The term <i>varṇa</i>, which translates as “colour” refers to the various classes or castes within India (Bunce, 2000b: 1016). The term may be referring to churning stick used by a particular caste (?)	<i>Illoo</i>	P ⁽¹⁴⁴⁾	Dissolved tribrach and a pyrrhic  Or dissolved pæon IV 
61	Abhinanda		[2-2-1-1-4] 5/8	Translation: Congratulations (Messiaen, 1994: 289)	<i>IllooS</i>	P ⁽⁴⁾	Dissolved Pæon IV

<i>Cont'd</i>				Wish, desire for, delight, pleasure (Monier-Williams, 2008) <i>Nanda</i>—Joy, delight (Monier-Williams, 2008) <i>Nanda</i>—(<i>Nandaḥ</i> aka <i>Vishnu</i>) the happy one (Bunce, 2000a: 364).			
62	Naṅga (Spelled 'Ananga') (Johnson and Rae, 2008: 221)		[1-3-1-1-2] 4/4	Translation: This is the God of love (Messiaen, 1994: 289) Cupid (Monier-Williams, 2008) (<i>Anaṅga</i> aka <i>Kama</i>—God of love and beauty, “desire, “lust”) (“Bodiless”) (...) In anger after <i>Kama</i> disturbed his meditation with an [sic] arrow of love, causing him to feel passion for <i>Parvati</i>, the Lord <i>Shiva</i> reduced <i>Kama</i> to ashes. The Lord <i>Shiva</i> later repented his action and caused the deity to be born as <i>Pradyumna</i>, the son of <i>Krishnavatara</i>. II. (<i>Anaṅga</i> aka <i>Dyaus</i>) (called “without parts”) One of the numerous names, variants or epithets, applied to or used to describe the deity <i>Dyaus</i>. (Bunce, 2000a: 34).	<i>ÍŚHS</i>	P (6) Subgroup: 1 non-retrogradable rhythm)	Elongated iamb and an anapæst 

63	Nāndī		[2-1-1-2-2-4-4] 4/4	Translation: Guardian of Shiva's door. Chromaticism similar to Dipaka (he who lights the fire), 'could this added laghu represent the door?' (Messiaen, 1994: 289) <i>Nāndī</i>—joyful (Monier-Williams, 2008) <i>Nandi</i> is the Bull (of <i>Vahana</i>), which serves as the gatekeeper of Lord <i>Shiva</i> and <i>Parvati</i>. Sometimes presented as <i>Shiva</i>—like and youthful. (Bunce and Capdi, 2000) <i>Nandi</i>—the most common name for the sacred bull that is the <i>Vahana</i> of the Lord <i>Shiva</i>. There are several contradictory stories concerning his genesis. <i>Puranic</i> legends have him born of the right side of the Lord <i>Vishnu</i>, while others say that he was the offspring of the <i>Rishi Shilada</i> or the <i>Rishi Shalankayana</i> or the <i>Rishi Nandi</i> (Bunce, 2000a: 366).	<i>IooIISS</i>	P ⁽²⁴⁾	Dissolved Proceleusmaticus and Spondee 
64	Mallatāla		[2-2-2-2-1-1½] 21/32 (10½/16) (2/4+5/32)	Translation: Difficult rhythm (Messiaen, 1994: 290) <i>Malla</i>—Strong, excellent, good (Monier-Williams, 2008)	<i>IIIIoò</i>	P ⁽²⁴⁾	Double Proceleusmaticus with a pyrrhic (last beat elongated) 

<i>Cont'd</i>				<i>Malla</i>—(aka mallarmā, Devi) (called “the mother Malla”) The name of a minor Tantric goddess, a village deity popular in the South of India (...) she evolved from local nature, animistic deities who had been amalgamated into the Vedic/Hindu pantheon. <i>Malla</i> may also refer to the <i>Malla</i> [a republic of ancient India] <i>mahajanapada</i> [great realm], situated north of <i>Magadha</i> (c.600-300BCE) (Raychaudhuri, 1973: 85, 113).			
65	(1) Pūrṇakaṅkā la (Spelled ‘kankāla- pūrṇa’) (Johnson and Rae, 2008: 221)		[1-1-1-1-4- 2] 5/8	Translation: Complete resignation kaṅkāla means skeleton— figuratively it is the God Shiva. (Messiaen, 1994: 290) Complete skeleton (bones, body) (Monier-Williams, 2008) <i>Pūrṇa</i>—Thorough, complete abundant, satisfied (Monier-Williams, 2008) <i>Pūrṇa</i>—(<i>Pūrṇah</i> aka	<i>ooooSI</i>	P ⁽²⁴⁾	Dissoved Antibachius --[~]

Cont'd				<i>Vishnu</i>) (called “he who is completed”) (Bunce, 2000a: 430). <i>Kankala</i>—refers to a necklace of skeletons. It is frequently worn by <i>kankalamurti</i> and <i>kali</i>. Also, it is the form of a skeleton (Bunce, 2000b: 986). There is also the story of <i>kaṅkālamūrti</i> (a form of Lord <i>Shiva</i>) who argues with The <i>Brahma</i> over who the creator was. In anger <i>Shiva</i> cuts off <i>Brahma</i>’s fifth head. <i>Brahma</i> survived but <i>Shiva</i> guilty of <i>Brahamahatya</i> (brahma-cide), condemned to twelve years of wondering and forced to carry <i>Brahma</i>’s skullcap (Bunce, 2000a: 256).			
–	a. (2) Khaṇḍakaṅkāla		[1-1-4-4] 5/8	Translation: Partial resignation (Messiaen, 1994: 290) (? <i>kāla</i> means time, <i>kalā</i> means division) (Monier-Williams, 2008) Khaṇḍa: Not full, piece, not full kaṅkāla: skeleton (bones, body) (Monier-Williams, 2008)	ooSS	D. P ⁽⁴⁾	Dissolved bacchius ~ --

<i>Cont'd</i>				<i>Kankala</i> —refers to a necklace of skeletons. It is frequently worn by <i>kankalamurti</i> [the one with the skeleton—a form of Shiva] and <i>kali</i> . Also, it is the form of a skeleton (Bunce, 2000b: 986).			
–	b. (3) Samakaṅkāla		[4-4-2] [2-2-1] 5/8	Translation: (? Part of the same) <i>Equal resignation</i> (Messiaen, 1994: 290) Equal body/Same body (Monier-Williams, 2008) <i>Kankala</i> —refers to a necklace of skeletons. It is frequently worn by <i>kankalamurti</i> and <i>kali</i> . Also, it is the form of a skeleton (Bunce, 2000b: 986).	<i>SSI</i>	P ⁽²⁾	Anti-bacchuis (Pæonic) -- [~]
–	c. (4) Viṣamakaṅkāla		[1-2-2] 5/8	Translation: Unequal resignation (Messiaen, 1994: 290) Unequal body/different body Viṣama-uneven, rugged, rough (Monier-Williams, 2008) <i>Vishama</i> —(Viṣama or <i>Viṣamah</i> aka <i>Vishnu</i>) (called “the one who is without equal”) One of the thousand names for <i>Vishnu</i> .	<i>ISS</i> <i>(yagaṇa)</i>	P ⁽²⁾	Bacchic Pæon ~--

<i>Cont'd</i>				Bunce, 2000a: 648) <i>Kankala</i> —refers to a necklace of skeletons. It is frequently worn by <i>kankalamurti</i> and <i>kali</i> . Also, it is the form of a skeleton (Bunce, 2000b: 986).			
66	Kanduka		[2-2-2-2-4] [1-1-1-1-2] 3/4	Translation: Inconstancy, change – like a ball that is thrown in all directions (Messiaen, 1994: 291) Ball, sphere (Monier-Williams, 2008)	<i>III</i>	P ⁽²⁴⁾ Subgroups consisting of non-retrogradable rhythms and displacement symmetry	Iambic dipody: (tribrach + iamb)  In Messiaen's analysis, the rhythm is notated as to suggest a dissolved molossus: --- Or catalectic proceleusmaticus 
67	Ekatāli		[1½] 2/32	Translation: One duration (Messiaen, 1994: 291) Any instrument having but one note. Eka: one (Monier-Williams, 2008) One beat (?)	<i>o</i>	R. N. P ⁽¹⁾	A simple time 

68	Kumuda		[2-1-1-2-2-4] 3/4	“The white flower that blooms in ponds, in the moonlight” (The water lily). (Messiaen, 1994: 291) Esculent white water-lily, red lotus, night lotus, what joy brings (Monier-Williams, 2008) “The one who is the water-lily (...) one of the thousand names of Lord Vishnu. Kumuda also refers to the white lily flower. It is frequently held by <i>Kirti</i>. It may refer to a lotus (Bunce, 2000b: 291, 990).	<i>lōōōōS</i>  (Same as second 68/2) (Nijenhuis, 1992) <i>lōōllS</i> (Śārṅgadeva. et al., 1943)	P ⁽¹²⁾ (classic augmentation and plane reflection symmetry)	Molossus (Dissolved): --- Catalectic double proceleusmaticus (dissolved) 
[Or]			[2-1-1-1-1-4] 5/8	[-]	<i>lōōōōS</i> (Śārṅgadeva. et al., 1943)	P ⁽²⁴⁾	Dissolved bacchius 
69	Catustāla		[4-1-1-1] 7/16	Translation: Tāla of four durations (Messiaen, 1994: 291) Catus: 4-times (Monier-Williams, 2008)	<i>Sōōō</i>	P ⁽⁶⁾ (Subgroup: two non-retrogradable rhythm)	Epitrite IV (dissolved and coagulated) 
70	Dombulī Also known as: (<i>ghombaḍa</i>, <i>Vañcanā</i>, <i>lambanā</i>) (Nijenhuis, 1992: 329)		[3-3] [1½ - 1½] 6/16	Translation: Ambiguous translation. Perhaps it consists of the <i>dumbaru</i> or <i>damaru</i>: percussion instrument shaken by <i>Shiva</i>’s hand when he danced the dance of creation?	ṽ Or ṽ (<i>niḥsāruka</i>) (Nijenhuis, 1992) ṽ (Śārṅgadeva. et al.,	R. N. P ⁽²⁾	Pyrrhic Trichronos—two three-times 

<i>Cont'd</i>				(Messiaen, 1994: 291) Shiva is considered the master of music, the lord of dance and the seducer of wives of the ascetics, and the husband of <i>Parvati</i> (daughter of the mountain) (Dallapiccola, 2003: 11) <i>Vañcanā: deception, trickery, cheating</i> (Monier-Williams, 2008)	1943)		
71	Abhaṅga (also known as utsava (97)) (Nijenhuis, 1992: 329)		[1-3] 2/4	(?) bhanga: Dividing, break (Monier-Williams, 1851) <i>Abhanga</i> refers to an iconographic body pose (bhanga) specifically held by Hindu deities. A standing body pose in which the weight of the body is placed on one leg, the body shifting into a gentle curve (Bunce, 2000b: 968).	ÍS	P ⁽¹⁾	Iamb (last beat prolonged) ~.
72	Rāyavaṅkola		[4-2-4-1-1] 3/4	(?) <i>Rāya</i> : king or prince <i>Vaṅkila</i> : thorns (Monier-Williams, 2008) King of thorns (?)	SISoo (<i>ragaṇa</i> =SIS)	P ⁽⁴⁾ (Subgroup: two non-retrogradable rhythm)	Ditrochee (Trochaic dipody) Last beat dissolved - ~
73	Vasanta		[2-2-2-4-4-4] [1-1-1-2-2-2] 9/8	Translation: Springtime (Messiaen, 1994: 292) Shiny (season), spring	IISSS (<i>magaṇa</i> =SSS)	D P ⁽⁶⁾ (Subgroup: two non-retrogradable)	Tribrach + molossus

<i>Cont'd</i>			(syncopated)	(Šimundža, 1987) <i>Vasantā</i> “spring”. A demi-god who personifies spring and the companion to <i>Kamantakamurti</i> (Bunce, 2000a: 618).		rhythm)	~~~~ ---
74	Laghuśekhara (also known as <i>haṃsa</i> (96)) (Nijenhuis, 1992: 331)		[1½] 3/16	Translation: Light crown (Messiaen, 1994: 293) <i>Laghu</i> —small/little/light <i>Śekhara</i> —Crest, summit, peak, crown (Monier-Williams, 2008) <i>Shekahara</i> – Refers to the crescent moon diadem [jewelled crown or headband, a symbol of sovereignty] worn over the third eye of the Lord <i>Shiva</i> . It represents creation and destruction (Bunce, 2000b: 1007). Little Crown/Light Crown (?)	Ī	R. N. P ⁽¹⁾	Trichronos -.
75	Pratāpaśekhara Messiaen wonders if the final 32 nd note signifies the illumination of mental capacity. (Messiaen, 1994: 293)	 (Grosset, 1913) (Messiaen, 1994) òòò Soò (Śārṅgadeva. et al., 1943)	[6-1-1½] 17/32 (3/8 + 5/32) Prime number (17)	Translation: The force that emanates from the brain – intellectual power. “Indra is mental power”. (Aurobindo in Messiaen, 1994: 293) <i>Pratāpa</i> —warmth, power, brilliancy, highest splendour, majesty <i>Śekhara</i> —Crest, summit, peak, crown (Monier-	Śòò (Nijenhuis, 1992) Derived from <i>Jagadekamalla</i> (12+2+3) (Nijenhuis, 1974) òòò Soò (Śārṅgadeva. et al.,	P ⁽¹⁾	Elongated Trochee with dissolved thesis - ~

<i>Cont'd</i>				Williams, 2008)	1943)		
				Majestic crown (?)			
76	Jhampātāla (Spelled 'Jhaihpā') (Johnson and Rae, 2008: 222)	 (Grosset, 1913) (Messiaen, 1994)	[1½-1½-2] 5/16 (6/32+4/32)	Translation: The jump (Messiaen, 1994: 293) <i>Jhampa</i> —Jump (Monier-Williams, 2008) Jumping rhythm (?)	ò ò I (Śārṅgadeva. et al., 1943) o ò I (Nijenhuis, 1992)	P ⁽²⁾	Elongated anapæst ~ ~ -
77	Jagajhampā (Spelled 'Gajajhampa') (Johnson and Rae, 2008: 222), (Messiaen, 1994: 293) (Grosset, 1913: 303) There seems to be confusion between 'gaja' and 'jaga', 'gaja' means elephant.		[4-1-1-1½] 7½/16 Karṇā+Ṭṛṭiy a 15/32 8+2+2+3 (2+2 <i>guru</i>) + (2+2+3 <i>druta</i>)	Translation: The jump of the elephant— manifestation and physical strength. World elephants. (Messiaen, 1994: 293) Meru—the sacred mountain the Gods live Ganges—fall from heavens on to Mount Jambudvipa (aka India, Island of the rose apple) Aja—ekapada (one footed goat)—holds earth and sky apart Flat earth rests on the cosmic serpent (Shesha) Akupara—it the tortoise that supports it. Four feet rest on the elephants, standing on the shell of a cosmic egg. Airavata is the first to emerge from the egg followed by seven male elephants, and then eight female elephants (sixteen	Sooò	P ⁽²⁾	Epitrite IV (Dissolved and coagulated) --- ~ Ictus on final metron

<i>Cont'd</i>				in total) (Dallapiccola, 2003: 25) <i>Jaga</i> —mountain, serpent, tree, sun Jhampa—jump (Monier-Williams, 2008) Mountain jump (?)			
78	Caturmukha		[1-2-1-3] 7/8	Translation: Having four faces, like <i>Brahmā</i> (Messiaen, 1994: 294) Four-faced, the one with four faces (<i>Śiva</i>) (Šimundža, 1987: 124) (The above definition is incorrect, it should be <i>Brahma</i>) “The one with four heads” One of the numerous names, variants or epithets applied to or used to describe the deity the Lord <i>Brahma</i> ’ (Bunce, 2000a: 123).	ISIS	P (2) (Subgroup: one non-retrogradable rhythm)	Diiamb (Second iamb prolonged) ~ ~ .
79	Madana (also known as Darpaṇa (7)) (Nijenhuis, 1992: 325)		[1-1-4] 3/8	Translation: God of love (Messiaen, 1994: 294) God of love, inebriating, delighting (Monier-Williams, 2008) One of the numerous names to describe the deity <i>Kama</i> (Bunce, 2000a: 307).	o o S	P (2)	Iamb (dissolved) ~ -

80	Pratimaṇṭha(ka)) or kollaka (Pratimaṇṭha and jholluka)		[1-1-2-2-1-1] 4/4	Translation: To churn again (Messiaen, 1994: 294) <i>Prati</i> —again <i>Maṇṭha</i> —churning stick (Monier-Williams, 1851) <i>Kollaka</i> —name of a mountain (Monier-Williams, 2008)	<i>IIS or SII</i> (This is most likely to be either or and probably not a non- retrogradable rhythm in its original form). (Nijenhuis, 1992) <i>IIS SII</i> (Śārṅgadeva. et al., 1943)	N. P ⁽⁴⁸⁾	Anapæst and dactyl ~ - ~
81	Pārvatīlocana *** (Messiaen, 1994) states this is the same as Simharvikrama - with a transformation*** (This is an example of addition of the dot) (Messiaen, 1994: 294)		[4-4-4-2-6-4-4-1-1] 7½/4 (4+3+3+5) 15/8	Translation: The eyes of Pārvatī, the white Pārvatī, goddess and daughter of <i>Himālaya</i> , is the <i>Shiva's</i> <i>Shakti</i> (his power of manifestation) (Messiaen, 1994: 294) <i>Pārvatī</i> —mountain stream <i>Locana</i> —eyes, sight, illuminating (Monier-Williams, 2008) <i>Pārvanī</i> (aka <i>Pārvatī</i>) “the one who sanctifies” Goddess <i>Pārvatī</i> , the daughter of <i>Himavan</i> (<i>Himalaya</i>) (Bunce, 2000a: 408) <i>Parvatilochana</i> — the one who is the inner eye of enlightenment (?)	<i>SSSIŚSSoo</i> (and second Pārvatīlocana is <i>SSSIooSSoo</i>)	P ⁽²⁴⁰⁾	Epitrite IV + epitrite II (catalectic) --- ~ - - ~
82	Ratitāla (Spelled 'Ratī') (Johnson and Rae, 2008: 222)		[1-2] 3/8	Translation: Love (we have already seen the tāla ratilīla, that <i>Ratī</i> is the wife of <i>Kandarpa</i> or <i>Kāma-deva</i> , god of love) (Messiaen, 1994: 294)	<i>IS</i>	D	Iambus ~ -

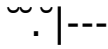
<i>Cont'd</i>				<i>Ratī</i>— “Delight” A goddess form of the deity Devi and related to the <i>Shaivas</i> and <i>Shakti</i>. Consort of <i>Manmatha</i>, a form of the Lord <i>Vishnu</i>, as well as <i>Kama</i> (Bunce, 2000c: 1522)			
83	Līla (Also known as Līlatāla) (Nijenhuis, 1992: 333)		[1-2-6] 9/16	Translation: The divine game. Lila is action movement rhythm, and of great cosmic significance. The game of the Mother, of the fundamental <i>Shakti</i>. “The expression of complete dynamic abundance” (Shri Aurobindo in Messiaen, 1994: 295) ‘...Effortless, purposeless, undirected play or action that possess the cosmic application. Creation, evolution and destruction are continuous, cyclical and impartial, without beginning, without end. The term (...) is associated with <i>Shiva-Nataraja</i> [Lord of the Dance] in his association with creation, preservation and destruction’ (Bunce, 2000b: 990)	<i>oIŚ</i>	P ⁽¹⁾	Cyclical anapæst (Elongated) ~ --. Tribrach + molossus (similar in proportion to Vasanta (73) ~ ---
84	Karaṇayati		[1-1-1-1] 2/8	Translation: The silent tāla [...] measure is indicated by hand movements and	<i>oooo</i>	R. N. P ⁽²⁴⁾	Double proceleusmaticus (<i>Dactylic</i>—

<i>Cont'd</i>				clapping. In popular rhythms, the durations are marked by cymbals. (Messiaen, 1994: 295) <i>Yati</i>—Sage <i>Karaṇa</i>—Making, causing (Monier-Williams, 2008) <i>Karaṇam</i>—the one who is the cause of the Universe; <i>Yati</i>—one of the names of <i>Shiva</i> (Bunce, 2000a: 261, 680)			<i>Even Species)</i> ~~~~
85	Lalīta		[1-1-2-4] 2/4	Translation: Sweet refined (Messiaen, 1994: 295) <i>Lalīta</i>—elegant, refined, fragile (Monier-Williams, 2008)	<i>oolS</i>	P (2)	Anapæst ~ -
86	Gārugi		[1-1-1-1½] 9/32 (2+2+2+3)	Translation: (ambitious translations) Perhaps it consists of <i>Garuda</i>, the bird that carries <i>Vishnou</i> (?) (Messiaen, 1994: 295) <i>Gāruḍi</i> -- (aka <i>Parvati</i>, <i>Devī</i>) (...) One of the thousand names of the Goddess <i>Parvati</i>, daughter of <i>Himavan</i> (<i>Himalaya</i>) (Bunce, 2000a: 184) <i>Garuda</i>—refers to the mythic bird which represents mind and which can instantaneously soar skyward and pervades all	<i>o o o ò</i>	P (6)	Double Proceleusmaticus with ictus on last beat ~~~~.

<i>Cont'd</i>				creatures. (...) It denotes immortality (...) (wings of speech) personifies <i>Vedic</i> knowledge when combined with the representation for the Lord <i>Vishnu</i> upon a serpent bed—since the serpent and <i>garuda Vishnu</i> are underlying enemies—it (they) represents the balance and harmony, one of the important aspects of the Lord <i>Vishnu</i>. (Bunce, 2000b: 981)			
87	Rājanārāyaṇa		[1-1-2-4-2-4] 5/8	Translation: The king of kings (Messiaen, 1994: 295) <i>Nārāyaṇa</i>—son of the original man Raja: The best of its kind, sovereign, king (Monier-Williams, 2008) <i>Nārāyaṇa</i>—(aka <i>Vishnu</i>) (...)“he who is the son of man”. The cosmic deity of the Brahmins. An avatar of Lord Vishnu who is often associated with the supreme being. It is told how, floating on a banana leaf, he sucked his toe—forming a circle, the symbol of eternity—creating the cosmos from his energy, He, with Nara, represents the love	oo ISI S (<i>jagaṇa=ISI</i>)	P ⁽⁸⁾ (Subgroup: one non-retrogradable rhythm)	Diiamb with dissolved anacrusis ˘ ˘- ˘- Or, diminished anapæst and Greek amphimacer ˘- ˘-˘-

<i>Cont'd</i>				between man and the Deity (Bunce, 2000a: 371).			
88	Lakṣmīśa (Spelled Lakṣmīṣa) (Messiaen, 1994: 222) Messiaen describes this as the most noble, elevated and exquisite deśitāla. He notes—she possess this andrygynous, sublime and smiling grace to the highest degree which is one of the charms of the Orient. (Messiaen, 1994: 296).	 (Grosset, 1913) (Messiaen, 1994) o ò I Ś (Śārṅgadeva. et al., 1943)	[1-1½-2-4] 17/32 (5+4+8)	Translation: calm, peaceful, like the peace of the goddess <i>Lakshmi</i>, <i>Vishnou's Shakti</i> (his wife and his power of manifestation) “Mistress of the delicate harmony and rhythm of the Universe, represents opulence and beauty” (Herbert in Messiaen, 1994: 296). Master of luck, beauty and richness, the name of <i>Viṣṇu</i> (Šimundža, 1987: 124) “He/she of good fortune” or “the one who is the mother of the earth” (...) one of the thousand names of Lord <i>Vishnu</i>. II. She is the <i>Devi</i> of beauty, wealth and prosperity, often times referred to as <i>Shri</i>. The foremost consort of Lord <i>Vishnu</i> (Bunce, 2000a: 295).	o ò I Ś  (Nijenhuis, 1992)	P ⁽¹⁾	Diiamb (Inexact augmentation) ~ ~ Or Catalectic, cyclical dactyl ~.- ~
89	Lalitapriya		[1-1-2-1-2] 7/8	Translation: Very dear, very loved (Messiaen, 1994: 296) <i>Lalita</i>—Elegant, lovely <i>Priya</i>—Loved, favourite <i>Priya</i>—(Aka <i>Skanda</i>,	IISIS (has a IIS called <i>sagaṇa</i>)	P ⁽¹²⁾ (Subgroups: two non-retrogradable rhythms, the first also exhibit displacement symmetry).	Greek Epitrite III (Dissolved first beat) -- ~ -

<i>Cont'd</i>				<i>Subrahmanya, Kumara</i>). An ancient Dravidian folk-deity. In Vedic and early Puranic legends <i>Subrahmanya</i> is closely related to the sun deity, a form of <i>Agni</i> , the Vedic God of fire (Bunce, 2000a: 544).			
90	Śrinandavardhara (Śrinandavardhara and Vaśaṅkha) (Nijenhuis, 1992: 333)		[2-1-1-3] 7/8	Translation: The son of the Goddess <i>Lakshmî</i> , the favoured child of the goddess of prosperity. (<i>Shrî</i> or “beauty” is one of the names of <i>Lakshmî</i>) (Messiaen, 1994: 296) <i>Śri-nanda-vardhara</i> Śri—“Beauteous one” Nanda—“The happy one” Vardhara—“The one who is the nourisher” (one of the names of <i>Vishnu</i>) (Bunce, 2000a: 364, 522,616)	SII Ś (has a SII called <i>bhagaṇa</i>)	P ⁽²⁾	Dactyl and coagulated trochee - ~ - - ~
91	Janaka	 IIIISSHS (Śārṅgadeva. et al., 1943)	[1-1-1-1-2-2-2-1-1-2] 7/4	Translation: The father (Messiaen, 1994: 296) King <i>Janaka</i> , probably reigned during the 7th century BCE, is mentioned in the late Vedic literature as a great philosopher-king. (Raychaudhuri, 1973:41-52). He gave weapons to Rama as a wedding gift (Noble and Coomaraswamy, 1913). Father of Sita (Narayan, 1990: 106).	IIIISSHS (Nijenhuis, 1992) IIIISSHS (Śārṅgadeva. et al., 1943)	P ⁽¹⁷²⁸⁰⁾	Dactylic tripody (catalectic): Double Proceleusmaticus + Spondee + dactly + catalectic ~ ~ ~ - - - ~ ~ -

92	Vardhana **Not listed in (Nijenhuis, 1992) but does appear in in (Nijenhuis, 1974: 78) and has an unusually structure [2+2+4+11]. I suspect is an error, should be [2+2+4+12]**		[1-1-2-6] 5/8	Messiaen refers to this rhythm as “<i>Vardhana</i>-augmented”. He speculates ‘Perhaps [...] because its durations increase in length’ (Messiaen, 1994: 297) Bestower of prosperity, enlarging, magnifying (Monier-Williams, 2008) <i>‘Vardhana’ is one of the thousand names of Lord Vishnu</i> <i>(Bunce, 2000a: 616).</i>	<i>oolś</i> (Nijenhuis, 1974)	P (2)	Pæon III (Dissolved and coagulated) 
93	Rāgavardhana 5 techniques: a) Diminution and coagulation placed end to end b) Coagulation or union, dissolution or disassociation c) Inexact diminution or augmentation d) Addition and withdrawal of dot e) Non-retrogradation Again, Messiaen describes this rhythm as ‘hermaphroditic, androgynous character so typical of oriental art.	 (Often appears augmented and in retrograde form with the pluta dissolved into three)	[1-1½-1- 6] 19/32 (7 + 12)	Translation: The rhythm that gives most life to the <i>rāga</i> (Messiaen, 1994: 297) Cutting colours, cutting off wishes, interrupting passions (Šimundža, 1987:124). <i>Rāga</i>—Prince, sun, harmony, colour (Monier-Williams, 2008) King/Prince <i>Vishnu</i> (?)	<i>o ò o ś</i>	P (2) (Subgroup: one non-retrogradable rhythm)	Tribrach + molossus, ictus on the second beat  (Similar in proportion to Vasanta (73) Līla (83)) Or, diiamb (Inexact augmentation) 

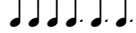
94	Ṣaṣṭtāla (Spelled 'Shattalā') (Johnson and Rae, 2008: 222)		[1-1-1-1-1-1] 6/16	Translation: Six values, six durations (Messiaen, 1994: 298) Ṣaṣṭ—six, sixth (Monier-Williams, 2008) Six beats (?)	<i>o o o o o o</i>	R. N. P ⁽⁷²⁰⁾	Tribrach monometer 
95	Antarakrīḍa (also known as Tṛtīya (3)) (Nijenhuis, 1992: 335)		[2-2-3] [1-1-1½] 7/32	Translation: The game of separation (Messiaen, 1994: 298) Distance, gap Playing, disrespect shown by a jest or joke (Monier-Williams, 2008)	<i>o o ò</i>	P ⁽²⁾	Tribrach (with an ictus) last beat prolonged 
96	Haṃsa (Same as Laghuśekhara (74))		[2-3] [1-1½] 5/16	Translation: The duck (Messiaen, 1994: 299) <i>Haṃsa</i> : (1) relating to a goose or a swan (2) flamingo The term (...) refers to a goose (or swan) and is frequently associated with the Lord <i>Brahma</i> , his <i>vahana</i> , a vehicle or object upon which a deity sits. The goose is also associated with <i>Sarasvati</i> , <i>Chandra</i> , <i>Varuna</i> and others. It is symbolic of the sun, a male symbol associated with virility, divine knowledge and the ability of the mind to commune on all levels (earth, water, air). In	 (Nijenhuis, 1992) Haṃsalīla (19)  (Nijenhuis, 1974; 1992)  (Śārṅgadeva. et al., 1943)	P ⁽¹⁾	Pyrrhic with ictus on second beat  Or: Truncated iamb 

Cont'd				addition, the <i>hamsa</i> has the ability of separating milk from water and, therefore, symbolises wisdom, discrimination and knowledge of a spiritual nature, as well as the breath of life [sic.] and boundlessness (...) it symbolises the ability to discriminate between right and wrong. If seven swans (<i>hamsa</i>) are pulling the chariot for the Lord <i>Brahma</i>, they represent the seven sphere/worlds (Bunce, 2000b: 982). <i>Brahma's</i> vehicle is <i>hamsa</i>, which means goose. (Dallapiccola, 2003: 13)			
97	Utsava (Also known as <i>abhāṅga</i> (71)) (Nijenhuis, 1992: 329)		[1-3] 2/4	Translation: The festival (Messiaen, 1994: 299) Ceremony, festival, ceremony rejoicing. Sava has associations with 'moon', 'vivication' and a kind of 'sacrifice'. (Monier-Williams, 2008) <i>Utsavamurti</i>—an image that is carried in a religious precession, particularly during festivals either on the backs of devotees or on a chariot (<i>ratha</i>) (Bunce, 2000b: 1014-5)	IŚ	P ⁽¹⁾	Iambus (Elongated) ~ -

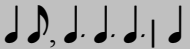
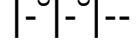
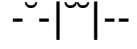
98	Vilokita		[4-1-1-6] 3/4	Translation: Examined (Messiaen, 1994: 299) Seen, looked at, beheld, examined, a type of glance (Monier-Williams, 2008) A type of facial expression (?)	<i>S o o Ś</i>	P ⁽²⁾	Trochaic dipody (Dissolved and coagulated) - ˘ - ˘ (Also, choreic dactyl and Trichronos)
99	Gaja (Also known as Dhārā)		[2-2-2-2] [1-1-1-1] 2/4	Translation: The elephant. It represents physical strength, its four feet and powerful gait represented by the four durations. (Messiaen, 1994: 299) The term refers to a <i>Vahana</i> , a vehicle or object upon which a deity sits. In this case, an elephant. (Bunce, 2000b: 980).	<i>IIII</i>	R. N. P ⁽²⁴⁾	The double proceleusmaticus. <i>Dactylic (Even Species)</i> ~~~~
100	Varṇa-yati		[2-2-1-1] 3/8	Translation: cessation of the melody (Messiaen, 1994: 299) <i>Yati</i> —one of the numerous names used to describe Lord <i>Shiva</i> in the <i>Mahabharata</i> . (Bunce, 2000a: 680) The term <i>Varṇa</i> , which translates as “colour” refers to the various classes or castes within	<i>II o o</i> or <i>II Ś Ś</i> (Nijenhuis, 1992) <i>II o o</i> (Śārṅgadeva. et al., 1943)	D. P ⁽⁴⁾	Tribrach (dissolved) ~~~~

<i>Cont'd</i>				India. (Bunce, 2000b: 1016) <i>Melodic Pace (?)</i>			
101	Siṃha (Also known as mrgendra)		[2-1-2-2-2] 9/8 (3+2+2+2)	Translation: The lion (Messiaen, 1994: 299) (...) a lion which symbolises bravery and the eager spirit of the believer. In addition it symbolises the finest of the animal creation—the regal beast— or it may connote greed for food which ultimately leads to lust. In the Hindu tradition, various forms of <i>Durga</i> have a lion as a <i>Vahana</i> (Bunce, 2000b: 1008).	<i>I o III</i> (<i>nagaṇa=III</i>)	P (2) (Subgroup: (2) non- retrogradable rhythms)	Tribrach + molossus (similar in proportion to Vasanta (73), Līla (83), Rāgavardhana (93)) 
102	Karaṇa (Also known as sannipāta) This is actually called 'Karaṇa', not to be confused with Karuṇā (!) – this is listed as the latter in Messiaen (1994) and in la laurencie and lavignac (1913) as 'Karuna'		[2] [1] [½] 2/8	Translation: Pathetic (Messiaen, 1994: 300) Karuṇa Mournful, miserable, lamenting; compassionate, 'causing pity of compassion', one of the Rasas or sentiments of a poem, the pathetic sentiment. (in mus) a particular tone. (Monier-Williams, Leumann and Cappeller, 1899: 255) Pity, compassion—	<i>S</i>	R. N. P ⁽¹⁾	Two-time long -

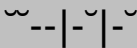
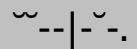
Cont'd				<i>Karuna</i> is a Sanskrit word meaning 'compassion'. In "Island" a novel by Aldous Huxley, mynah birds were trained by the old Raja to constantly repeat 'Karuna'. The island (...) embraces the best that both Western civilization and the culture of the East has to offer—biology, chemistry, technology, modern physics from the West; and philosophy, religion, and ancient psychic practices form the east (Watt, 1997: 467) Karaṇa—A man of mixed class, a scribe, and writer, skillful, clever. (Monier-Williams, 2008) Kāraṇam—(aka <i>Vishnu</i>) ("The one who is the cause of the Universe) (Bunce, 2000a: 261).			
103	Sārasa		[2-1-1-1-2-2] 9/16 (4+5)	Translation: "The stork" (Messiaen, 1994: 300) Belonging to a lake, an Indian crane, the name of the son of <i>Viṣṇu</i>'s mythic bird <i>Garuḍa</i>. (Šimundža, 1987) A crane. It denotes	<i>l o o o l l</i>	P ⁽³⁶⁾	Tribrach and Spondee (diminished) + with anacrusis - ~ --

<i>Cont'd</i>				vigilance and circumspect manner. The term <i>sarasa</i> refers to a ruddy goose (Bunce, 2000b: 1005).			
104	Caṇḍa (Spelled 'Candatāla') (Johnson and Rae, 2008: 223)		[1-1-1-2-2] 7/16 (3+2+2)	Translation: The rhythm of the moon. The division of the groups perhaps symbolise two revolutions of the moon (sidereal and sardonic revolutions) <i>Chandra</i> personifies sweetness (Messiaen, 1994) "He who is luminous" or "he who is the lovely one" A minor Hindu god, one of the <i>Navagrahas</i> (Nine planets). The <i>Navagrahas</i> are believed to influence not only individual lives, but also the course of nations. As one of the <i>Navagrahas</i> , <i>Chandra</i> , represents the moon and is considered to be of the <i>Vaishya caste</i> (Bunce, 2000a: 118).	oooll	P ⁽¹²⁾ (Subgroup: containing (2) non-retrogradable rhythms)	Epitrite II (Dissolved) ~ - - Or Tribrach and Spondee (diminished) ~ --
105	Candrakalā	 (Grosset, 1913) (Messiaen, 1994)	[4-4-4-6-6-6-2] [2-2-2-3-3-3-1] (2 x) 4/4 (3/4 + 6/8 + 2/4)	Translation: Symbolizes 'beauty and peace' (Messiaen, 1969:37) Translation: The beauty of the moon Three values consist of three phases of the moon (...) Or does it consist of the trio: earth, sun, moon (in	ssssśśś  (Nijenhuis, 1974; 1992) ssssśśśI (Śārṅgadeva. et al., 1943)	P ⁽³⁶⁾	Molossus (Catalectic dipody – dichronos and trichronos feet) --- --- ~

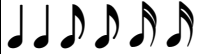
<i>Cont'd</i>				this order)? “A couple on which the sun acts, that constitutes the famous problem of the three bodies” (Théo Varlet in Messiaen, 1994: 301) A digit, or 1/16 of the moon’s disc (each digit is personified as a female divinity), the crescent on the day before or after the new moon, the mark of a finger-nail resembling the crescent before or after the new moon (Monier-Williams, 2003) <i>Candrakalā</i> represents the crescent moon. <i>Candrakalā-mudra</i> is a hand pose representing the crescent moon (<i>Chandra</i>) The moon is a symbol of “relative truth” when combined with the sun disk it symbolizes the revelation to the “Twin Unity”. It is frequently found in the crown of Lord <i>Shiva</i>. (Bunce, 2000b: 975)			
106	Laya (Which also means ‘tempo’) (Nijenhuis, 1974: 32) Messiaen describes the three laya: <i>Druta</i>—fast		[4-2-6-6-6-4-6-1-1-1] 37/16 (18½/8) (6/8 + 6/8 + 5/8 + 3/16)	Translation: The term corresponds to tempo (Messiaen, 1994: 301) Spiritual indifference, delight in anything, making the mind inactive	<i>SIŚŚŚŚŚooo</i>	P (288)	Trochee + molossus (trichronos) + Spondee (with ictus) + tribrach (diminished)

<i>Cont'd</i>	<i>Madhya</i>—medium <i>Vilambita</i>—slow And the alterations of movement: <i>Samā</i>—equal <i>Srotoratā</i>—continuous stringendo <i>Gopucchā</i>—ritenuto	   The tāla is analysed in relation to larger phrase lengths (Inexact): iambus and trochee forming a diæresis.		or indifferent, time, rhythm (Monier-Williams, 2008).			
107	Skanda		[4-2-4-1-1-4-4] 5/4	Translation: <i>Skanda</i>, the god of war (Messiaen, 1994: 302) <i>Skanda</i> also known as <i>Kartikeya</i> son of <i>Shiva</i>, Hindu god of war. (Monier-Williams, 2008) <i>Skanda</i> (aka <i>Subrahmanya</i>, <i>kumara</i>). An ancient Dravidian folk-deity. In Vedic and early <i>Puranic</i> legends <i>Subrahmanya</i> is closely related to the sun deity, a form of <i>Agni</i>, the Vedic God of fire (Bunce, 2000a: 544).	<i>SISooSS</i> (<i>ragaṇa</i> = <i>SIS</i>)	P (48) (Subgroup: containing (1) non-retrogradable rhythm, dilation symmetry present)	Trochaic dipody + spondee  Messiaen's analysis: Cretic Amphimacer + Spondee interrupted by short value in the middle 
108	Adḍatāla (Spelled 'addatāli or tripūta') (Johnson and Rae, 2008: 223) Appears as <i>Tripūta</i> in Messiaen, (1994: 302)		[1-2-2] 5/16	Translation: Folded in three (Messiaen, 1994: 302) Threefold, a kind of measure, a kind of pulse (Monier-Williams, 2008)	<i>oll</i> or (second type) <i>loo</i>	P (2)	Bacchic pæon 

Cont'd				<i>Tripura</i>—refers to three heavenly cities of the demons. One was built of gold, another of silver and the third of iron. It was created by the demon architect <i>Maya</i>, for the three demon sons of <i>Taraka</i> named <i>Tarakaksha</i>, <i>Kamalaksha</i> and <i>Vidyunmali</i> (Bunce, 2000b: 1013).			
109	Ghattā **[Mispelled as Dhattā - la laurencie and lavignac, 1913]**		[2-2-1-1-2-4] 3/4	(?) <i>Dhātā</i> (?) – “the one who establishes” (...) a <i>Prajapati</i> (“Lord of Progeny), therefore, he was created by <i>Brahma</i>. Also “the one who is the holder: (aka <i>Vishnu</i>) (Bunce, 2000a: 151). <i>Ghata</i> (?) – A drum with the form of a pot or ceramic vessel. It is associated with the <i>ganas</i> as well as the deity <i>Ahirbudhnya</i> and others (Bunce, 2000b: 981).	<i>IllooIS</i>	P ⁽¹²⁾	Trochaic dipody: Dissolved trochee and an iambus (diaeresis) ~ ~
110	Dvandva		[2-2-4-4-4-2-6] [1-1-2-2-2-1-3] 12/8 (compound time much more enjoyable)	Translation: Dispute, a combination of two elements (Messiaen, 1994: 302) Dilemma, a contest between two entities (Monier-Williams, 2008)	<i>IISSSIŚ</i>	P ⁽³⁶⁾	Ionicus a minore and trochaic dipody (coagulated)

<i>Cont'd</i>							 Or: Ionicus a minore and prolonged cretic amphimacer 
111	Mukunda		[1-2-2-2-2-4] 5/8	Translation: One of the names of <i>Viṣṇu</i> (Messiaen, 1994: 303) <i>Mukunḍa</i> (aka <i>Viṣṇu</i>) "The one who grants freedom" (Bunce, 2000a: 357). Mukunda is another name for Krishna (Knott 2000, p. 56)	<i>looIS</i>  or <i>Second version:</i> <i>loooooS</i> (Nijenhuis, 1992) (Used by Messiaen) <i>loooooS</i> (Śārṅgadeva. et al., 1943)	P ⁽²⁴⁾	Pæon III (Dissolved) 
112	Kuvindaka		[2-1-1-4-6] 7/8 (2+2+3)	(?) <i>Kuvinda</i> (ka): Weaver, from the mixed caste known as <i>sat sudra</i> (Sharma, 2001: 200)	<i>looSŚ</i>	P ⁽²⁾	Epitrite IV (Dissolved and coagulated) 
113	Kaladhvani		[1-1-2-1-3] [2-2-4-2-6] 4/4	Translation: Very sweet sonority (Messiaen, 1994: 303) Pigeon, peacock, Indian	<i>IISIŚ</i> (has a IIS called <i>sagaṇa</i>)	P ⁽⁶⁾	Anacrusis of two shorts and an Amphimacer in which last value is prolonged.

<i>Cont'd</i>				Cuckoo, having a pleasant voice (Monier-Williams, 2008) <i>Kala</i>—refers to ‘time of the’ <i>Dhvani</i>—Echo, tone, allusion, sound, implied, meaning			~~~~~ - ~ - . b). Anapæst with iamb, last value dotted: ~~~~~ - ~ - . c). Greek Peon III and dotted final duration (trichronos): ~~~~~ - ~ - - .
114	Gaurī		[2-2-2-2-2] [1-1-1-1-1] 5/8	Translation: One of the names of Shiva’s (<i>Shakti</i>), (his power of manifestation) Under the name of <i>Kālā</i> (power of time), <i>Shiva</i>’s <i>Shakti</i> is a frightening goddess who wears a collar of human heads (symbolising the energy which destroys the imperfections of man. Under the name of <i>Gaurī</i> (the white one), she is a young and beautiful wife who gives abundantly to all (Messiaen, 1994: 303). <i>Gaurī</i>—(aka <i>Devi</i>) (“the fair one” or “the white one”). A Hindu Goddess, a <i>Sattvika</i> (...) she exemplifies ideal motherhood and the force universal. (...) is able to	IIII (<i>nagaṇa=III</i>)	R. N. P ⁽¹²⁰⁾	Dissolved Pæonic ~~~~~

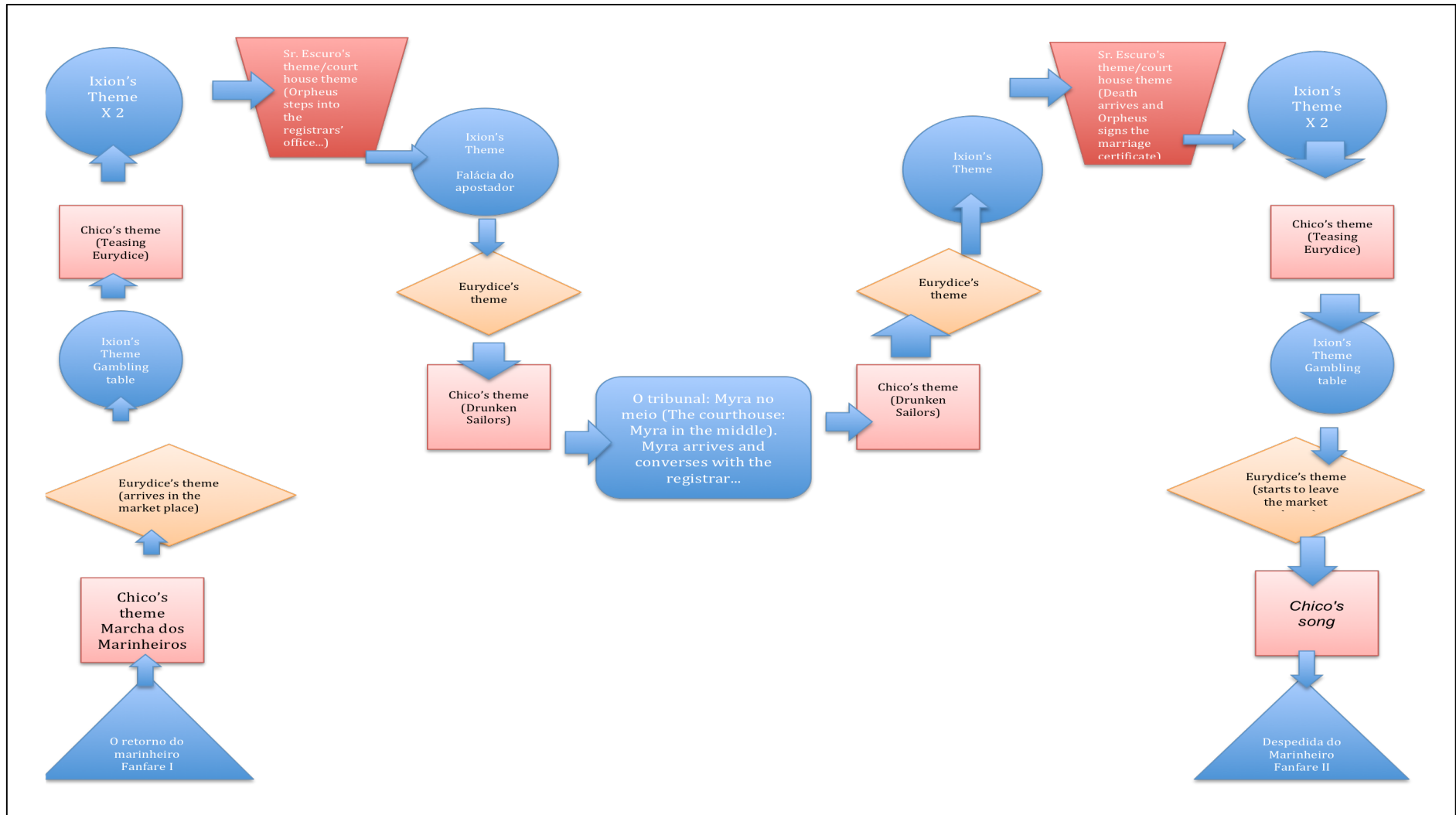
<i>Cont'd</i>				bestow merit and great benefits, and is often worshipped by other deities. She is believed to have been related to an ancient Goddess of the Harvest. The goddess is looked upon as an unmarried woman (Bunce, 2000a: 186).			
115	Sārasvati kanthābharana		[4-4-2-2-1-1] 7/8 (Prime number 7)	Translation: <i>Sarasvati's</i> collar (The goddess of science and arts) (Messiaen, 1994: 304) <i>Sarasvatī</i>—(aka <i>Devī</i>) (called “the flowing one”) In Vedic period, there [sic.] was a Goddess of some importance, related to a heaven sent river and water in general, and said to be present in the creation of the earth, the atmosphere and the heavenly spheres. She cleanses all with her waters. Supplications are offered her for wealth, children, sustenance and he giver of sons. Later her nature changes and she becomes a goddess of culture, learning and speech. She is often depicted wearing white garments and a necklace (Bunce, 2000a: 477).	<i>SSIlloo</i>	D. P ⁽⁸⁾	Epitrite IV (dissolved) ---~ Or Spondee + Tribrach (dissolved) -- ~

116	Bhagna		[1-1-1-1-2-2-3] 11/8 (Prime number 11)	Translation: Cracked in two, broken burst (Messiaen, 1994: 304) Fractured, shattered, split (Monier-Williams, 2008)	oooIIİ	P (48)	Double Proceleusmaticus (diminished) + Tribrach with an ictus on last metron 
117	Rājamṛgāṅka (Spelled 'Rājamrigāṅka') (Johnson and Rae, 2008: 223)	 (Grosset, 1913) (Messiaen, 1994) oolŚ (Śārṅgadeva. et al., 1943)	[1-1-2-4] 2/4	Translation: The king who is handsome like the moon (Messiaen, 1994: 304) <i>Mṛgāṅka I</i> —"He who is marked like a deer" One of the names used to describe <i>Soma</i> <i>Mṛgāṅkā II</i> —(aka <i>Parvati</i> , devi) "The one who is deer marked" (Bunce, 2000a: 355). Translates: The king who is marked like a deer (?)	oIS  (Nijenhuis, 1992) oolŚ oolIS (Śārṅgadeva. et al., 1943)	P (2)	Anapæst (Dissolved) ~ -
118	Rājamārtāṇḍa 117 and 118 are made up of increasing and decreeing values. He speculates they are played at the beginning of the night, at sunset, preceding the moon's rising (Messiaen, 1994: 304)		[4-2-1] 7/16 (3+4)	Translation: The sun king (Messiaen, 1994: 304) Bird, bird in the sky, sun (Monier-Williams, 2008) <i>Martanda Bhairava</i> [<i>Shiva</i>]—one of the 64 forms of <i>Bhairava</i> [<i>Shiva</i>]. <i>Martanda</i> is one of the eight forms of <i>Asitanga</i> i.e. one head, fierce, three eyes, crescent, cobra <i>jvalakesha</i> arms, four arms holding a	Slo (Is retrograde for original Rājamṛgāṅka)	D. P (1)	Trochee (with added value) - ~

<i>Cont'd</i>				trident, sword, drum, noose) (Bunce, 2000a: 347).			
119	Niḥśaṅka		[1-2-2-3-2-2-2-1] 15/8	Translation: Fearless (Messiaen, 1994: 305) Without fear, fearless, carefree, confident (Šimundža, 1987: 124). Separated, passionless, free from worldly attachment, careless, secure (Monier-Williams, 2008) Niḥśaṅka was <i>Śārṅgadeva</i>'s first name, it means: Secure, carefree, [and] free from fear of risk, a kind of dance. (Monier-Williams, 2008)	ISSSSI  (has a SSI called <i>tagaṇa</i>) (Nijenhuis, 1992) ISSSSSI (Śārṅgadeva. et al., 1943)	P (240)	Bacchius + pæon IV (coagulated) + antibacchius ~-- ~-- ~-- Or: Iamb + amphibrach + antibacchius ~ ~ ~--~
120	Śārṅgadeva		[1-1-4-6-4-4-2] 11/8	Translation: Name of the 13th Century Hindu-theorist and collator of the 120 deśitālas in the Saṅgītaratnākara (Messiaen, 1994: 305)	ooSSSSI	P (12)	Iambic dipody (Coagulated) ~ ~ ~--~ Messiaen analysis: Pæonic dipody with dissolved anacrusis (Pæon III + antibacchius) ~ ~ ~--~ (Messiaen, 1994)

(Appendix M):

Symmetry: Thematic Structure of *Aquático dramática, Black Orpheus*: Act. 1, Scene V/I-IX.



(Oliver, Unpublished)

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