

Strange Flowers

Cultivating new music for gamelan on British soil

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Abstract

This thesis explores new music created for gamelan in Britain, focusing primarily upon works for Javanese gamelan. It explores the historical conditions and human motivations which have made composition for gamelan such a distinctive part of the UK scene, and explores the range of works created through a series of taxonomical spectra.

It considers how composers writing for gamelan in the UK situate themselves amongst the transcultural influences they are at play with in their composition. This is explored through a variety of lenses: looking at how composers use, avoid or mix musical structures associated with gamelan and those from other systems; whether or not they draw upon creative processes and methods of transmission associated with traditional gamelan music; and what happens when gamelan instruments are combined with those from other systems or with electronically-generated sound. It also explores narratives of authenticity and hybridity, and the interrelationship between British gamelan composition and the wider cultural scene. It questions the extent to which the British gamelan scene is distinct from other international gamelan communities, and the extent to which it is not, suggesting that the appearance of difference is in fact more of an inflection, coloured by local conditions, history and individuals, but nevertheless an expression of the same contemporary trans-state cosmopolitan flows (Turino 2003) that characterise gamelan cultures around the world.

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1 data DVD of recordings and scores

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It is unlikely that this thesis would have come into existence if it were not for Gamelan Sekar Petak, a bronze Javanese gamelan built by Tentrem Sarwanto in Solo and now residing at the University of York. It was the presence of this gamelan which first attracted me to the Department of Music in York as an undergraduate. At the time, I had a place to read physics at Manchester University, but after spending six months in Chennai studying Carnatic music, I decided that travelling the world and studying music would be a more interesting career path. I returned to the UK with a month or two to spare before the start of term and started casting around for somewhere I could study ethnomusicology. Looking back now, I recall framing this in terms of departments which had a gamelan. I will have more to say about this later.

York was appealing for its wide-ranging course which not only covered ‘world music’ but was well-regarded for composition, electroacoustic and computer music, early music and other intriguing areas. But it was the gamelan that I threw myself into on arrival, joining the weekly student class and enthusiastically volunteering when the following year a group of postgraduates and former students initiated a second group to work on new compositions.

The open-minded, inclusive and very laid-back atmosphere around the gamelan, in which new composition was considered to be as valid and important an activity as learning Javanese music, had at its source Neil Sorrell. It was Neil who had pestered the department into buying the gamelan (which arrived in 1982) and who had in subsequent years taught a large proportion of the gamelan specialists working in the UK today. And on my return to the department in 2009 to undertake a PhD, it was he who became my supervisor when I eventually decided on this topic. My gratitude to Neil is immense, for both his guidance in this thesis and his huge contribution to the thriving (if niche) British gamelan scene I find myself a part of today.

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Author's declaration

All the work in this thesis has been carried out by the author and has not previously been submitted for examination at the University of York or any other institution for another reward. Case study N reproduces material previously published as a report in *Asian Theatre Journal* 30/1, 2013 entitled 'A Celebration of Gamelan Sekar Petak's Thirtieth Anniversary and of the British Gamelan Scene: *Wayang Lokananta: The Gamelan of the Gods*. University of York, Department of Music, 26-28 April 2012'.

Introduction

It's simple botanical fact: if you're going to transplant this tender plant from an alien climate and soils and tradition and expect it to survive, then its got to take root. And its got to take root with new nutrients, new soils. So there's got to be new growth. It's the only way its going to take root properly. And I really believe that passionately.

(Alec Roth, interview transcript 2012: 16)

We're not Javanese or Balinese, we're feeling it differently [so] it's going to be different. You know, you take *Ricik-ricik* and play it here, it becomes something different. It has its roots in Java but it becomes something different. So for me it was just an extension to then write pieces for gamelan. I felt that gamelan was something that we were kind of planting in English soil and new flowers were growing.

(Andy Channing, interview transcript 2011: 11)

An English Garden is anything but English.... A lot of plants come from America; lots of plants come from China and Japan and India. You know the rose, we think of as an English plant. Well there might be an English rose, but it's been crossed with plant flowers from China.... So you get this crossing of plants, hybridising, and you have Henry Cowell talking about how a lot of the best music was hybridised, and is a mixture of several things.

(Clive Wilkinson, interview transcript 2011: 30)

Contemporary composition has been a feature of gamelan performance in the UK since the establishment of the country's first regularly-performing indigenous ensemble, the English Gamelan Orchestra, in 1980. Using the Indonesian Embassy's Javanese instruments, the group was primarily established to enable the study of traditional repertoire but new composition was, from the outset, a part of their concert programming.

This set a strong precedent, and new composition has become an integral feature of many subsequent British gamelan groups. Over thirty years this has produced a significant body of work which forms the subject matter of this thesis.

One notable aspect of the British gamelan scene,¹ which it has in common with certain other international gamelan communities, is that there is no substantial Indonesian

¹ I use 'scene' in the sense that Will Straw defines it, in terms of 'particular clusters of social and cultural activity.... Scenes may be distinguished according to their location ..., the genre of cultural production which gives them coherence (a musical style, for example...) or the loosely defined social activity around which they take shape' (2004: 412). All these aspects of scene come into play in this thesis, where I use the term to describe the bewilderingly diverse range of gamelan-related activities – performance, teaching, learning, composition, improvisation, therapy – the people who engage in them, and the way in which those participants engage with one another.

expatriate community in the UK. As a result, local gamelan groups are dominated by participants with no direct geographical, ethnic or historical links to the regions from which gamelan originates.²

This pattern of participation fits Turino's description of 'cosmopolitan formations': communities whose members have adopted 'constellations of conceptions, ethics, aesthetics, practices, technologies, objects and social style' that do not relate directly to their own geographical, cultural or ethnic background but are defined, rather, by 'the absence of an original homeland as a key symbol, if not an actual ground for the formation' (Turino 2003: 63-64). Slobin's coining of the term 'affinity groups' to describe non-commodified, face-to-face, small-scale networks, independent of industrial/commercial interests or ethnic/cultural background, sharing 'a jointly imagined world which arises from a set of separate strivings temporarily fused at a moment of common musical purpose' (1993: 60) is also insightful.

Of particular interest is Slobin's allusion to a 'jointly imagined world', something which is key to understanding the success of gamelan outside Indonesia generally and in the UK specifically. As the quotes at the start of this chapter show, this imaginary landscape tends not to be characterised by a desire to emulate Indonesian practice in every last detail but to indigenise it, to cultivate new, localised forms, to imagine and then create a living, changing, growing tradition of gamelan suited to the context of these damp and distant Northern European islands.

.....

Ethnomusicology has historically focused primarily on music in its indigenous setting, music amongst immigrant and diasporic groups, or the change which occurs when two cultures meet and influence each other. However, an 'ethnography of affinity' (my term) is gradually beginning to take shape, through an increasing number of studies of those who play 'minority' music (i.e. not 'Western' art or popular forms – the definition of which I will come back to below) with which they have no ethnic or historical link, and it is in the context of these works that this thesis is located. They include Joseph Getter's survey of Americans performing Carnatic music (1998: 225-255), Peter Hadley's doctoral study of didgeridoo music in the US (2007), and a collection of articles about teaching and learning

² There are, to my knowledge, currently three Indonesian arts professionals who were born in Indonesia and are permanently resident in the UK, and are actively involved in the country's gamelan scene. The country frequently often hosts visiting artists, who may be studying for a higher degree at a British institution, undertaking an Artist in Residency with a particular ensemble or working at the Indonesian Embassy in London.

‘world music’ in academic ethnomusicology contexts (ed. Solís, 2004). Thanks to the widespread dispersal of gamelans around the world (the historical reasons for which are explored further down) there exists a plethora of books, papers and dissertations dealing with gamelan culture outside Indonesia, including Sumarsam (2013, 1995), Steele (2013), Miller (2005), Scott-Maxwell (2013), Cohen (2010), Sorrell (2007, 1992), Becker (1983), Hadley (1993), Diamond, (1998, 1992a, 1992b), McDermott (1986), McGraw (2013), the majority of chapters in Solís (ed.), (2004), and numerous other papers cited throughout this document.

Most relevant to this thesis, however, is Maria Mendonça’s 2002 doctoral dissertation on Javanese gamelan in Britain. After deciding initially to base my own doctoral study upon an ethnography of the gamelan scene in Britain, I soon discovered it had already been done, very thoroughly; however, Mendonça’s study gave only cursory coverage to new composition. Being based at the University of York, home to one of the country’s longest-standing groups and the most consistently active in terms of new music, I found myself well-placed to cover this topic in more detail. Since it has already been explored in depth by Mendonça, I have given only a cursory account of the history of UK’s gamelan scene, focussing instead on examining its home-grown music and giving voice to the musicians who created it.

The following chapters explore the enormous variety of compositional activity which has taken place in the UK over the last thirty-three years (1980 – 2013). Although only a snapshot can be given, it is hoped that the selection of works covers a broad range of compositional approaches, philosophical premises, group dynamics and performance contexts which have taken shape, as well as providing some insight into how composition for gamelan interacts with other creative music-making in the UK.

Chapter 1 deals with background context, offering a brief overview of Javanese *karawitan* structures and terminology, tracing the historical path of gamelan music from Indonesia to Britain, and giving details of the methodological outline.

Chapter 2 explores how and why composers use, mix or avoid musical structures associated with gamelan and those from other systems. Chapters 3 and 4 focus upon human interaction in gamelan compositions, exploring the related issues of creative process and transmission respectively, with a particular focus upon collaborative composition and aural learning. Chapter 5 examines what happens when gamelan instruments are combined with those from elsewhere, and also explores the combination of gamelan and electronics. Chapter 6 moves beyond the music to consider how composers

writing for gamelan in the UK situate themselves amongst the transcultural influences they are at play with in their compositions and how common narratives have shifted through time. It examines narratives of authenticity and hybridity, and the interrelationship between British gamelan composition and the wider cultural scene. Finally, it examines the extent to which the British gamelan scene is distinct from other international gamelan communities, and the extent to which it is not, suggesting that the appearance of difference is in fact more of an inflection, coloured by local conditions, history and individuals, but nevertheless an expression of the same contemporary trans-state cosmopolitan flows (Turino 2003) that characterise gamelan cultures elsewhere.

Between the chapters lie case studies: analyses of the music that forms the core of this thesis. These case studies are placed to illustrate points discussed in the chapter that precedes them, but they are also free-floating, stand-alone objects which relate to threads running through all chapters, and are not necessarily intended to be read sequentially: the reader may wish to dip in and out of them at any point as arguments based upon them are being developed. The tone of the case studies differs somewhat from the main body of the thesis and from each other: the approach for each is driven by the nature of the music being analysed rather than following a specific model.

Genesis of this study and personal background

When I was awarded a doctoral studentship to study at the University of York, my intention was not to study new music for gamelan in the UK, but to undertake research based on materials held in the University of York/ Borthwick Institute's sound archives. I was particularly interested in applying the kinds of tools used in ethnomusicological research in a way that did not involve travelling around the world to study a distant culture, for a number of reasons. There were environmental ones: having already spent much of my adult life in living in Asia (Japan and India) I was keen to limit further long-haul flights. I was increasingly questioning the value of travelling around the world to study the 'music of the other' and uncomfortable with the inequality that made it very difficult for my peers in countries such as India to contemplate making such a trip in reverse. Also, I was becoming more interested in music-making as it takes place 'at home'; an MMus fieldwork project exploring Kurdish folk music and politics in bars around the corner from my house in Dalston, North London, had proven far more fruitful than a year and a half spent trying to learn Carnatic violin in Madras.

A year into my three years of funded study I had failed to come up with an inspiring topic from within the archives, but had meanwhile enthusiastically re-immersed myself in the activities of the music department's Gamelan Sekar Petak, of which I had been a member as an undergraduate (1997-2000). When I proposed switching to a gamelan-related project which would involve the creation of a new research archive, the department accepted my proposal.

Had it been my intention from the outset to study composition for gamelan in Britain, I might not have chosen to do it from within the University of York. The fact that it was the first British university to own a Javanese gamelan, and that composition for gamelan has been a major part of its activity spanning decades, made it an important institution to research, as did the presence of senior academic, Neil Sorrell – one of the main instigators of gamelan education and composition in the UK. However, it is generally acknowledged that it is preferable to undertake research of an institution from outside that institution. Although it was incredibly helpful to have extended access to the department's archive of gamelan concerts and the semi-chaotic mass/mess of decades' worth of old scores clustered upon what we came to refer to as 'The Shelf of Doom' in Neil's office, retaining a sense of objective distance was not easy. This was compounded by the fact that my supervisor was also a key informant and several of the composers I was writing about were old friends. However, as supervisor, Neil was careful to take a light, non-directive approach towards guiding the direction of my research, suggesting areas worth investigating without imposing his own views on them (unless solicited in the context of an interview!).

With regards to gamelan, my own position is one of both insider and outsider. Exploring how I would describe myself in relation to the music discussed in this thesis seems to require differentiating between gamelan in Indonesia and Britain. As someone who has been studying gamelan and playing new compositions by my contemporaries (usually fellow group members) since I was an undergraduate in 1997, as well as more recently composing myself, I could probably be considered as something of an insider in terms of the British gamelan scene, albeit not the amongst the most experienced or dedicated players. However, I have not been to Indonesia to study, nor do I teach workshops in community music settings, and thus if not exactly an outsider, I am on the periphery: an enthusiastic amateur.

My personal involvement with contemporary British gamelan music provides particular opportunities and challenges: opportunities because many years of performing

and thinking about gamelan compositions gives me a good grounding in issues of concern to composers and performers, not to mention a strong network of informants; and challenges because it can be hard to step outside the realm of subjective experience, of what I think I know (or worse still, what I know I like), and take an objective overview of the subject, find the burning issues that might be obvious to an outsider but which are easily missed after many years of personally accepting them, unchallenged, as the norm – a problem described by Cottrell (2004: 16). It can also make it more difficult to present material without allowing my own personal feelings on the matter to affect my presentation of a topic.

Rather than objectivity, then, I have aimed for fairness. As a participant, I occasionally offer my own experiences as anecdotes alongside those of informants, since I have my own perspective, situated within the wide range of opinions, philosophies and stances described here. However, on encountering topics on which I discovered I have a strong opinion (for example, on aural learning) I have felt it best to state this clearly, not in the hope of persuading the reader to my point of view, but because it seems more honest and useful to reveal how my biases may have coloured the subsequent analysis than to risk presenting a skewed argument hidden behind passive, faux-objective academic language.

Scope of this study

The subtitle of this work is ‘Cultivating New Music for Gamelan in Britain’. The terms ‘British’, ‘gamelan’ and ‘new music’ all require careful definition, as they can be applied and interpreted in a number of ways (I leave it to readers to interpret ‘cultivate’ as they please). It should be borne in mind that the boundaries defined below are at best permeable, at worst vague: in practice, outsiders have often crept into the narrative from beyond their borders because their value as examples to illustrate particular points outweighed the benefits of rigid adherence to arbitrary limitations.

Defining ‘gamelan’

Gamelan can be defined in many ways, depending on how specific the writer wishes to be, and the temporal or geographic perspective they take. For instance, the Grove Dictionary of Music opens by describing gamelan as ‘A generic term used for various types of Indonesian orchestra’ (Kartomi, Mendonça), but in fact takes a broader geographic perspective, going on to describe types of gamelan found in Malaysia, as well as Indonesian-inspired ‘home-built’ sets in the US. The article is written from a decidedly

contemporary viewpoint; as Mendonça points out elsewhere, the Balinese would not historically have referred to the various ensembles found on their island as ‘gamelan’, with the nearest equivalent term being *gamelang* (2002: xxi): a reminder that Indonesia is not a single cultural entity but made up of numerous regions, each with a distinctive musical culture. Indeed, to speak of gamelan as an ‘Indonesian Orchestra’ is only meaningful in the context of post-1945 independence, before which ‘Indonesia’ did not exist as a country. Taking a more bounded approach, Yampolsky laments the dilution of the term ‘gamelan’ from its original use to denote specific Javanese ensembles to a general catch-all for any Indonesian ensemble, and offers the reader a very specific definition focused upon organology and the type of music typically played (1997: 6). Others consider the use of *slendro* and/or *pelog* tunings to be an essential element of a gamelan (detailed in, though not necessarily the opinion of Sorrell, 2007: 32).

For this thesis, I have found it most useful to place the definition of gamelan in the hands of the composers it features: it is used to refer both to ensembles of Indonesian origin and those built locally, with the focus more upon whether the builder (or its players) regard it as a *gamwwelan* than on how closely it resembles Indonesian models. Under this logic, Metalworks, which is closely modelled on Javanese instruments, tuned to *slendro* and *pelog*, and used to play Balinese and Javanese music as well as new compositions, is included. Cragg Vale Gamelan – a community gamelan tuned to a Western pentatonic scale which is “inspired by the music and other art forms of Indonesia” but does not attempt to emulate them³ – is also mentioned. However, the Bow Gamelan – an anarchic creation constructed from scrap metal, electric motors, glass and pyrotechnics⁴ – is not included: neither the ensemble nor its music bears any deliberate relation to Indonesian models, and their use of the term ‘gamelan’ verges on the ironic, deliberately underlining how these days any collection of ‘old pots and pans’ can be called a gamelan.

In practice, I have found it necessary to narrow the scope somewhat further, focussing mainly upon works for Javanese gamelan over those for Balinese. This is partly out of a need to limit things to a manageable scale, and partly because Javanese gamelan is the type most commonly found in the UK (not including the plethora of cheap iron sets of mixed Balinese instruments sold to schools by an organisation known as Drums for Schools).

³ This quote was from a now-defunct webpage <http://www.piano40.co.uk/craggvalegamelan.html>.

⁴ <http://www.annebean.net/past-projects/1981-1990/192>

Defining ‘new music’

Defining new music a more complex issue than it might initially seem, not least because of differences in the concepts of creativity, originality and ownership in Europe and Indonesia. The argument that nothing is truly ‘new’, that everything rests upon pre-existing ideas, is well-established, but is particularly pertinent with regards to creative practice within *karawitan*, where historically the creation of new works was (and in some contexts still is) seen more of as an act of ‘recombination’ than original ‘composition’ (discussed further in Chapter 3).

With regards to contemporary composition for gamelan, it is generally more acceptable than in European art music to incorporate chunks of pre-existing music, whether borrowing elaborating techniques (*garap*) or repurposing segments of traditional pieces in new settings, although the person doing the recombining may not think of themselves as a ‘composer’ (see Chapter 3). Furthermore, a composer writing a piece that draws strongly on *karawitan* forms may well expect players to fill out the basic structure with traditional elaborative techniques.

This thesis deals with any original work created afresh for gamelan within the UK, regardless of whether it uses fragments of traditional material or not.

Defining ‘Britain’

‘Britain’ here is used as short-hand for the United Kingdom of Great Britain and Northern Ireland (i.e. England, Scotland, Wales and Northern Ireland). In practice, only ensembles in England and Scotland have been covered, more due to time constraints than any particular reasons of scope.

The focus of this definition is firmly on geographic location, not nationality: this thesis considers any work that was created in the UK, regardless of the nationality or long-term place of residence of the composer.

As is often the case with such studies, even a relatively concise and narrow area such as new music for gamelan in Britain has proven elusive to cover comprehensively in the time available. As well as areas of the UK which have been neglected, there are groups which were active in new composition which have been given less space than they deserve, significant composers whose works are omitted and creative practices that have not been captured.

The most significant of these gaps centres around group composition and improvisation in schools, community groups, and with vulnerable or disabled groups. This

should not be in any way seen as playing down the value of the creative, original music and arising from such contexts, which is both of value to participants and has led to some excellent art; however, this particular area of gamelan-based creative activity is left to others to explore.

For a study purporting to deal with composition for gamelan in Britain, there are groups which deserved substantially more space. Metalworks is a very important ensemble for new music in the UK, but since it is the subject of a substantial case study in Mendonça's 2002 thesis I have not prioritised it in this one. Lilacita is another: as a Balinese ensemble it falls outside the scope of this thesis, though it is one of the few groups currently performing new composition for gamelan in the UK. A third is the Cardiff Gamelan group, a community group who play a mix of traditional music and their own compositions.

There are individual composers whose absence may be noted. In particular, an entire planned chapter dealing with whether or not the composer was an experienced gamelan player, and how this affects their compositions, regrettably had to be dropped.⁵ This chapter was to have incorporated analyses and interviews about the major commissions for gamelan by established but non-gamelan composers, such as Michael Nyman's *Time's Up* (commissioned for the English Gamelan Orchestra) and Geoffrey Poole's *Swans Reflecting Elephants* (for the Southbank Gamelan Players and BBC Symphony Orchestra), as well as large-scale works by experienced composers such as Adrian Lee's *Alice Songs*. It would have also discussed works by the most experienced gamelan players, such as visiting Indonesian musicians Joko Purwanto and Rahayu Supanggah, exploring their experiences of writing for British gamelan players. The absence of the voices of visiting Indonesian artists in this thesis is perhaps the most regrettable absence, and one I hope to fill in subsequent publications.

Another area of study I had hoped to pursue in more depth was consideration of gamelan composition from the perspectives of performers and audiences. Although some initial progress was made in this area, with audience questionnaires and a listening panel, there is great scope for a more comprehensive study of the multi-directional interactions between composers, performers and audiences, and the different readings and responses

⁵ I was pleased to discover that the effect of composers' knowledge of gamelan is discussed in some detail by Chris Miller (2005), whose viewpoints chime to some extent with what I was finding in my preliminary research on the topic.

each of these participants bring to the music. In particular, the experiences of performers would have been a useful counterbalance to composers' voices in the case studies.

The imbalances run both ways – as well as absences, there are some dominating presences. Despite efforts to cover composers from many groups, a significant proportion of the compositions discussed are from the University of York. This is in part due to weight of numbers: York's Gamelan Sekar Petak (est. 1982) is the second-longest-standing group in the country (Dartington being the first) and has been playing new music created by its members for decades. Due to the fact that it is based in a department with a strong reputation for composition, there have been a large number of 'in-house' composers over the years (38 names emerged from the catalogue and there may well be more whose contributions went unrecorded). Between them, these composers have demonstrated a wide range of approaches to writing for the ensemble, and my desire to cover a broad spectrum of compositional styles has led me to draw many examples from amongst them. Sekar Petak's substantial archive of recordings, concert programmes and scores has proven a valuable resource for this, and digitising and cataloguing this material has formed a significant aspect of my research. Further, as a member of the group, I have played/ been involved in the creation of many of the works discussed, giving an insider's perspective that was worth utilising.

The resulting thesis has thus become not so much a regional survey of all new composition for gamelan created in the UK as an exploration of the spectrum of approaches composers have taken to writing for gamelan. This focus arose in an organic way from the research material, from a process of allowing issues which emerged in the course of interviews and musical analyses to inform the structure of the write-up, permitting interesting topics to bubble to the surface, rather than attempting to constrain the material into a pre-determined format.

Notes on use of language

Art music is used here to differentiate between complex, large-scale works and popular or folk forms. I do so, however, in recognition that this is an amorphous boundary; particularly in the latter half of the twentieth century up to the present day, distinctions between 'high' and 'low' musics have become increasingly blurred, with forms such as jazz and folk forging a path to the concert hall and orchestras seeking mass appeal with

film score programmes and DJs⁶. Defining art music has resultantly become difficult, but it is vaguely identifiable in terms of some likely markers. In the UK, at least, contemporary art music is often (but not always): created by those who think of themselves/ might name themselves as composers; involves formally trained musicians (though not necessarily exclusively); intended for a concert-hall or other formal venue; written with the expectation of a passive, attentive audience; funded through a commission or grants; not expected to have mass commercial appeal. Many of these factors, however, do not apply in the case of installation art involving music or sound. In essence, it is hoped that where the term is used, its meaning is clear from the context without needing a firm definition.

In Indonesia, all these markers differ – named composers were unheard of before the twentieth century (works were attributed to rulers), concert halls and passive audiences are also more recent phenomena. To avoid confusion, I avoid referring to Indonesian art music and adopt more specific descriptors (for example, *karawitan*, contemporary music) where needed.

Western art music: To speak of ‘the East’ or ‘Eastern music’ is today considered unacceptable, lumping together as it does an enormous yet ill-defined range of very different countries and cultures and musics. The term ‘Western music’ remains in common usage despite suffering from similar problems: geographical meaninglessness (being embedded in countries such as Australia, Japan, China and Brazil) and semantic vagueness (since it can be applied to a dizzying range styles from Gregorian plainchant to chance-procedure pieces). However, it does, in practice, tend to be well-understood as a style of music originating in the churches and courts of Europe and now widely performed around the world, often in concert halls to passive and attentive audiences, in which some form of notation tends to be the favoured method of transmission, and composers are usually named.

I occasionally refer to Western/European *classical* music when discussing music (or, more likely, attitudes towards music-making) in the Baroque-Classical-Romantic era up to around the end of the nineteenth century.

‘Western culture’ is a term I personally try to avoid, but it does sometimes appear when discussing other peoples’ opinions.

⁶ See, for example, <http://nonclassical.greedbag.com/buy/g-prokofiev-concerto-for-turntab-0/>

Karawitan: Since it first appeared in print in the Javanese courts in the late nineteenth century (Sumarsam 1995: 125), *karawitan* has come to be used more generally in Indonesia as a formal term for gamelan music ‘that privileges its more “classical” aspect’ (Miller 2014: 26). Although it can be used for non-Central Javanese forms, in this thesis, it is primarily used when discussing this particular style.

Traditional: I follow Marc Benamou’s example (2010: 34-5) in reclaiming the much maligned word ‘traditional’, rightly ghettoised by ethnomusicologists past as implying a reified concept of culture which fails to recognise the inevitability of change. Instead, I employ it much as the borrowed Dutch word *tradisi* is used in Indonesia (ibid.), to imply continuity with recognisable historical styles, but without denying tradition’s living, changing present. The word is occasionally supplied with scare quotes to denote that it is being used in its discredited sense of a fixed, unchanging, monolithic ‘tradition’.

Tonality/atonality: I use the term ‘tonality’ in its broadest possible sense, to refer to any system in which there is an audibly perceptible relational hierarchy between notes: so not only Western tonal harmony, but any music, based in any scale (including *slendro* and *pelog*) in which strong tonal centres and relatively weak ones can be heard, giving a sense of movement from points of stability to instability or flux. ‘Atonality’ is used as an antonym to this definition, referring to music in which there is no hierarchy between notes, or at least not an easily-perceived one: works in which the listener gets no sense of the implications of one note upon the others.

Counterpoint/ polyphony: There is some debate over whether the term ‘counterpoint’ is applicable in the context of gamelan (I know of one undergraduate counterpoint essay from the 1980s that was arbitrarily failed because the student concerned chose to base it on *karawitan*). The objections seem to arise from the word’s association with very specific types of compositional techniques associated with Western art music; however, overall definitions of the term, such as this one in the *Oxford Dictionary of Music*, describe perfectly the nature of linear movement in *karawitan*:

The ability, unique to music, to say two things at once comprehensibly.... A single ‘part’ or ‘voice’ added to another is called ‘a counterpoint’ to that other, but the more common use of the word is that of the combination of simultaneous parts or voices, each of significance

in itself and the whole resulting in a coherent texture. In this sense

Counterpoint is the same as Polyphony. (Sachs and Dahlhaus)

Although the term ‘stratified polyphony’ is often preferred in reference to gamelan (for example, Hood 1971: 52, Brinner 1995: 193), my feeling is that polyphony is a term more suited to describing the resulting music, whereas counterpoint implies in my mind an active process of creation, the act of building of a structural whole from many converging and diverging strands. While Western counterpoint is built on a different premise – painstakingly crafted by an individual composer – I feel the term is applicable to the combination of independently-created but interdependent lines which arise from the structural processes of *karawitan*.

Aural/oral: I follow Nettl (2005: 291) in using the term ‘aural’ as a broad term which covers forms of transmission that might also be described as ‘oral,’ since whether the communication is verbal or is achieved by demonstrating on an instrument, sound, ears and active listening are involved.

Prescriptive/ open-ended scores: Charles Seeger defined prescriptive notation as documentation that provides a player with ‘blue-print of how a specific piece shall be made to sound’ (1958:184). My usage of the term is in keeping with this, but rather than Seeger’s dyad of prescriptive versus descriptive notation, I use it more in terms of degrees of prescriptiveness, to distinguish scores which are very specific about what a performer should do, as opposed to those which are open-ended, granting players greater freedom as to what actions they take from moment-to-moment.

Plurals: I follow Pickvance (2005) in not pluralising Javanese/Indonesian words: one gamelan, many gamelan.

Italics: Non-English words are italicised, with the exception of words such as ‘gamelan’ and ‘gong’ which have become common within the English language.

Slendro and pelog notes: Whilst most numbers from one to ten are spelt out (apart from chapter and figure numbers), I use digits to distinguish gamelan notes. Where these appear in the body of the text, *slendro* notes are preceded by an ‘s’ (s2) and *pelog* notes by a ‘p’

(p2). Shared notes are written sp6 if *slendro* and *pelog* notes are the same pitch or p4/s5 if they are the same pitch but have different names.

Surakarta/Solo: This Central Javanese city is usually referred to as Solo, unless the older name, Surakarta, is the part of an organisational name, such as Radio Republik Indonesia Surakarta.

ASKI, STSI, ISI: Indonesian state arts academies have gone through several re-namings over the years; for instance, the institution now known as ISI (*Institut Seni Indonesia*) Surakarta was formally known as ASKI (*Akademi Seni Karawitan Indonesia*), then as STSI (*Sekolah Tinggi Seni Indonesia*). In this thesis I either use the name by which the institution was known at the time being described or default to the most recent, ISI.

Chapter 1

Background and Theoretical Frameworks

Central Javanese gamelan – instruments and music

This following account gives a brief history of the development of gamelan into the forms that are commonly played today, and how it became part of the British cultural scene. The account focusses primarily on Central Javanese music, since the majority gamelan in Britain hail from this region and it therefore has greater overall influence upon composers working here. The pieces analysed in this thesis are all for (or have versions for) Javanese gamelan, though some involve musical concepts and techniques borrowed from Balinese or Sundanese gamelan styles. I offer brief accounts of such structures as they arise, but otherwise do not offer any historical or musicological account of non-Javanese genres.

It is common practice, followed in this thesis, to refer to Central Javanese music simply as Javanese, since forms from other part of the main island of Indonesia are referred to by region, such as Sundanese *degung* from West Java or Cirebonese gamelan in the North. Similarly, written or spoken references to ‘Balinese gamelan’ in English often mean the relatively recent (twentieth century) *gong kebyar* which plays lively, loud, rhythmically intricate music, as opposed to other ensembles such as the stately *gong gede*, associated with the courts and more similar in style to that of Central Java, or of more distantly related ensembles such as *angklung*.

There are many comprehensive published accounts of both the history of Javanese music and the theory and playing techniques involved, and the following account does not attempt to add to these; rather it represents a gathering of threads – musical, historical and individual – which are woven through the fabric of the thesis, emerging in the music, in the philosophies which drive creative processes, and in responses from performers and audiences.

.....

The modern Javanese gamelan has grown and developed over the last 1000 years or more from instruments which today are considered archaic, taking on its current form in the last few hundred years. The following description of the instruments and their music will focus on the way the ensemble generally appears now.

Music traditionally played upon a Central Javanese gamelan is known as *karawitan*, though this term includes non-gamelan forms from that same region, such as vocal genres.

The Javanese word *rawit* from which the term is derived means ‘small, refined, subtle or sophisticated’ and the word *karawitan* ‘can be used to describe or cover several different artistic genres which have a refined, small, or sophisticated nature’, including genres related to music such as dance and shadow puppetry (Supanggah 2011: 5). Martopangrawit offers a simpler definition of *karawitan* as ‘the art of producing sound using the *slendro* and *pelog* tuning system’ (1984: 9).

Like any other living music, *karawitan* is not a fixed tradition: as well as gradual change in tastes and styles across the years, more recent compositions may or may not be considered *karawitan* depending on the extent to which they are based upon older forms.

Instruments

A full gamelan consists of two complete sets of instruments, one in the five-note *slendro* tuning, one in the seven-note *pelog* scale. The instruments are further divided into ‘loud’ (*soran*) and ‘soft’ (*gadhon*) instruments; the latter are also referred to collectively as *panerusan*. The loud instruments are mainly tuned metallophones, either bars (*bilah* or *wilah*) laid over tuned resonators, or knobbed gongs (*pencon*) which may be either suspended from ropes or resting upon strings. In the common parlance of overseas English-speaking gamelan groups, these can be further divided into colotomic⁷ instruments (*gong ageng* [big gong], *kempul*, *kenong*, *kethuk*, *kempyang*) which mark structural points; *balungan* instruments (*slenthem*, *demung*, *saron*, *peking*⁸) which play relatively simple, mid-density melodic parts; elaborating instruments such as the *bonang* and *bonang panerus* (small *bonang*); and *kendhang* (double-headed drums).

The *gadhon* or *panerusan* instruments include a spiked, skin-bellied fiddle (*rebab*), tuned metallophones played with two soft beaters (*gender* and *gender panerus*), the xylophone-like *gambang*, a bamboo flute (*suling*) and a zither (*celempung* or *siter*); these play more complex lines, and are allowed a greater degree of freedom over fine details than the loud instruments. Vocalists are also involved, typically a chorus of male singers (*gerong*) who sing a fairly fixed line and a solo female singer (*pesindhen*) who elaborates in similar manner to the *panerusan*.

Other rarer instruments that might be found include the *gambang gangsa*: a bronze *gambang*, played undamped with two hard mallets, which is only used in a few ceremonial

⁷ A term coined by Jaap Kunst to describe ‘interpunctuating’ instruments (1973 [1934] 1: 247)

⁸ *Demung*, *saron* and *peking* are effectively different sizes of *saron* and are sometimes referred to as *saron demung*, *saron barang* and *saron panerus* respectively.

pieces in traditional repertoire (but which often crops up in contemporary music in Britain if the ensemble is lucky enough to have one) and *kemanak*: banana-shaped, hand held, hollow bronze gongs, also associated with ancient ceremonial music, whose use is recorded as far back as the twelfth century (Sumarsam 1995: 15).

The metallophones tend to be made of bronze with a high tin content which produces a pleasing sonority (Sorrell 1990: 47). Cheaper iron sets, which have a harsher sound, are also available.

Tuning systems and pitch structures

There are two tunings (*laras*) found in Javanese gamelan, neither of which conform to notes on the 12 tone chromatic scale with any more reliability than passing coincidence. The *slendro* scale has five notes which are usually roughly equidistant divisions of the octave; the seven notes of *pelog* are more unevenly spaced. The two tunings will usually match on at least one pitch, known as *tumbuk*, so for example a *tumbuk 6* gamelan will have the same pitch for *slendro* and *pelog 6*. Each gamelan has its own individual nuance of tuning, known as *embat*: the instruments are tuned to each other but not to any other gamelan, although the tuning may be modelled on or inspired by a particularly well-loved gamelan, such as one from the royal courts, or more recently, that used by Radio Republik Indonesia (RRI) Surakarta. The individual character of each gamelan is something of a feature in Javanese music: certain sets of instruments may be considered particularly beautiful for certain pieces or modes but regarded as something of a compromise for others (Perlman 1994: 536). *Karawitan* pieces work regardless of the wide variety of *embat*, being based less upon the exact relation of absolute pitches to one another as on melodic contour and interplay: indeed many, such as *Ladrang Wilujeng*, can be played in either *slendro* or *pelog*. However, the non-standardisation of pitches does raise issues for some contemporary composers, especially those schooled outside the *karawitan* tradition, who are more likely to compose with a particular set of intervallic relationships in mind (see Chapters 2 and 5).

Within each of the two tuning systems are a number of *pathet* which can loosely, but not precisely, be translated as ‘mode’, although Pickvance’s suggestion ‘character’ (2005: 37) has a certain appeal. *Pathet* implies a particular hierarchy of notes, with certain ones favoured at structural points and others avoided, and also relates to tessitura of the melodic line. Different *pathet* are said to imply different moods and times of the day, and in a *wayang* (theatrical performance) sections of the narrative ascend through the *pathet*, from

low tessitura to high. For performers, it determines the contour of elaborations used to realise a particular phrase (see discussion of *cengkok* below).

Bentuk, seleh, padhang-ulihan

Karawitan pieces tend to conform to a set form (*bentuk*) such as *ladrang*, *ketawang*, *lancaran*, *gangsaran* to give examples of shorter, regular forms. The term *gendhing* is used to refer generally to a piece of music within the *karawitan* idiom, and more specifically to describe longer, complex forms. *Bentuk* are cyclical – most sections can be repeated or two cycles alternated between at the whim of the players. The various *bentuk* can be characterised by their colotomic structure: the pattern of strokes on played on some of the louder, punctuating instruments such as the *gong ageng*, *kempul*, *kenong* and *kethuk*. Shortened versions of the onomatopoeic names of these instruments – respectively *gong*, *pul*, *nong*, *thuk*, *pyang* - are often used to outline structures orally. The first *kempul* after the stroke of the **gong ageng** is omitted, as the sound would interfere with, or be lost beneath, the resonance of the larger gong.

Figure 1.1: Colotomic strokes in three *bentuk*

Ladrang							
pyang	Thuk	pyang	---	pyang	thuk	pyang	nong
pyang	Thuk	pyang	Pul	pyang	thuk	pyang	nong
pyang	Thuk	pyang	Pul	pyang	thuk	pyang	nong
pyang	Thuk	pyang	Pul	pyang	thuk	pyang	gong
Ketawang							
pyang	Thuk	pyang	---	pyang	thuk	pyang	nong
pyang	Thuk	pyang	Pul	pyang	thuk	pyang	gong
Lancaran							
thuk	---	Thuk	Nong	thuk	pul	thuk	nong
thuk	pul	Thuk	Nong	thuk	pul	thuk	gong

(Pickvance 2005: 63)

Each box in the above table represents a beat of the mid-density line played by *saron*, *demung* and *slenthem* (often referred to as the *balungan* line or melody, although this term

can be misleading, as discussed below). These beats are usually gathered into groupings of four, known as *gatra*; unlike the Western concept of ‘bar’ with its strong first beat, the strong beat in a *gatra* is the last, known as the *seleh*.

This encapsulates a fundamental point about the melodic structure in *karawitan*: it is end-weighted, involving the convergence of melodic contours in different instruments upon *seleh* notes. Understanding *seleh*-based structures requires a fundamental shift in the conception of melody, movement and resolution for those trained in Western music, and it is something that many such musicians resist when first learning gamelan. Two of the composers interviewed in this thesis confessed to having rewritten notation for traditional pieces with the strong points at the start of *gatra*, and academic David Harnish who teaches Balinese gamelan at Bowling Green State University, Ohio, writes of capitulating to the realities of teaching short-term students in his decision to call the strong beat ‘beat one’ (2004: 132).

This point is worth lingering over because of its significance to gamelan composition, since one of the decisions a composer has to make is whether to follow the Javanese system of end-weighted melodies or not. This is not simply a matter of calling the heavy beat ‘one’ or ‘four’, but fundamental to the way players conceptualise and elaborate upon the phrase structure. Certainly, if the composer wishes the ensemble to use anything like Javanese structures to interpret something like a *balungan* line on more complex instruments such as *bonang* or *gender*, an end-weighted conception of melody is essential.

If the composer wishes to write a work conforming to a particular *bentuk*, an understanding of idiomatic phrase structure (*padhang ulihan*) is also necessary. Without wishing to go into too many details here,⁹ writing a *lancaran*, for instance, involves more than coming up with a 16-beat melody: the length and direction of phrases must be appropriate to the form, as Sri Hastanto notes in his analysis of *Lancaran Daniel* by Lou Harrison (1985:54).

Irama

The term *irama* ostensibly relates to the tempo at which the music is performed, though more specifically it expresses the ratio between the beat and the subdivisions played by the faster-moving parts (see Brinner 2001: 316). *Karawitan* employs discrete units of timescale in which the pulse (usually carried by *balungan* instruments) nearly halves in

⁹ For further details, see Sri Hastanto (1985: 49-54).

speed with each drop in *irama*, allowing space for more intricate elaborations by soft instruments. Instruments such as *peking*, *bonang*, *gender* and *gambang* double the number of subdivisions they play to each pulse of the *balungan* when the *irama* drops, but since the tempo is usually a little faster than half the previous one, these subdivisions will fall a little closer. This gives the sense of the music speeding up as it slows down, with the liveliest texture emerging in the slowest *irama rangkep*.

Figure 1.2: Subdivisions of the beat according to *irama*

<i>Irama name</i>	Shorthand notation	<i>Peking/ gender subdivisions of balungan beat</i>	<i>Gambang/ siter/ gender panerus subdivisions of balungan beat</i>
<i>lancer</i>	ir ½	1 (<i>gender</i> tends not to play)	-
<i>tanggung</i>	ir I	2	4
<i>dados</i>	ir II	4	8
<i>wilet/ wiled</i>	ir III	8	16
<i>rangkep</i>	ir IV	16	32

Irama changes are initiated by the drummer, usually by slowing down or speeding up, though individual players decide at which point to drop into the new *irama* by doubling or halving the rhythmic density of their line. Most pieces can be played in more than one *irama* (though the choice is limited by the *bentuk* – a *lancaran* would never be played in *irama rangkep*, for instance) and also a degree of freedom over when to change *irama*. Often, a change of *irama* will be a cue to move on to a different section of a piece, or to end it.

Melody

The concept of melody is worth taking some time over here, as it relates to some historical misconceptions about Javanese music prevalent throughout Europe and the US (and still lingering today) which have had a direct impact on gamelan composition outside Indonesia.

In the earlier half of the twentieth century, when comparative musicology was the dominant trope and musicologists were keen to demonstrate *karawitan*'s validity as one of

the world's great 'classical' artforms, there was a tendency to explain its structures in relation to Western classical concepts. Kunst, for instance, referred to the part played by *balungan* instruments as a 'cantus firmus' or 'nuclear theme' and that of the *panerusan* as 'countermelody' (1973 [1934], 1: 247).

As notation (once considered an essential marker of high art music) was developed for gamelan music in a generally collaborative process between Dutch and Indonesian musicologists (see Sumarsam 1995, Ch. 3) this mid-density *saron* part became the basis of notation, as it represented a usefully simple abstraction of more complex melodies surrounding it. However, the focus on this relatively simple part, often referred to as the *balungan* (skeleton) line, coloured subsequent Western analyses of Javanese music for years to come, giving it undue importance and leading several musicologists to treat it as the main melodic line. Although many who studied in Indonesia may have adopted a more nuanced view, this misconception was not widely corrected in the language of the academy – i.e. published in English or a European language – until Indonesian musicians began to enter the Western academic mainstream.

In 1975, Sumarsam responded to this general misconception by coining the term 'inner melody' to describe an abstract sense of the piece which exists somewhere between all the individual parts: 'the individual musicians' conception of melody ... that directs the melodic motion: ... a melody that is sung by musicians in their hearts'.¹⁰ Martopangrawit's description of the roles of various instruments in the gamelan ensemble defines the *rebab* (not the *saron*) as the instrument with 'authority over the melody', and also emphasises the importance of the *pesindhén*'s role (1984: 12). Parts played by other soft instruments are based upon the contours of these lines, rather than extrapolated from the *balungan*.

A further misconception over melody is the oft-quoted assertion that *karawitan* involves a kind of heterophony,¹¹ which fails to describe the complexity of *gendhing* and implies adherence to the flawed belief that everyone is playing an elaboration of the *saron* line. Mantle Hood favoured the term 'stratified polyphony' (1971: 52); another possible

¹⁰ This 'inner melody' is sometimes referred to as the *lagu* (melody) (Supanggah 2011: 131-2) or *balungan*, though confusingly both these terms have other meanings. In particular, the term *balungan* is more commonly used by non-Indonesians to refer to the notated *saron* part, and I have seen this cause confusion at an international conference (Gathering of the Gamelans, York 2012) when used by an Indonesian academic, A.L. Suwardi, in the sense of 'inner melody' in discussion with a composer who was using it to mean the *saron* line (which he also, to add confusion, conceived of as being the primary melody). In this thesis, the term *balungan* is usually used to refer to the *saron* part, unless clearly specified otherwise.

¹¹ This fallacy is widely reproduced, for example, on Wikipedia (http://en.wikipedia.org/wiki/Heterophony#cite_ref-2) and on the BBC's worryingly inaccurate GCSE notes website (http://www.bbc.co.uk/schools/gcsebitesize/music/world_music/gamelan_music3.shtml).

description that could be borrowed from Western musicological terms, is counterpoint. Unlike the precisely-constructed, through-composed counterpoints of European art music, in *karawitan* musicians each weave their own path – idiomatic to their instrument and idiosyncratic to themselves– from *seleh* to *seleh* (or other points of stability): an expansion of complexity converging on a point of temporary resolution before setting out on the next contour to the next point of agreement. As Supanggah (2011: 132) and Brinner (2001: 316) mention, the derivation of individual melodic pathways amongst *panerusan* players is, to a certain extent, interdependent with other musicians in the ensemble.

Misunderstandings over where or what the melody is has had an impact on gamelan composition outside Indonesia, with composers often approaching *karawitan*-inspired music by working out a simple *saron* melody. This is not ‘wrong’ – for simpler forms such as *lancaran* it may be ideal – but it is limiting, not least because of the small range (just over one octave) of a *saron*, but also because it potentially closes off greater levels of subtlety, melodic complexity and coherent phrasing available to a composer who, for instance, writes a song first, then extrapolates a simple abstraction the *saron* might play to support it.

Garapan

The concept of *garap* is fundamental to the way *karawitan* is created (both in its inception and its recreation in performance). It refers to the interpretation or realisation of a piece of music, according to specific instrumental or vocal idiom. From the perspective of a typical British ensemble (which is not necessarily the most accurate representation of Javanese music, but the most relevant in the context of this thesis) players will usually work from a notated or aurally learned *balungan* line and derive their parts – at least for the loud instruments – primarily from this. To give the simplest example, in *irama tanggung*, the *peking* would usually play double the speed of the *saron* by doubling each note:

Balungan line: 2 1 2 3 2 1 2 6
Peking garap: 22 11 22 33 22 11 22 66

In *irama dados*, the *peking* plays four notes to each note of the *balungan*, taking each pair of notes and alternating between them:

Balungan line: 2 1 2 3 2 1 2 6
Peking garap: 2211 2211 2233 2233 2211 2211 2266 2266

The *bonang* and *bonang panerus* (small *bonang*) play more complicated elaborations which deviate further from the *balungan* line at slower speeds: for example in *irama wilet* the two instruments can shift into a series of interlocking patterns called *imbal*, culminating in *sekarang*: independent melodic phrases which resolve on the *seleh*.

However, the limitations of the *balungan* line as a source for deriving *garap* become all the more clear when considering the soft instruments, whose elaborations are based more closely upon vocal and *rebab* contours, or more specifically on the ‘inner melody’, of which the staid *saron* line is only a basic approximation. *Pathet* becomes much more of an issue here: the idiomatic phrases played by *panerusan* differ according to *pathet*, which in some pieces such as *Gendhing Bondhet*, may shift from *gatra* to *gatra*, and in many cases is open to interpretation.

The way many *panerusan* instruments are taught in modern Indonesian conservatories is through a system of *cengkok*, characteristic modular patterns culminating on *seleh* that suit the inner melody and *pathet*, or elaborate a commonly-used melodic contour. *Cengkok* are not fixed entities: a student may learn several variations aurally from a teacher and observe those of others, eventually developing their own versions within idiomatic limits. This individual freedom to determine the fine detail of certain parts is not exactly ‘improvisation’ (a problematic term implying to most people a higher degree of freedom than is appropriate to *karawitan*).¹² For the purposes of this thesis, I generally refer to ‘extemporisation’, ‘extrapolation’, ‘realisation’ or simply use the Javanese term *garap*.

Overall, then, *karawitan* can be seen as a process in which musicians *garap* their individual parts according to a shared sense of the music, recreating it afresh in each performance, leading and responding to one another in a collaborative process. Sumarsam suggests that in fact many *gendhing* which are now seen as relatively fixed entities may have originally arisen from a collective instrumental elaboration of older vocal forms such as *macapat* or *tembang* sung poetry (1995: 164). As we will see in subsequent chapters, this collaborative way of working has implications for composers wishing to draw on *karawitan* forms, or those interested in collaborative creative processes more generally.

¹² Sutton explores the question of whether Javanese musicians ‘improvise’ in more detail, providing a useful survey of terms commonly used by other musicians and ethnomusicologists attempting to describe the nature of *garap*, which include embellishment, paraphrasing, elaboration, variation and flexibility (1998: 69).

Notation

The most commonly used form of notation is called *kepatihan*. It emerged as the most useful amongst many experiments in notating gamelan music, undertaken through collaborations between Indonesian and Dutch musicologists in the late nineteenth and early twentieth centuries, with the dual purposes of preservation and legitimisation of Javanese court music as high art (Sumarsam 1995: 106 – 113).

As discussed above, *kepatihan* notation tends to provide the mid-density *saron* part, and the *gerongan* (male vocal line) where necessary, though it can be used to notate other parts. However, many teachers prefer to teach aurally, which can be something of a challenge in situations where the majority of players are trained in Western art music and accustomed to reading rather than picking things up by ear; on the other hand it is incomparable for allowing beginners to ‘feel’ the music correctly, without confusion over matters such as whether the strong beat is written at the start or the end of a *gatra*. For an inspiring account of oral teaching in Britain see Mendonça’s description of Nikhil Dally’s children’s class in Stevenage (2002: 376 – 399).

Kepatihan notation assigns numbers to each note in the scale, with *slendro* numbered 1,2,3,5,6 (omitting 4) and *pelog* numbered 1 to 7. This reflects the fact that 4 is an ‘exchange tone’ in *pelog*; it can be used to replace a 3 or a 5, but does not have a counterpart in *slendro*. A dot above the note indicates a higher tessitura, a dot below a low one.¹³ Half-length notes are marked with a line over the top, two lines for quarter-length notes.

Figure 1.3: Four beats of *kepatihan* showing one full beat, two half-beats, four quarter-beats and eight eighth-beats

5 j56 k5j5k66 15151661515166

¹³ Where they appear mid-paragraph, I have notated low tessitura notes underlined, e.g. 6, because the only available *kepatihan* computer font disrupts the spacing of lines.

From Java to Britain – a history of hybridity

As with the previous section, this thesis does not attempt to give a detailed account of the development of *karawitan* from pre-history to the present day. In keeping with the subject in hand, it offers instead a history of hybridity, of the influences from elsewhere on music in Java and the influence *karawitan* has had outside Indonesia.

All musical genres are hybrids if examined closely enough: none exist in a vacuum. However, hybridity is a particular feature of Javanese music, theatre and dance, not least due to its geographical location on important seaborne trade routes. The earliest records of music in Java date from the period of Hindu influence from India from the fifth to tenth centuries CE (Brinner 2001: 311), which left a legacy that remains today in the primary religion of Bali, and in popular Hindu epics, the Ramayana and the Mahabharata. These still form the subject matter for most dance and puppet dramas today, despite the widespread Islamisation of Java, which began in the fifteenth century and led to the development or adaptation of novel forms such as *dhikir* (a type of ritual Sufi music), *terbangan* music and the *bedhaya* dance.

The first contact with Europeans – sixteenth century Portuguese traders – left a legacy of hybridised European folk music known as *kroncong*, played on violin, cello, guitar, flute and a pair of ukulele-like instruments, which is still popular today, and was considered a serious contender for a ‘national’ music when Independence brought about the political impetus to engage in nation-building activities (Sumarsam 2004: 70). Eighteenth century interactions with Dutch colonial powers saw the introduction of martial brass bands, a symbol of European military power, to the royal courts. In the Jogjakarta royal court, this music became integrated into hybrid forms with gamelan, such as *gendhing mares*, (*mares* meaning ‘march’, from the Dutch *mars*), which combined military drums, flutes, brass and also firearms with *alus* (refined) court gamelan forms, for example, accompanying the entrance and exit of the refined *serimpi* and *bedhaya* dancers.¹⁴ Sumarsam suggests that:

The reaction of Javanese courtiers to the penetration of colonial culture was to re-establish a well-ordered cultural landscape by ritually situating the Dutch not as intruders, but as respected guests in the country’s domicile. *Gendhing mares* and other Javanese-European cultural hybrids were the products of this domestication. The fact that *gendhing mares* was created to accompany one of the most important royal cultural

¹⁴ See Sumarsam 2013: 15-25

practices, the *serimpi* dance, proves its powerful symbolic significance.

(2013: 23)

Whilst Javanese-European hybrid musics such as this were relatively rare and limited in scope, colonial influence in the nineteenth and twentieth centuries led to some pervasive and long-lasting influences, not so much on the repertory itself as upon the way it is taught and performed, such as the adoption of notation, the establishment of conservatories and performance of music in a concert-like setting.

As mentioned earlier, notation was seen by Dutch scholars as a tool to legitimise court music as a classical form and to preserve works that were seen to be under threat from either fading to obscurity or (more controversially to contemporary minds) becoming diluted or perverted by the promulgation of multiple versions, as this writer complains:

That is why [songs are] always incorrectly sung, since they teach aurally.

And [each teacher] has his own melody. If this teaching method continues,

the publication of *Sekar Kawi*¹⁵ songs will be useless, and there will be many different melodies for each song; the correct melody will not be

known. (*Layang Wuwulang Nut* [1874], quoted in Sumarsam 2004: 75)

Whilst this provides more insight into how art music was defined in the mind of a nineteenth century scholar than anything about how Javanese music works, it does serve as a reminder that notating something that was originally aurally taught changes it. In this case, the authority of the written score represented to this unnamed scholar a reified, 'correct' version, and although such ideas were soon revised, the fact remains that the development of notation has resulted in a degree of standardisation within *karawitan*, despite the efforts of contemporary teachers to undermine this.¹⁶ Similarly, as discussed above, the adoption of the *saron* line as the basis for *kepatihan* caused subsequent theories of melody in *karawitan* to develop in a way that did not exactly reflect how musicians thought of it.

The effects of notation and musical theory (both positive and negative) should not, however, simply be thought of as a legacy of patriarchal colonial attitudes: this overstates the importance of Dutch musicologists and undermines that of Indonesian ones. The drive to legitimise Javanese music as high art was conducted very much in partnership between Dutch scholar-officials and the royal courts, and the wide-scale adoption of notation and

¹⁵ A 1970 book of Javanese songs transcribed into staff notation.

¹⁶ See Sumarsam 2004: 76-79 for an account of the difference between learning *gender* aurally in the village and through notation at KOKAR music academy in 1961, and subsequently through the system of *cengkok* devised by Martopangrawit after 1965.

European academy-style music education was driven forward by Indonesian nationalists in post-independence nation-building exercises.

The twentieth century saw the stirrings of nationalist movements across the Indonesian archipelago, culminating in the Declaration of Independence in 1945, finally acknowledged by the Dutch in 1949 after considerable bloodshed. The new government of Indonesia faced the challenge of creating a cultural narrative for a single united nation state out of what had previously been an archipelago of independent islands divided into royal fiefdoms and administered by Europeans. The Javanese were the largest and politically dominant population amongst these, so a particular problem faced by the independent government was how to create a sense of national identity without being accused of ‘Javanese chauvinism’ (Quinn 1978: 36) by promoting the well-established elite court forms of music, dance and theatre over other regional or village styles.

A policy of unity through pluralism was adopted, as laid out in the 1945 Constitution, relating both to the different regions of the country and the dialogue between tradition and modernity (Sumarsam 1995: 117) which can also be seen as a kind of hybridity, albeit epochal rather than geographical. This policy was institutionalised through the creation of state-sponsored schools for the arts in centres of regional culture on Java, Bali, Sumatra and beyond,¹⁷ where regional forms were to be taught alongside other styles from across the archipelago. Some argued that new composition was also essential to making these traditional forms relevant to modernity, amongst them S. D. Humardani (who went on to found ASKI – now ISI – Solo), who felt strongly that ‘the development of our arts will only prosper if it is open to the riches of fertile and productive ideas from the cultural resources of ... modern society’ (1981: 243; see also Benamou 2010:11-2 and Roth 1986: 60-1).

Whilst early post-colonial compositions, such as those by Ki Nartosabhdho and K.R.T. Wasitodiningrat, involved a contemporary take upon *karawitan* structures, exploring developments such as three-beat *gatra* instead of the usual four-beat ones, or creating lighter forms of music, the late 1970s saw the emergence of a more experimental, avant-garde approach, especially at ASKI Solo, where Humardani encouraged it as a way to break away from the *tradisi* into entirely new ways of making – or even conceiving – of music (Roth, interview transcript 2011: 14).

¹⁷ The website for the *darmasiswa* scholarship offered by the Indonesian government to foreign nationals wishing to study Indonesian arts and crafts lists thirty-eight participating institutions across the archipelago.

Although these avant-garde experiments may have been somewhat niche, with interest within Indonesia limited mainly to conservatory-based musicians and the Jakartan cosmopolitan elite (I Wayan Sadra et al. 1991: 23), they proved a significant influence upon non-Indonesians such as Alec Roth, who studied in Java and subsequently set up gamelan groups in their home countries, providing confirmation that it is acceptable to write for gamelan, and that respect for the instruments does not mean never using them in unconventional ways. Neil Sorrell, another influential instigator of the British gamelan scene, often cites the wildness of Indonesian composition as offering non-Indonesian composers a kind of *carte-blanche* to get creative (p.c. *passim*).

International gamelan ‘scenes’ as they appear today – populated by local musicians, many of whom have no ethnic or historical link to Indonesia – were instigated in the Netherlands and the US decades before Britain even had a usable set of instruments; however, gamelan’s initial introduction to the West can be traced back to Thomas Stamford Raffles, who brought two sets back to England in 1816, after his brief stint as Governor of the East Indies during the British Interregnum of 1811-1816.¹⁸

The very first of the world’s Great Exhibitions, held in 1851 at the Crystal Palace in London also boasted a gamelan, or at least, gamelan-related instruments from various parts of the archipelago, thirty-eight years before Debussy famously encountered the ensemble at the Paris Great Exhibition of 1889. Mendonça’s survey of the catalogues from the Exhibition do not indicate the presence of any performers; it seems that various instruments were on display as examples of myriad exotic holdings from the East India Company (2004: 80-88). 1882 saw the first performance in Britain by a visiting Indonesian troupe, at the Royal Aquarium in London, followed in 1898 by a visit from a more prestigious group from the Mankunegaran court in Surakarta.¹⁹ By the 1920s there were a number of performances happening, often given by Indonesian nationals living in the Netherlands (*ibid.*).

The precedent for non-Indonesians performing – and building – gamelan was set in the Netherlands in 1941. The main driving force came from a remarkable teenager called Bernard Ijzerdraat, whose father, a Dutch resistance fighter, was executed by the Nazis when Ijzerdraat was fifteen. Not long after, he encountered a performance of Javanese music and dance at the Institute of the Indies in Amsterdam and persuaded his friends to

¹⁸ See Mendonca (2003: 74-9) and Sumarsam (2013: 78).

¹⁹ Detailed accounts and readings of the fetishized colonialist presentation and more complex reception of Javanese and Balinese culture in European world fairs are given in Cohen (2010), Mendonca (2002) and Sumarsam (2013).

form a group to imitate the music using their own instruments – accordion, guitar and improvised percussion instruments. After an initial successful performance, the group resolved to study Javanese repertoire more thoroughly and build their own gamelan, with the help and guidance of Javanologist Jaap Kunst²⁰ who was, at that time, director of the Institute of the Indies. The creation of their ensemble, Babar Layar, was achieved on pocket money, donations, funds from performances and, in some cases, scrap metal destined for ammunitions filched from under the noses of the Nazis, such as an antique bronze cannon snaffled away for the project by Kunst himself (Mendonça 2011: 58 – 64).

The mainstream adoption of gamelan as a must-have accoutrement for any music department intending to teach ethnomusicology is generally laid at the door of another of Kunst's students, Mantle Hood, who famously advocated 'bi-musicality', suggesting that it is not enough to study the music of others from a theoretical viewpoint, but that the student must immerse him or herself through participation, in order to understand the processes involved (Hood: 1960). It is worth noting that Hood would have observed Babar Layar whilst in the Netherlands in 1952-54 (Mendonça, 2001: 506), although he never explicitly acknowledged the group as influential upon his educational theories (Mendonça 2011: 74).

In 1954, Hood established the first ethnomusicology programme at UCLA (University of California, Los Angeles), and in 1958 returned from fieldwork in Java with a gamelan and introduced the concept of the non-Western music 'study group' to the American academy. At that time, the focus of study groups was less on attaining performance-level skills as upon 'understanding the music of another culture, that is, accessing the musical other' (Trimillos, 2004: 24). Hood's student, Robert Brown, later founded ethnomusicology programmes at Wesleyan University in the 1960s, Cal Arts in the 1970s and San Diego University in the 1980s (Hadley 1993: 14), all of which included performance as a key aspect of study.

It is worth pausing here to consider the historical conditions propelling the creation of this contemporary international gamelan scene. It seems likely that even if Hood had not advocated bi-musicality, somebody else would have: it was the right idea for the age.²¹ The era of European colonialism was, by and large, over. There was an increasingly widespread

²⁰ Kunst is considered one of the founders of modern ethnomusicology – indeed, he coined the term. Kunst travelled to Java in 1919 as a violinist in a string trio, and remained for fifteen years, studying *karawitan* whilst working an official for the Dutch colonial government (Sumarsam 2013: 108).

²¹ Indeed, Hood was not the only person to be engaging with such questions: over at the University of Hawaii, Barabara B. Smith was reaching similar conclusions in finding ways to incorporate multicultural approaches to teaching music that reflected the multi-ethnic makeup of the student (and local) population (Trimillos 2004: 25).

recognition of the cultural as well as political validity of former colonies in Asia, even affinity with them (as presaged by the engagement of teenagers in Nazi-occupied Netherlands with the music of a country which had for so long been occupied by the Dutch [Mendonça 2011: 68]). The paradigm of the civilised Westerner versus the simple, primitive, undeveloped natives which had been cynically exploited in Europe to maintain justification for dominance right through to the early twentieth century now seemed an embarrassment. As McAllester puts it, ethnomusicologists of this period were ‘keen to assuage three centuries of colonialism’ (1979: 180) and informants were less seen as objects of research as peers and teachers.

In America, the late 1950s and 60s were a time of massive social change. The war in Vietnam, the Civil Rights movement, and liberal, anti-authoritarian philosophies all formed flashpoints at which the old and new paradigms staged battles, and gamelan seems to have taken on a particular appeal in the radicalised atmosphere sweeping through the country. As well as a new willingness to engage directly with the music of ‘subalterns’ as a counterfoil to racism, other politicised readings (often dressed as spiritual or philosophical ones) were associated with gamelan music. In practice these often revealed less about music or Javanese/Balinese culture than about the imagined landscape of spirituality and egalitarianism with which ‘Eastern’ cultures were increasingly associated.²² For example, the concept of gamelan as ‘leaderless orchestra’ proved an appealing trope: the absence of the patriarchal conductor-figure that dominated Western orchestras made gamelan appear very much in keeping with the anarchic, or at least left-wing, philosophies of the time (p.c. William Brooks²³ 2011; see also McGraw 2013), despite the fact that, as described by Martopangrawit, there is in fact very much a hierarchy of ‘responsible’ and ‘supporting’ roles within the gamelan (1984: 12-13), not to mention occasional ‘demonstrations of power ... and displays of individual virtuosity’ even in the most *alus* (refined) Central Javanese ensembles (Sumarsam 2013: 120).²⁴

Whilst these kinds of political philosophies may have influenced the some Liberal Arts students who were taking up gamelan, there were other more pragmatic pedagogical reasons driving its adoption in universities. Gamelan is extremely well-suited to the demands of the academy, which needs to cater for a series of short-term students with no

²² For example, see Sumarsam (2013: 115-138) for a sympathetic critical analysis of several analyses of gamelan music as a metaphor for socio-cosmological cultural formations.

²³ A former Wesleyan University gamelan study group member (graduated 1965).

²⁴ On the other hand, Sumarsam also points out the more rigid, hierarchical musicological descriptions of interaction in gamelan belie the reality of fluidity and negotiation between roles (ibid. 123-6).

background in the music and only a few hours a week available for study. The multi-layered nature of the ensemble, ranging from simple parts that can be learned in a single rehearsal to complex techniques requiring years of study, make it ideal for academia. The presence of timbres, tuning systems and musical grammars so different from those in Western music, not to mention the focus upon aural learning and collaborative realisation of pieces, provide ideal tools for introducing large-scale classical forms based on profoundly different structural rules. More cynically, the exotic visual appeal of the instruments makes the gamelan a high-profile flagship for any number of messages – plurality, multiculturalism, open-mindedness, originality – that the host institution may wish to project.

Whilst practical studies in Javanese classical gamelan were burgeoning in universities, another strand of engagement was emerging in the US: the phenomenon of the American home-built gamelan. Dennis Murphy began experimenting with building Javanese-inspired gamelan instruments in the 1960s, as described in his Wesleyan PhD thesis ‘The Autochthonous American Gamelan’ (1974: 75, 81-88), in which he declared the arrival of an indigenous, independent gamelan tradition in the U.S. The music he wrote for his homemade iron gamelan was influenced by Javanese, American and also his invented ‘Thoomist’ culture: ‘an elaborate joke, a religion, a lifestyle, a way of approaching beauty, a systematized superstition, a framework for various artistic activities, and an intellectual exercise’ (Murphy 1974: iii). Murphy used Thoomist culture as an intermediary, imaginary location in which to contextualise his American/Javanese gamelan works, a place where the music could claim to be truly indigenous, respectful of both but beholden to neither tradition, neatly sidestepping any debate over whether an American should be writing for a Javanese ensemble.²⁵

Meanwhile, composer Lou Harrison and his partner Bill Colvig built their first tuned percussion ensemble, Old Granddad, in 1971, tuned to a diatonic just intonation scale, although it was only dubbed ‘an American gamelan’ as an afterthought (Miller and Lieberman, 1999: 148). They followed this up in 1979 with Si Betty, modelled more closely on Javanese ensembles, but utilising Harrison’s versions of *slendro* and *pelog*

²⁵ That such a debate was relevant is demonstrated by Murphy’s robust defense: ‘Since Javanese music is very much alive and well, it is slowly changing. New pieces are being composed and new performance practices are developing. I am very much interested in Javanese music as it has been and as it is becoming... This does not, however, put any sort of damper on the further development of Thoomese²⁵ gamelan composition and performance-practice, and the shadowplay which goes with it’ (Murphy, 1975: vi).

scales rationalised according to the theory of just intonation (see Chapter 5 and Case Study D). Harrison first made the break from writing for homebuilt American gamelan to Javanese ones in 1976²⁶ in response to a suggestion by his colleague at San Jose State University, K.R.T. Wasitodiningrat (familiarily known as Pak Cokro). Until then ‘This had never occurred to Harrison. He had thought that gamelan were “used for academic purposes and that a composer didn’t have a chance to play with one”’ (Hadley, quoting Harrison 1993: 31). This sense of having been granted permission was important to Harrison, whose works are amongst the best-known internationally and helped establish the acceptability of non-Indonesians composing for gamelan (Miller and Lieberman, 1999: 163).

The UK’s contemporary gamelan scene began to stir when Professor Eric Taylor of Durham University organised a series of Oriental Music Festivals (1976, 1979, 1981). The first of these featured live performances of Chinese, Japanese and Persian music, but given the logistical difficulties of shipping a gamelan to Britain, Indonesia was represented only through a lecture by E.L. Heins, another former student of Jaap Kunst’s (Taylor 1976: 652). Heins took full advantage of the opportunity to pointedly remark upon the importance of hearing the music played live, to an audience that included the Indonesian Ambassador. The diplomat was so impressed by British enthusiasm for the gamelan that he acquired a set to be housed at the Indonesian Embassy in London (Sorrell 1985: 3).

This arrived in 1977, and was used for the second Oriental Music Festival, for which Taylor engaged an ensemble from the Joganese *kraton* (royal palace). Unfortunately, when the musicians heard the Embassy’s gamelan was of Solonese make, they pulled out of the concert at short notice. A chance encounter between Taylor and S.D. Humardani, the head of ASKI Solo in a hotel in Java saved the day: Humardani offered to bring a group of teachers and students from the conservatory to the UK to participate in the festival and subsequent tour. This was to have a profound effect on one of Taylor’s students, Alec Roth, who helped facilitate the group’s UK tour, when Humardani, noticing he had been smitten by the music, invited Roth to study for free at ASKI Solo (Roth, interview transcript 2012).

The acquisition of a gamelan to be permanently housed in Britain was no small cause of celebration to Neil Sorrell, a former student at Wesleyan University (1969-71) where he first encountered gamelan. Engaged to the faculty at the University of York from 1971, Sorrell spent many years agitating for a gamelan, even running a *wayang kulit* practical

²⁶ According to the list of works in Miller and Lieberman 1999: 174.

project in 1975 without any gamelan instruments. The arrival of the embassy's set enabled him to take students on his Music of Java and Bali project²⁷ to London for some hands-on experience (interview transcript 2011: 2-3).

In 1979, two important things happened. The first was that Dartington College acquired their own set of Balinese instruments. The second was that Sorrell was asked to run a workshop by a former student, Jan Steele, who was teaching a World Music course at the University of Birmingham (Mendonca 2002: 101-2). Steele also invited several fellow-members of the Scratch Orchestra, and, according to Sorrell:

Being Jan, he was on the phone the next day, or straight after the thing, and he said 'I really want to carry this on. They're quite enthusiastic about this. I think we should ... get a regular group and come and rehearse here.' (Interview transcript 2012: 12)

More people became interested, including Alec Roth, established composers Michael Parsons and Dave Smith, and former York student Mark Lockett (who wrote the script for Sorrell's gamelan-less *wayang* in 1975) eventually leading to the founding of the English Gamelan Orchestra (EGO), the UK's first performing gamelan group which was ran from 1980-83.

Unlike Harrison's invitation from Pak Cokro in the US, composition for Javanese gamelan in the UK was born of sheer desperation. When an enthusiastic Jan Steele announced EGO's inaugural concert would be on 1st June 1980, two months after the group was founded, Sorrell realised that as complete beginners they would struggle to create a viable programme of gamelan music:

I remember sitting at home thinking we haven't got enough stuff for this concert, I'll have to think of something, have to come up with something, you know, I was desperate, I was thinking what is there? And then I thought I'll have to write something.... compose it or arrange it or whatever. And if that hadn't been the case, I'd have never have probably thought of it. (Interview transcript 2011: 13)

Alongside some basic *karawitan* pieces and a more complex *gendhing bonang*, the concert programme included (allegedly) gamelan-inspired music such as Debussy's *Pagodes* and a composition/arrangement by Sorrell called *Gendhing Campur* which he describes as a 'very basic Young Person's Guide to the Gamelan' (ibid.). The performance of Western

²⁷ Rather than follow an undergraduate syllabus, York's music department operates a selection of themed projects each term

compositions for gamelan was later included amongst the constitutional aims and objectives of EGO (Mendonça 2002: 105), and set a precedent for much of the gamelan activity which was to come.

The inclusion of new composition for gamelan right from the outset is one of the most distinctive characteristics of the British gamelan scene. Of course, it cannot be entirely attributed to desperation to fill a concert programme: the absence of a sizeable Indonesian expatriate/immigrant community in the UK, the lack of funds in UK universities (relative to the US) for bringing over visiting teachers, and the scene's relatively late start in the 1980s – when concepts of hybridity and interculturalism had largely superseded those of authenticity and 'tradition' – also played a role, as did influence of Indonesian musicians such as Humardani who actively encouraged new composition for gamelan. Such matters are explored further in Chapter 6.

Another significant influence upon the development of the British gamelan scene has been support from the Indonesian government, through donations of instruments (Oxford, Cambridge, School of Oriental and African Studies²⁸ and Southbank gamelans were all gifts); support for Artists in Residence; provision of funding for conferences, festivals and major performances; and through the *darmasiswa* scholarship programme which has enabled dozens of British enthusiasts to study Indonesian performance arts abroad. Sometimes engagement has been even more direct: the Ambassador to Britain from 1985-89, Suhartoyo, was himself an amateur *dhalang* (puppeteer) and performed *wayang kulit* with the University of York's Gamelan Sekar Petak in 1987.²⁹

Gamelan in Britain today is a surprisingly well-established part of the local cultural scene. There over a hundred Central Javanese, Balinese and Sundanese gamelans in Britain: a survey in 2002 revealed 80 sets (56 Central Javanese, 18 Balinese, five West Javanese and one from Banyumas) (Mendonça 2002: 152) as well as several homebuilt sets, such as Cragg Vale Gamelan and Metalwork. Since then, and at least two more Javanese sets have been purchased, for the Royal Northern College of Music and the Sage Gateshead, whilst an organisation called Drums for Schools has provided 87 sets of iron Balinese-style instruments to educational institutions around the country (email from Andy Gleadhill, 6 February 2014), bringing the number up to at least 171. These are used by professional, community, university and school groups that meet regularly to play, as well

²⁸ SOAS inherited the Indonesian Embassy's instruments.

²⁹ For details on all of these contributions, and the political motivations entangled with them, see Mendonça 2002: 171-9.

as in community music projects in prisons, care homes, and with various special educational needs groups. Whilst some groups focus purely on Indonesian classical music, several, like York, encourage new composition as well, and group composition or improvisation is often the focus of activities in community projects.

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Methodology – taxonomies and spectra

Writing a musicological study of British gamelan compositions as a body of music poses a unique challenge, as it does not describe a single coherent body of work or encapsulate a unified style: there are as many (or more!) approaches as there are composers. This difficulty is, of course, not unique to gamelan composition: the explosion of styles and genres in Western art music from the early twentieth century onwards has seen successive fragmentations of musical style until it seems that a composer wishing to set out on writing a piece of music must first reinvent the whole system from scratch.

It would be insane to set out writing a doctoral thesis on a topic as broad as ‘the contemporary music scene in Britain’ yet, in a sense, that is what is faced in giving an account of British gamelan composition, which is created by academically trained composers, jazz improvisers, pop-song writers, amateur community-group members, sonic artists and school children. In order to gain some kind of insight into the broader themes that do underpin new music for gamelan, it seems that some kind of taxonomy that can relate these works to one another and identify common tendencies in approach and aesthetics, is needed.

There are a number of ways in which composing for gamelan can be a very different kind of activity from composing for, say, a Western orchestral or chamber ensemble. Many of these differences arise from the context of the instruments themselves, and the knowledge of them held by performers and most composers. Almost all groups which perform new music will also be playing *karawitan*, so the musicians will usually have some degree of knowledge about how Javanese music is structured in terms of tuning, rhythm, tempo, orchestration and so on; therefore such knowledge may be manifest in compositions by members of the group. So, for example, whilst the concept of *irama* change might never occur to an experienced orchestral composer who has had no contact with Indonesian music, a fledgling gamelan player writing their first composition might use it confidently and naturally, relying on the knowledge of the musicians in their group to make it happen.

Then there is nature of ensemble when performing *karawitan*: no conductor, no visible leader (although there are certainly those who give audible cues), skeleton notation which necessitates players bringing varying degrees of personal knowledge to the performance. So, for example, even a composer choosing to avoid any musical references to *karawitan* structures might still find themselves writing large ensemble pieces designed to be performable without conductor, or consider leaving space in the score for performers to derive their own parts from a core idea, or leave structural decisions, such as how many times a section is repeated, up to the musicians. For some, the whole set of political ideas surrounding the ‘leaderless ensemble’ trope discussed above might themselves be a starting point for a work, such as in Clive Wilkinson’s text piece *Spindrift*.

There is also the relationship between the composer and ensemble to consider. In most contemporary Western art music performances, musicians expect to interact with the composer little if at all. If the work is a première, the composer may spend one or two rehearsals working with the musicians on interpretative aspects of the piece, but in essence it would be expected that the composer will produce a full score and parts for the first rehearsal and make no more than minor modifications before the performance and that the performers should, to the best of their ability, reproduce what is in the score. Whilst this fully scored “sit-down-and-play-your-part” approach to realising a composition does occur in gamelan, especially when composers are not members of the group, or where the composer has a very strong background in writing Western art music, a fair proportion of works arise from a more collaborative, rehearsal-based approach that is more familiar to rock bands or jazz ensembles. It is also an approach commonly found amongst Indonesian composers where pieces are worked out and committed to memory during rehearsals, with each musician responsible for deriving his or her own part: a situation Sorrell describes as ‘more process than product’ (2007: 39). For example, a composer might bring a compositional idea in one week to try out with their group, go away and think about it, come back with a reworked version the next week and in this way gradually build their way up to a full work over a period of months. This luxury has no place in the world of professional classical music making, where every minute of rehearsal time must be paid for, and where musicians do not expect to learn a piece at the composer’s pace of writing it. So the amateur nature of the majority British gamelan ensembles is also a significant influence on compositional style: in a context where rehearsal time tends to be seen as a pleasurable hobby rather than a means to a financial end there is plenty of time to develop a work during rehearsals (though patchy attendance can lead to problems with this

approach). Even for groups which perform semi-professionally (such as AlphaBeta) rehearsal time is usually unpaid and, much like being in a rock band, participants expect to meet regularly to rehearse and work on new material.

In essence, whilst a huge range of approaches are found in writing for gamelan, there are a number of common recurring threads that relate specifically to the differences between creative processes in *karawitan* and Western art music. As I began to explore recordings and scores and interview composers, I became aware of a number of significant distinctions which have since proven useful in understanding this very diverse body of works and the motivations for composers in adopting specific approaches. The distinctions reflect compositional techniques, aesthetic choices, methods of transmission and degrees of collaboration, which highlight some of the defining questions composers face specifically when writing for gamelan. For example, was the work collaborative, with a high degree of input from performers, or through-composed down to the last note? Did it draw on traditional gamelan structures or avoid them completely?

Of course, most pieces do not easily fit into neat categories, such as collaborative or through-composed. Even a through-composed piece with an exhaustively detailed score may involve a significant element of interpretation and performance-related decision making by musicians, whilst a piece with a high degree of collaborative input will almost always be influenced by aesthetic decisions made by the composer who, if present in rehearsals, usually has the last say. Rather than a taxonomy designed to sort pieces into discrete boxes, compositional responses tend to exist somewhere along a spectrum, a continuum between two opposing approaches.³⁰

In the more familiar taxonomy used to identify flora and fauna, a series of questions specified in a key are applied to the specimen under consideration in order to classify it. Although in this case I am not attempting to ‘classify’ compositions so much as arrange them along in relation to one another, posing a series of questions is the obvious starting place. The most useful and revealing questions which have emerged are:

- To what extent did the composer draw on Javanese (or other Indonesian) forms?
- Was the piece the output of a single composer working alone or was it collaboratively realised?
- How much of the piece was devised before the rehearsal process began/ to what extent was it a rehearsal-based compositional process?

³⁰ Having arrived at this framework independently, I was interested and reassured to see Hadley (1993) take a similar approach.

- To what extent was the work notated? What was the nature of the notation?
- To what extent were elements of the work improvised during performance?
- What was the approach to tonality and pitch?
- Was the composer an experienced gamelan player or someone who had never played?
- Was the composer an active member of the performing group/ were they present during the rehearsal process?

Although initially intended as a basis for describing the body of British gamelan music in writing, these taxonomical spectra provided a very helpful a starting point when discussing works with composers, offering a structure through which to quiz people about their compositional approach, decisions they made and how what is heard in recordings relates to what is written down in the score. They also provided insight into rehearsal processes and the relationship between composer and performers, which in many of the works explored turned out to be an amorphous and dynamic boundary.

Chapter 2

Karawitan and other idioms

Code switching and code mixing

One of the most obvious ways of exploring compositions for gamelan is by looking at the extent to which the composer drew on Javanese (or other gamelan-related) structural ideas, avoided them, or mixed them with influences from other musics. This is a particularly interesting area for research in terms of what it reveals about how composers negotiate a path between multiple musical worlds, how they choose to exploit their knowledge of different musical structures and systems to create the desired effect, and perhaps even what extra-musical meaning composers and audiences attach to the cultural markers employed.

In exploring these factors, it is helpful to follow Slobin's lead (1993: 85-6) in adopting the terminology of **codes** and **code-switching** from linguistics, to which I add **code-mixing** as a particularly pertinent term for the pieces under discussion here.

Codes refer to elements of coherent linguistic systems, whether on the level of different languages, dialects, grammatical formations or other consistent sets of rules for communicating. The term code-switching is often used with regards to bilingualism, but Labov defines it more broadly as moving 'from one consistent set of co-occurring rules to another' (1972:188). It is usually used to describe alternating between two languages in discrete blocks of speech - a clause, a sentence, or in completely different social environments. Code-mixing, on the other hand, implies hybridisation, where two languages are mixed fluidly within a single sentence (Kachru and Romaine, 1994: 228). The deployment of code-mixing requires a high degree of bilingual competence and fluency by the speaker (and, by extension, those with whom he/she is communicating) as it involves a greater degree of linguistic integration than the mere 'borrowing' of loan words from a second language (Sridhar and Sridhar, 1990: 407).

For the purposes of his study into code-mixing, Muysken uses the term to describe 'all cases where lexical items and grammatical features from two languages appear in one sentence', distinguishing between the various levels at which code-mixing might take place:

- **Insertion** of material (lexical items or entire constituents) from one language into a structure from the other language.
- **Alternation** between structures from languages.

- **Congruent lexicalization** of material from different lexical inventories into a shared grammatical structure. (2000: 3)

These processes all have parallels in compositional practices described in this thesis, but to avoid overtly linguistics-based terminology that might prove distracting in discussions of music, and redefine it slightly in terms more relevant to the material under discussion, rather than ‘congruent lexicalization’ I tend to refer to the integration, synthesis or fusion of material from different musical styles into a shared structure.

In linguistics, code-switching and code-mixing are often used to explore questions of identity, group association and self-projection, as switching between different modes of communication can act as a signifier of which group the speaker wishes to be associated with at a given moment. Code-switching – alternation between different modes of speech – might, for instance, be invoked to analyse the meaning behind why members of a bilingual community such as Quebec choose to speak in either French or English depending on the context (Heller 1988: 10). To demonstrate the application of the term in the context of cultural analysis, Slobin offers the example of code-switching used satirically to illustrate different perspectives on America, describing Jewish-American comic duo The Barton Brothers alternating verses from the patriotic poem *The Midnight Ride of Paul Revere* with a parody Yiddish-English version about the midnight ride of Paul Rabinowitz (1993: 87). Cottrell uses the term to analyse the way in which freelance musicians in London might be conversant in multiple styles from high classical/ romantic orchestral music to early music ensembles to West End musicals to jazz, which require not only different performance skills in terms of tone production and ensemble, but the ability to adapt to a wide range of social conventions such as rehearsal etiquette, behaviour on stage and dress (2007: 94). The music described in this thesis falls more commonly into the category of code-mixing, since the majority of works involve elements of Javanese music (if only the instruments themselves) integrated with elements not found in traditional *karawitan*. The implications of this in terms of identity – that creators are usually not making a point of switching between two musical identities but presenting a single unified work arising from plural influences – are explored in more depth in Chapter 6.

In applying socio-linguistic terminology to music, Slobin points out that it is necessary to first define what the coherent underlying systems being analysed are. He suggests ‘style’ as a good starting point, but points out that there is capacity for greater refinement and detail to be added:

‘Style’ is an admittedly slippery concept but is intuitively clear, at least in terms of being a set of consistent rules. For present purposes, ‘style’ can stand for the commonplace categories of everyday music, as in the particular mix of repertoire and mode of presentation that we anticipate when we buy an album or go to a concert... A future, more sophisticated sense of musical code might want to evolve more precise terms that would take account of ‘languages,’ ‘dialects,’ ‘levels,’ and ‘registers’ – all of which count as ‘codes’ for sociolinguists. (1993:86)

There is an inherent risk of going too far in trying to shoehorn musical terms into linguistic equivalents, although some do map over quite neatly; for example, the difference between completely different musical systems, such as European classical-romantic, South Indian Carnatic and Central Javanese gamelan, could arguably be thought of as equivalent to different ‘languages’. More closely related yet distinctive systems such as Balinese *gong kebyar*, Malaysian *Joget* gamelan and Central Javanese court gamelan could be considered as different, but regionally related ‘languages’, employing different organisational principals but with underlying similarities in terms of instrumentation, and numerous points of connection that speak of common influences in not-to-distant history. ‘Dialects’ might describe the minor differences in *garap* and instrumentation between Solonese and Jogyaneese gamelan; indeed Sutton uses this term to describe three ‘mutually intelligible’ local traditions of gamelan music from the Banyumas, Semarang, and Surabaya-Mojokerto regions of Java (Sutton 1985: 61). The term ‘vocabulary’ is widely borrowed by musicians and musicologists: a particular composer might be described as having a distinctive vocabulary that contributes to his or her personal style, or a jazz musician as drawing on a pre-existing vocabulary of ideas when improvising; similarly, in terms of *karawitan*, individualised phrases such as *cengkok* and *sekaran* could be thought of in this way. The terms ‘grammar’ and ‘syntax’ are also frequently borrowed in music, for example, when discussing structural rules that pertain to a particular musical style, or in expressing an opinion on the appropriateness of improvised phrases and ornaments to the idiom.

However, such linguistic metaphors cover only the structural, technical aspects of music. As this study shows, code-mixing in gamelan composition also occurs on the level of process and behaviour – how music is created, how the musicians (including the composer or composers) interact, how musical ideas are communicated and so on – indeed, many musicians involved in gamelan are drawn to it as much by the nature of these interactions as by the sounds of the instruments themselves. As such, I have found it useful

to distinguish between **structural codes** and **processual codes**. The former describes the musical systems and concepts through which sound is organised such as melody, rhythm, timbre, harmony, cadence, resolution, tempo, phrasing and so on; an exploration of how a composer utilises *garap* or rhythmic harmony would fall into this category. The term processual codes is used when discussing the processes and interactions involved in creating, rehearsing and performing a piece; for instance, issues of group dynamic (hierarchy, etiquette, consensus and leadership), the creative process (control, collaboration, individual freedom, interpretation, ownership), communication of musical ideas (through notation, oral transmission or interpretation of non-musical instructions such as text or graphics) and the interactions at involved in performance (venue, seating arrangements, dress codes, audience behaviour etc.).

Code-mixing in gamelan composition

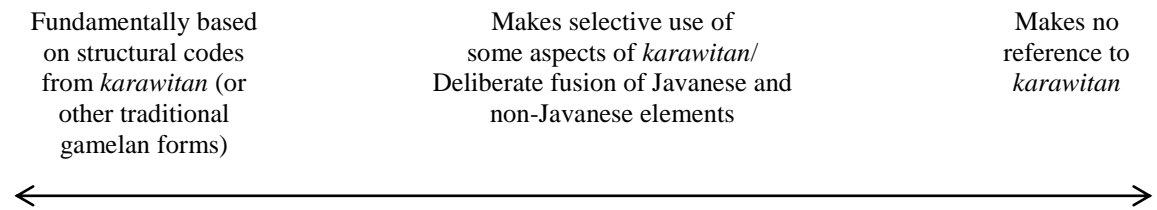
In his discussion of new gamelan composition, Sorrel co-opts the Indonesian terms *kreasi* (from the English ‘creation’) and *komposisi* (from ‘composition’) to describe the different approaches: ‘In current Indonesian parlance a ... difference is often made between *komposisi* and *kreasi* ... that usefully distinguishes between adaptations of traditional models (*kreasi*) and more radical, avant-garde composition (*komposisi*)’ (2007:39) However, he goes on to point out that ‘It must be conceded that many Javanese would not make such neat distinctions and quite reasonably view *komposisi* as virtually synonymous with *kreasi baru* (new creation)’.

I have chosen not to adopt these terms to this discussion, partly because of the ambiguity Sorrell points out, but also because this kind of dichotomy implies that works can easily be subdivided into one or the other. In fact, all the pieces under discussion can be said to lie on a spectrum, from those which are fundamentally based on structures from *karawitan* through to those that make no reference to Javanese codes other than the fact that they are played on a gamelan, whilst in between lie works which use and combine codes from multiple systems as well as extra-musical influences such as texts.

This chapter deals primarily with structural code-mixing, exploring how composers interact with concepts drawn from *karawitan* and those other musical styles, although processual aspects, such as group dynamic and improvisation do arise. Chapters 3 and 4 look more specifically at processual codes, exploring collaboration and how musical ideas are communicated.

Figure 2.1: *Karawitan/ non-karawitan* spectrum

To what extent does the composer draw on structural elements from *karawitan*?



On the left of this spectrum are works primarily derived from *karawitan*-based codes: typically such works might involve a *balungan* around which instruments and singers *garap* their parts (which may or may not be written down); phrases such as *cengkok* or *sekaran* which cadence onto *seleh* notes; cyclical melodic structures; gongs to mark structural points; *irama* changes and so on.

In a way, none of the compositions explored in this thesis occupy the farthest extreme of this axis, as none can be said to be exactly in the style of classical *gendhing*. None of the composers interviewed have claimed that their only interest is in attempting to write new *karawitan* pieces (although this might be attempted as a compositional or educational exercise): all the works examined in this thesis show some evidence of code-mixing, whether it be an adaptation to traditional *garap* rules, non-Javanese elements such as an English text or a non-gamelan instrument, or melodic ideas from a non-gamelan source, such as a local folk song. It is worth noting here that the composer's success in employing *karawitan* structures may depend to a great extent on his or her knowledge and understanding of gamelan: it is not unusual for the main difference between compositions by less knowledgeable composers and traditional repertoire to have its basis in that knowledge gap.

At the other extreme of this spectrum are works which make no reference at all to classical *gendhing* or other gamelan forms. The compositional techniques found in the set labelled 'not *karawitan*' are, of course, potentially limitless, but some of the approaches encountered in this study include works which are completely through-composed with every last note written out, chance procedure pieces, compositions which eschew cyclical sections in favour of a more linear structural arc, experiments with multiple tunings (for example combining *slendro*, *pelog* and equal temperament), the use of vertically conceived harmonies (chords), minimalist process pieces and works involving experimental sonic

techniques such as hitting the rims of *pencon*, bowing *gender* or striking water-filled *bonang*.³¹

In between these are works in which *karawitan* and codes from other musical systems are mixed, for example using gongs to mark cadential points in a cyclical but otherwise un-Javanese piece, or borrowing techniques such as *imbal* to play rapid flurries of notes. Within this lies a tranche of works whose primary conceptual purpose is to seek out points of connection between gamelan and other musical styles, or those which seek rapprochement or resolution of contrasting musical structures from two or more styles. Terms to describe such endeavours, for example ‘fusion’ have become much maligned, along with descriptions such as ‘East meets West’, thanks to challenges laid down by writers such as Said (1978), Feld (1994) and Hutnyk (2000) who question the validity of distinctions between ‘East’ and ‘West’ and ask whether musical encounters of this kind are on the even footing implied by the terminology, or whether such cheery, hand-holding rubric disguises and distracts from post-colonial power imbalances. Whilst ‘East meets West’ has probably had its day,³² there is some movement towards reclaiming the term ‘fusion’ by liberating it from its poisonous association with what is widely seen as exploitative forms such as worldbeat. Pete Steele, in his exploration of Balinese fusion musics around the world, argues that the commonly-used alternative ‘hybrid’ is a linguistically insufficient substitute which describes only the end product of mixed of musical systems, whilst ‘fusion’ refers to the deliberate act of ‘fusing’, the process of blending contrasting elements – in other words, fusion implies a consideration of creative practices as well as the resultant music (2013: 2-7).

Despite greater caution as to the use of politically-fraught terminology,³³ there is no doubt that the exploration of connections between musical systems and cultures remains a valid and interesting approach for many composers, and there are many nuanced and carefully considered responses that have resulted. In fact, arguably all the pieces discussed in this thesis display elements of hybridity. Even works which conform the most tightly to *karawitan* structures do, as mentioned above, bear signs of other influences upon the

³¹ It is worth noting that while such techniques may not relate to traditional *karawitan*, many experimental, techniques for gamelan, such as water-filled *bonang*, were developed within the Indonesian *avant-garde* movement. This case illustrates a useful distinction between codes associated with a particular style of music, such as *karawitan*, and those associated with a geographical location.

³² At least amongst postcolonially anxious academics – a quick Google search on ‘East meets West’ shows it is still a very active trope in the wider world, bring up over a million hits, including some high-profile uses, such as East Meets West Music Inc., the Ravi Shankar Foundation’s official recording label.

³³ See Chapter 6 for a more thorough analysis of changes in the way composers describe their engagement and interaction with multiple musical influences.

composer from outside gamelan tradition, whilst on the other hand works which avoid all structural reference to *karawitan* are still performed on a gamelan, with all the inherent visual, timbral and physical implications of the instruments themselves and the cultural associations these carry for both audiences and performers.

For the sake of the following discussion, works in which the composer's stated aim is to find connections between gamelan-based and other distinct musical systems will be referred to as employing **code-synthesis**, equivalent to Muysken's 'congruent lexicalisation' (above), a distinct category within code-mixing referring to the composer's intention to fuse elements of multiple systems into something new, as opposed to simply making use of compositional tools from multiple systems to suit the needs of the piece. This is a subtle distinction, the boundaries of which are open to interpretation; whether code-synthesis is an applicable description may not be apparent simply from examining the work through recordings and scores, as it deals with the intentions of the composer more than the actual resulting traces.

This chapter will explore some of the reasons composers have for adopting a particular approach. The discussion touches upon more than the directly musical aspects of *karawitan* influence (structural codes), for as will be seen, the influence of Java is found not only in gong cycles and *garap*, *irama* and *pathet*, but in a whole way of working, in the interaction between composer and musicians, in the processes of creation, transmission and performance (processual codes), many of which are explored more thoroughly in subsequent chapters.

Why draw on *karawitan* structures?

There are a number of reasons why basing works on Javanese forms might be appealing. To start with the obvious, when writing for a gamelan, drawing on traditional gamelan music is a logical starting point. As several composers (for example, Symon Clarke, John Jacobs, and Nye Parry) point out, the *garap* rules and the instruments evolved together, making this a reliable approach to generating a rich, complex and sonically pleasing result, building on the foundations of generations of musicians experimenting with ways to create elaborate and aesthetically coherent music for the instruments. Rather than turn their backs on this in favour of creating something completely new, many composers choose to embrace existing musical practice, seeking out the possibilities that lie within or just beyond the boundaries of traditional *garap*, or simply drawing on it as a ready-made structure in which to explore compositional ideas.³⁴

For some, composing such works can itself be a way of reaching for a deeper understanding of *karawitan* and of how, as a musical system, it differs from Western or other forms. Jacobs, whose doctoral compositions explore the nature and implications of concepts not found in Western music such as *garapan* and *seleh*, describes

that kind of gradual getting to grips with the profound difference, really, that's wrapped up in understanding what a *seleh* note is ... and its ramifications; well, that just continues to be intriguing, and not just because I have some kind of need to understand all there is to understand about Javanese music, but because as soon as you come across ... music and concepts connected to it which are very different from all the music that you've grown up with ... it changes your perspective significantly, because there are things about the music you grew up with that of course you think are 'fundamentals of music', and they're not. And that's intriguing. (Interview transcript 2012: 7)

Exploring such differences through composition can, he explains, act as a 'proxy for formal study of *karawitan*, in place of using a theory text book, for example' (Jacobs, p.c. 29 November 2012). The composer comes face-to-face with musical questions, problems to solve or unexpected outcomes which highlight how certain elements in *karawitan* interact, in a way that he or she might not notice when simply performing.

³⁴ Though interestingly not Clarke or Parry, who take inspiration from the orchestration and instrumental techniques but for the most part avoid the musical structures.

Peter Moran describes a similar reason for using traditional *bonang* techniques such as *imbal* and *sekarang* when writing his otherwise non-*karawitan*-like *Bonang Quartets* whilst studying traditional Javanese gamelan:

So I got stuck into the *bonangs*, I learned all about *imbal*, *sekarang* ... And those textures, those rhythms, the interlocking patterns, that just really excited me ... But composing them is doing something different, it's extracting from them their musical relationship to my life.... I wasn't quite imitating [*imbal* and *sekarang*]: ... to me those interlocking patterns and those rhythms suggested these patterns, these harmonic changes, how the rhythms fit together ... it's just kind of my brain's way of working out, of making sense of all that new information so I understood the *bonangs* better and I understood *imbal* and *sekarang* better for having written those pieces.

(2011 interview transcript: 12-13)

Another advantage of writing in a *karawitan*-like way lies in the nature of gamelan tuning. Each gamelan has a different *embat*, and it is embedded in the nature of Javanese polyphony (which involves numerous idiomatic instrumental phrases such as *cengkok* and *sekarang* converging on a *seleh* note) that pieces conceived of in this way should work on any gamelan, because they rely on contour rather than on absolute pitches or fixed intervallic relationships to work. A composer who thinks in terms of horizontal melodies culminating in a *seleh* note, rather than in terms of harmonies and chords, is more likely to come up with a piece that can be played on any gamelan. A cautionary tale in this respect is that of Dave Stewart, who wrote pieces with AlphaBeta Gamelan to be performed on the Southbank Gamelan at a time when its *slendro* pitches were very close to Western equal temperament notes and could therefore be used to create harmonies familiar to pop and rock music (which was Stewart's background). Stewart admits his pieces often sounded odd or wrong when the group played away-gigs on other gamelans, but more tragically, when the *slendro* instruments at the Southbank were retuned to a more 'typical' Javanese *slendro*, his pieces no longer 'worked' (Stewart 2012 interview transcript p12); in a certain respect, they ceased to exist.

As well as musical structures, there are aspects of Javanese performance practice which composers may wish to draw upon. Unlike orchestral players who are usually expected (and expect) to follow a part dictating every last note and even, to an extent, the

manner of its articulation, gamelan musicians can draw on their pre-existing knowledge of *garap* to generate the fine details of own parts, at least on the elaborating soft instruments. There are several advantages to this for a composer. At the most basic level, it offers the possibility of writing something fairly simple (a *balungan* line) which a group of experienced musicians can turn almost instantly into something much more rich and complex, using their knowledge of *garap* to elaborate and fill out the texture of the basic idea. In some cases, the expertise present in the group might be greater than that of the composer, allowing the possibility of creating something more sophisticated than the his or her personal knowledge of gamelan – or in some cases composition in general – could generate unaided. Perhaps for this reason, *karawitan*-based compositions are frequently, though certainly not exclusively, the starting point for composers writing their first piece for gamelan, especially those with little prior experience of composition.

For example, speaking of the process involved in creating music for her final undergraduate ‘solo’ project, a Welsh *wayang* called *Culhwch ac Olwen*, student Ellen Jordan describes working on *Mabon*, her first piece for gamelan (although certainly not her first composition), which she initially brought to rehearsals as a simple *saron* melody:

EJ: there were a lot of times where I definitely benefited from being in a group who knew more than me about Javanese music.

GH: In what way?

EJ: Well by asking ‘oh what would fit here?’ So for example with *Mabon* [I’d ask] ‘Oh what would fit here?’ [And somebody would suggest,] ‘Probably a *lancaran*, let’s try a *lancaran*’, and then it was like, ‘Are you happy with that?’ and it was like, ‘Yeah’. Or ‘No’, and then we’d try something different. But it was that type of relationship.

(Interview transcript 2012: 5)

Jordan’s comment touches upon a key aspect of the group dynamic which is rooted in the performance of classical *gendhing*, where players of elaborating instruments have a degree of freedom to derive their own parts from the *balungan*, and that although the *kendhang* and *rebab* might lead changes of *irama* or section, it is ultimately achieved through a shared group feel. In Indonesia, this group dynamic often translates to a collaborative approach when creating new works, where musicians in the group are involved in developing the basic ideas of the composer (or composers) into a fully formed piece (Roth 1986, Ch. 7: 68-83). Whether as a result of the influence of Indonesian teachers, or as an intuitive continuation of traditional performance practice (or some other influence entirely,

such as playing in rock bands) this kind of group-based, rehearsal-led creativity crops up in several British ensembles, most notably Naga Mas and Sekar Petak.

This type of group dynamic is, of course, not only useful for novice composers with limited knowledge of *karawitan*: it can be one of the fundamental appeals of working in a *karawitan*-based way for anyone, providing a refreshing alternative to the highly prescriptive compositional method common in Western art music. Roth, now an established composer, whose doctoral thesis described compositional practice in Central Java in the early 1980s, speaks of his fascination with collaborative creative practices at ISI Solo, which he contrasted with the ‘hardcore modernist attitudes’ prevalent when he was an undergraduate in the 1970s, which at the time prompted him to more-or-less give up composition (email to author, 13 February 2013). Speaking of the appeal of Javanese performance practice, he explains that:

It brings into focus the difference between things which are fixed and things which are created at the moment of performance.... [I]n gamelan there’s a much more ... even balance between that which is fixed, like the *balungan* and the fixed form, ... the gong patterns and the drum patterns, and then the whole area of *garap*, the things which are left to the players themselves to develop, within the music, as it’s happening. That’s the sort of thing which in other forms of Western music still happens, especially in jazz and the performance of popular music or folk music: that has the balance. But it seems to me we’ve ... developed an extremely unhealthy preponderance towards what’s fixed. You know, you only need to look at some contemporary scores and every minutest detail is written down on paper, and there’s nothing left for the performers: they’re just machines really. (Interview transcript 2012: 4)

In response, he explains that in his composition he tries ‘to find ways ... of leaving space for the performers to add something to it. That’s what interests me more’ (ibid.: 5).

Roth’s foregrounding of the performers in the creative process and their engagement with the music is not uncommon amongst composers writing *karawitan*-influenced works. In some cases, the composer deliberately works space into the composition for the group to interact with the music, suggest ideas, improvise or make decisions during performance, as I did with my own piece *Waterlily*, where the *peking* player could choose when to give the cue to change section, *bonang* players were given a choice of *kotekan* rhythms to pick during performance, and the singer was given a core melodic line on which to elaborate in

a fairly free way. One of the *gender* players was asked to adapt traditional *cengkok* to work in triplets, whilst the *suling* player was given a free mandate to play traditional *sulingan* or respond to the vocal line. My motivations for doing so were a mix of the above points: I was keen to leave space for the musicians to interact with the music, I wanted to retain the flexibility and freshness that arises from a less prescriptive approach, and I knew I could take advantage of expertise within the group (for instance, I was aware that the *gender* player (John Jacobs) had been working on something similar to the triple-time *cengkok* I needed for his own compositions, and would therefore have little difficulty adapting them to my piece).

Jacobs's compositions rely very much upon the experience and skills of the players. For him, one of the main appeals of writing *karawitan*-based works lies in the possibilities for writing large-scale, complex works that can be generated from smaller units of material, simple enough or close enough to traditional *garap* to be orally learned, but which leave space for variation and interaction in performance (see, for example, Case Study F). This leads to a sense of a shared 'feel' for the music amongst the performers which he feels is often missing from performances of contemporary Western art music:

[I]t probably is related to some of the things that I find appealing playing jazz, and that's to do with the oral transmission, I suppose: the larger amount of it that's about listening to the people around you and the small amount of it that's about being able to read complicated notation in a very accurate way. (Interview transcript 2012a: 4-5)

Yet the kind of strong group feel that arises from such orally learnt music is only achievable 'with music where there's a much lower degree of complexity, or perhaps better to say a much lower degree of newness, smaller steps away from what came before' (ibid.: 12). For this reason, writing in a *karawitan*-based way allows Jacobs to generate music of greater complexity, asking players to extend their pre-existing knowledge rather than learn completely new material.

The group dynamic and relative freedom from prescriptive notation is not simply a useful tool for composers: for many who play gamelan (including myself) it can be a key part of the enjoyment of participating in the ensemble. The pleasing mental and creative challenge of deriving your own part and the opportunity to feel involved in the creative process can lead to a sense of shared ownership, which in turn might well make the group more eager to perform such pieces more often, or welcome subsequent compositions from that composer enthusiastically. For example, in the space of two years, Jordan's *Mabon* had

more concert outings than any other Sekar Petak-born composition during the time I have been in the group, partly because it is catchy and fun to play, but also, perhaps, because we had all felt involved in creating it, something that was not entirely unintentional in Jordan's working methods:

I think ... what ... I probably excel at is ... getting the best out of the people I work with and ... using their skills to my advantage ... and hopefully trying to make everyone feel like they are a part of it as well, without them feeling like I'm some sort of like artistic director who's telling them what to do. (2012 interview transcript: 5)

One final reason some composers draw on *karawitan* is simply that it can sometimes be hard not to. Given the fact that the instruments and the music traditionally played on them evolved together, it can be difficult to avoid using classical structures and do something entirely new, when the whole ensemble seems so well suited to doing what it already does. Even composers such as Symon Clarke who consciously avoid using *karawitan*-like material acknowledge the importance of understanding what aspects of traditional music work well and why:

[T]he ... thing I recognised as a composer is that the instruments have specific functions in gamelan – I mean as they do in a Western symphony orchestra – but the range of the ensemble is about three octaves when it comes down to it ... everything overlaps, and it's about a dense texturing, and it becomes less and less effective if you try and think about it like a Western symphony orchestra ... the Javanese have got it right, the instruments have evolved to perform particular functions within Javanese music and they do it beautifully, and you kind of dismantle that at your peril, really, as a composer. (Clarke, 2011 Interview transcript: 6)

For some, it can be hard for some to balance an understanding of traditional Javanese music with a truly fresh approach to writing for gamelan. Talking of compositions created for the English Gamelan Orchestra, Neil Sorrell describes how composers often fell into the trap of writing what could be described as pastiche Javanese music based on their knowledge of *karawitan*, as far as that went:

[T]he moment you play a few *lancarans* and *ladrang*s and stuff and people are talking about *balungans* and they get the hang of what these other instruments do, everything then falls into that mould, so all

compositions have a *balungan*, punctuations from the *kenong* and *kempuls* and the *bonangs* tend to do sort of *mipils* and *gembyangs* and stuff like that.... I suppose you think yeah well [they did it] because they were quite interested in how gamelan music worked, and therefore you can quite understand people staying sort of fairly within its remit.

(Interview transcript 2012: 2)

From personal experience, when writing *Waterlily*, I certainly found that sometimes the weight of context could prove difficult to escape. The piece is in two contrasting sections: the first is not composed in a particularly Javanese way (although it has a cyclical structure and the *bonang* play Balinese *kotekan*-inspired patterns), but the second takes the approximate form of a *ladrang* with some novel adaptations to *garap* and an unusual number of *gatra*. It was not my intention to compose a *gendhing* when setting out to write it: the main compositional idea was to have two *gender*, one playing in triple time against duple in the other, generating a rippling, flowing effect evocative of a river, to suit certain programmatic requirements of the piece. I spent some time considering whether to use existing *cengkok* or write new material for the two *gender*. In the end, given the beauty of existing Javanese *cengkok*, the improbability of my writing anything better and the limited time available to Jacobs and myself as performers to learn completely new melodic material from scratch, I decided classical *cengkok* would serve adequately for the effect I wanted. Once this decision was made, I found myself locked into – or at least strongly gravitating towards – using end-weighted melodic structures with *seleh* (as these are an inextricable feature of *cengkok*) which swiftly led to adopting other Javanese structures such as *balungan*, *bentuk* and so on.

So the context of the instruments became difficult to escape for two reasons. Firstly, having adopted one aspect of *karawitan*, many others had to follow: from *cengkok* to *seleh* to *balungan* to *bentuk*. Secondly, the expertise of the musicians (including myself as performer) generated a certain inertia: given a limited amount of time available for rehearsal, using *cengkok* enabled me to obtain the desired effect with little time and relatively little energy required to make it work, and in a manner that was creatively satisfying to all involved.

In summary, there are many reasons composers draw on structures and ideas from *karawitan* in contemporary gamelan music. Some of these are based in the nature of how traditional music is organised. When writing for the gamelan, making use of musical ideas

and orchestrations (structural codes) which evolved with the ensemble and are well adapted to produce a sonically pleasing effect is a logical step to take. The difference between the organising principals of gamelan music and other systems the composer may have encountered (such as Western art music or jazz) may itself be an intriguing area to explore: for example, the possibilities inherent in a different pitch set, or an unfamiliar kind of counterpoint. In some cases composing provides a way to learn about the musical implications of these different principals, bringing a deeper understanding of how classical Javanese music works in a way that merely playing or studying from a textbook cannot. Also, there is the fact that using *karawitan*-like principals of melodic writing, i.e. horizontally-conceived melodic counterpoint rather than vertically-conceived harmonies helps ensure pieces will be playable on any gamelan regardless of *embat*.

Then there are the processual codes: the social aspects of gamelan, the group dynamic, the communication and transmission of compositional ideas in ways which allow the composer to draw on the expertise of the players, to create richly complex music from a simple core idea. This is not only an advantage for relatively inexperienced composers: it can be a profoundly appealing way to make music at all levels, offering a pre-existing model for collaborative creative processes (explored more fully in Chapter 4). This can result in a shared 'feel' for the piece amongst the musicians and a flexibility in performance that might be hard to achieve in a through-composed, fully scored composition. In many (though not all) gamelan groups, this way of working may be appealing to the players as well, allowing them the opportunity to contribute to the compositional process and providing a pleasing but manageable challenge in interpreting their own parts based upon pre-existing knowledge.

Finally, some pieces draw on *karawitan* simply because it can be hard not to. The weight of context can be difficult to escape, whether because the ability to imagine what is possible becomes limited by pre-existing knowledge, because a decision to use one aspect of *karawitan* can cascade into using many, or because performers' knowledge of *karawitan* itself creates inertia, making it much easier to draw on this than ask people to master completely new techniques, especially if rehearsal time is limited.

The need to completely escape the context of the instruments and write something fresh is a significant factor behind many of the approaches discussed in the next section.

Why avoid *karawitan* structures?

There are many works for gamelan which make no reference to any of the aesthetic or

organisational principals found in traditional Javanese music, and reasons for avoiding *karawitan* structures are also varied.

In some cases, such as Michael Nyman's piece *Time's Up*, which was commissioned for an English Gamelan Orchestra tour in 1983, it may simply be that the composer has little prior knowledge of gamelan to draw upon in the first place. In other instances, the composer may be a knowledgeable enough player but choose to avoid *karawitan* references, perhaps out of a sense that the tradition is one they are not capable of adding anything worthwhile to, or simply because they are motivated by different kinds of compositional ideas.

Speaking about his approach to writing, composer and director of the Cambridge Gamelan Society, Robert Champion, explains:

[M]y feeling was I can't possibly build on a tradition like this, so I'm going to really have to take this from a different perspective and ... just purely create ... a sound that I feel is me.... I don't like dogma about anything really ... I'd feel dogmatic about saying look I'm not going to do it like this, definitely. Because ... at one point, I might say that what I'd like to write is a nice *ladrang* in *pathet sanga*, and yeah, why not? ... So no, nothing like ... a conscious decision so much [as] just that it doesn't come out like that for me. And also in the back of my mind, I suppose yes, this is such an amazing tradition and I'm not part of it, but I'm part of a different culture that's playing it, and I can't try and build on something, someone else's culture in that way.

(Interview transcript 2012: 7)

This sentiment is echoed by director of Dutch gamelan group, Ensemble Gending which, although not a British group, is worth mentioning here, as the stated group aesthetic represents something of an outlier at the far non-*karawitan* end of the spectrum.

Established in 1989 in order to play an early non-Indonesian composition for gamelan from 1973 by Ton de Leeuw called *Gending* (from which the ensemble takes its name), the group's director Jurrien Sligter was very strongly influenced by de Leeuw's writings on how to approach compositional engagement with gamelan:

[De Leeuw] was, from the very beginning, very strongly aware of the danger of what is called exoticism. So he was interested in music, Japanese music, Indonesian music, but he was very afraid to imitate it, to use any outside characteristics of it without understanding the

characteristics behind it... The important thing to me is his contribution to thinking about it as being that if you start to compose for gamelan as a non-Indonesian ... composer, you have really to think *why* you do it - ... not to use it as a kind of Orientalism.... [H]e said if you use [the gamelan] as a Western composer, you are still a Western composer and you should ... not try to make something like oriental music from it. Still on the other hand you should try to be inspired by the contexts behind it, but that was his main idea.

(Interview transcript 2012: 1)

As a result of Sligter's interpretation of this ethos, Ensemble Gending is unusual in that the majority of players are (Western) classically trained percussionists who do not play any Javanese or Balinese gamelan music, and also in that composers are expected to submit scores in staff notation, preferably fully notated, in the manner of Western art music. Whilst the group has tentatively begun involving composers who incorporate improvised or group-derived elements, there apparently remains significant resistance to such processes amongst some members of the ensemble, who expect a fully-notated score at the start of the first rehearsal, (Sligter 2012 interview transcript: 5), perhaps feeling the approach to be too time-consuming (p.c. Robbert van Hulzen 9 December 2012). Certainly, with limited rehearsal time available (Ensemble Gending pays its musicians professional rates and only rehearses in preparation for a concert), a fully notated score ensures a musical idea can be brought swiftly and efficiently up to performance standard.

For many, consciousness of the need to avoid pastiche is an important reason for eschewing *karawitan* references. Neil Sorrell writes of this problem, which ties in with the aforementioned difficulty in escaping the context of the instruments:

Those who have both played in a gamelan for any length of time and tried to compose for it will probably share a feeling of being conditioned by the traditional uses of the ensemble, as instrumental functions are so clearly defined and constant from piece to piece. This stability is very easy to grasp at a surface level and extremely hard to escape from, with the result that composing for gamelan often results in what I would decry as little more than pale pastiche of the traditional repertoire.

(Sorrell 2011: 11)

He goes on to suggest that composers with only a superficial understanding of *karawitan* exploit its forms at their peril, giving the well-documented example of Lou Harrison, whose Javanese-esque compositions have been criticised (for example Sri Hastanto 1985:54) for compositional faults based on a limited understanding of *pathet*, or the interrelation between *padhang-ulihan* and *bentuk*. The fear of falling victim to their own ignorance is often a factor when composers choose to avoid all reference to *karawitan*.

Similarly to the way in which it a composer can be easily dragged into using multiple *karawitan*-based elements after borrowing just one, having decided to write a piece in a purely Western art music way can make certain Javanese concepts difficult to use, as described by Clarke:

The other thing that I experimented with that I found problematic is *irama*, which is an absolutely unique Javanese phenomenon, well a Balinese phenomenon too, but it's anathema in Western music ... and it's very difficult to bring off in a Western composition... I tried it in a couple of pieces and abandoned it, because in rehearsal people just play it like they play the Javanese stuff, and it works beautifully in Javanese traditional music, but as a device in Western music it just sounds like you're clunking through the gears,... [it] just doesn't work.... *irama* was something I found I just couldn't translate.

(Interview transcript 2011: 9)

Whilst *karawitan* structures offer great possibilities for drawing on the expertise of the group but less influence over what is finally performed, conversely writing in a conventional Western art music manner, with every note specified in a score, offers the composer a great deal more control over the final output, and thus the opportunity to create something complex that does not rely on pre-existing, pre-learned structures. Daniel March describes how his approach to writing for gamelan changed over the course of three works (*After the Film is Over* (1998), *Bronze by Gold* (1999) and *Pieces of Five and Three* (2001)) as he found himself requiring a greater degree of control in order to realise his compositional ideas:

[I]n terms of a straight-forward trajectory, there's a move in these pieces from a more traditional gamelan-type way of working to a much more – similarly traditional, similarly conventional – new music way of composing: you know, here's the piece, you play it. Because I became more egotistical, you see! [laughs].... I think it's probably about the

control. And I suppose it's just the sort of musician you are really, or even the sort of things that interest you compositionally.... At that time, I suppose, I was interested in doing those things where I had made the decision about the composition and wanted to specify all those things pretty exactly.

(Interview transcript 2011: 11)

The kind of complexity that can be created through fully scored music is, of course, of a different nature to that arising from Javanese *garap*. In the former, players are reproducing exactly the ideas of the composer as expressed through the notation and adding little – at least in terms of notes and rhythms – themselves, whereas in *karawitan* musicians of all but the simplest instruments will be playing something quite different from what is written in any notation they might (or might not) be using,³⁵ and are making small decisions all the time over which variation to play, when to change section and so on. Works such as March's *Pieces of Five and Three* (case study C), which involves a carefully constructed distribution of gamelan and equal temperament pitches, rely upon a particular type of complexity that absolutely requires the composer's control of every note to realise the compositional ideas.

However, this question of full scoring can arguably represent something of a pitfall in certain pieces, for example ones which are influenced by the sound of classical gamelan music but attempt to realise related ideas through fully scored parts. In many cases, such pieces beg the question of whether a similar effect could have been achieved in a more interesting (at least for the players) way by retaining the freer interpretative structures of *karawitan*. For example, an attempt by Gamelan Sekar Petak to play through de Leeuw's *Gending* from its highly prescriptive score, led some players to question whether a more interesting effect could be achieved through improvisations based upon – but not tied to – the score (Sorrell, p.c. 2011).³⁶ Compared to the richness and variation generated by classical *garap*, it is easy for through-composed, fully-notated gamelan works to end up sounding somehow empty and stilted unless the composer puts a lot of effort into building

³⁵ As well as interpolating idiomatic instrumental lines from the written *balungan*, players may make other decisions based on knowledge of what other parts – *rebab* or vocal lines, for example – are doing. For example, if the *panerusan* are playing *pethut gelut*, a two-*gatra cengkok* with a 6 at its midway point, the *bonang* players might *garap* to a 6 at the end of the first *gatra* to fit the contour of the *cengkok*, even if the *balungan* specifies a *seleh 3*.

³⁶ This anecdote sheds interesting light on the issue of institutional style – it might be considered a very 'York' thing to suggest, whilst being absolute anathema to Utrecht-based group *Ensemble Gending*, who named themselves after this very work having initially convened for the purpose of performing it, and who now perform a repertoire of entirely new and almost always through-composed, fully-notated music.

an equally full orchestration. Of course, it could be argued that composers writing *karawitan*-based works can equally fall into the same difficulty if their knowledge of the idiom is not great enough: mistaking the saron line for the ‘main’ melody and thinking that gamelan music is based upon a some kind of heterophony is likely to lead to this problem, which is common amongst novice composers.

In many pieces, the reason traditional structures are not found is simply because the composer had other ideas to explore. Treated as an ensemble of (mainly) tuned percussion instruments, the gamelan has great sonic potential for composers to explore beyond the boundaries of the music traditionally played upon it. There is another potential pitfall here: there are pieces composed for gamelan which in essence could have been composed for any ensemble: Nyman’s *Time’s Up* is a typical example sounding, as Andy Channing put it, ‘like a Michael Nyman piece that he just happened to write for gamelan’ (interview transcript, 2011:7) and making no more use of the instruments than as a basic pitch set. This is a problem Alec Roth defines using the analogy of ‘software’ and ‘hardware’:

[Y]ou have Western composers writing pieces for gamelan who have just taken the hardware..., the instruments.... It’s like trying to run a Windows programme on an Apple Mac machine: you can’t do it because the operating system is just completely different. And unless you take that into account, you’re going to be in trouble. (Interview transcript 2012: 9-10)

As Neil Sorrell often points out, particularly when looking at non-*karawitan* style works, it is often worth asking the question ‘Well why use a gamelan then?’ (p.c., multiple occasions). Whilst with Nyman’s piece, it is tempting to respond ‘Why indeed?’ there are many perfectly valid compositional responses to this question: pieces that make original use of the instruments to produce music that could not be achieved on any other kind of ensemble, for example, works which combine *slendro*, *pelog* and equal temperament together, or works which draw on the unique sonic qualities of the instruments, such as Michael Parsons’ *Changes*, which draws a parallel between the sounds of the gamelan and church bells by transcribing change ringing patterns onto the gamelan.

To summarise: some composers deliberately avoid reference to traditional gamelan music when writing for the ensemble, for a variety of reasons. In some cases, the composer’s own lack of knowledge of *karawitan* may discourage him or her (often quite wisely) from exploiting it, as ignorance can easily lead to compositional mistakes and risks producing a substandard imitation of something only half-understood. Related to this, a

desire to avoid what Sorrell describes as a ‘pale pastiche’ (2007) may drive even those composers with a deeper knowledge of *karawitan* to seek out other ways of organising the sounds of the gamelan instruments. Some find classical gamelan music so complete in itself they see no need to add compositionally to that body of work, preferring instead to approach the ensemble in a completely fresh way. In many cases, the composer is simply working in a manner familiar to him or her, for example, writing out a full score rather than working with ideas such as *balungan* and *garap*. Often it is driven by a compositional need to control more aspects of the piece more closely, to specify exactly what notes should be played when, and how they should be articulated. Or it might simply be that the composer wishes to exploit particular sonic aspects of the instruments, such as pitch or timbre, in a way that has nothing to do with Javanese music.

Why combine *karawitan* and other musical approaches?

As mentioned above, the pieces discussed in this chapter are not easily separable into distinct types, but exist on a spectrum, with all but the most rigorously anti-*karawitan* works bearing traces of some technical or structural ideas found in traditional gamelan music, and no works completely devoid of influences from elsewhere. As such, many of the arguments given above for both using and avoiding *karawitan*-based structures apply to compositional decisions made within pieces occupying the central ground: works which actively mix principals from *karawitan* with those from other musical systems.

Often the awareness of arguments for both approaches (for example, the desire to avoid ‘pale’ pastiche whilst retaining elements of *karawitan* that work elegantly on gamelan instruments) is the driving force behind such syntheses. Composer and academic, Nye Parry, describes his thinking in trying to achieve this balance:

It is my natural inclination as a composer to go ‘that’s an interesting Javanese structure, what happens if we knock two beats off it here?’ rather than ‘that’s an interesting Javanese structure, I will use it’. And those composers who do [just] use it, it’s a question of why you choose to.... I mean in a way why not use it, because it obviously works because otherwise they [the Javanese] wouldn’t use it. And [on the other hand] I find it slightly absurd to try and do everything differently from how the Javanese do it, because obviously they have centuries of expertise writing for these instruments and therefore they know what works.

(Interview transcript 2011: 12)

For Parry, as with Sorrell (of whom he was a former student) avoiding pastiche is a key concern. Despite being a composer who usually avoids too-obvious reference to *karawitan* in his works, his most revealing comments on the issue surround his deliberate use of pastiche in music for a film about Antonin Artaud, a French writer who was inspired by Balinese dance dramas in the 1930s to develop a new form of European physical theatre (see Cohen 2010: 142-7):

I do base it very much on gamelan structures in a way that I wouldn't in other pieces, because [Artaud] is discovering Balinese music. But even there I've sort of put the accents in the wrong places and things like that, in order not to pretend that I'm writing Balinese music, because if it gets judged alongside a Balinese piece as Balinese music it will fail dismally! ... I feel the wonkiness in my music for gamelan is a deliberate stepping away from the tradition and not trying to put myself in a place where I will be compared to the tradition.

(Interview transcript 2011: 12)

In other words, Parry avoids the pitfalls of pastiche by deliberately tampering with traditional structures, introducing intentional oddities to distinguish his music from 'real' Balinese *gong kebyar*. By way of contrast, Sorrell speaks self-deprecatingly of disguising pastiche of one kind of music by combining it with various other kinds of pastiche, giving the example of his mass for choir and gamelan, *Missa Gongso*:

The main thing was to get away from the ... pastiche *lancarans* and stuff: I thought there's no point in that, it's not adding anything, it's just manipulating something.... It was just that feeling of why bother, you know? In other words ... if I just write a piece of blatant Mozart pastiche, what's the point in doing that? Mozart would do it better. But if you do little bits of pastiche of all these other guys stitched altogether in a different package then you can get away with it as an original composition!

(Interview transcript 2012: 4-5)

Whether *Missa Gongso* can truly be described as a mere patchwork of pastiches from various sources is worth questioning. The 'Kyrie' (analysed in case study B) seems more an exercise in meticulous code synthesis (which I define as the musical equivalent of Musken's 'congruent lexicalisation' (see above), where a choral fugue is integrated into a

Javanese-style gong cycle (or perhaps a gong cycle is created around a choral fugue), forming a single unifying structure, each element supportive of the other. Even if both threads began life as pastiche, the act of bringing them together creates something new which is larger than the sum of its parts; in other words, he does indeed ‘get away with it’ but there is more to it than a patchwork of generic elements.

Linguistic quibbles aside, the above quote hints at a deeper interest which characterises Sorrell’s many gamelan compositions: integrating Javanese forms with structures from Western classical music. For many composers, this kind of deliberate code synthesis – the act of combining and finding points of connection between two distinct styles – is a creative process that can yield interesting and original results, and serves a wide variety of motivations.

American gamelan teacher and composer, Jody Diamond, suggests that composing can be a way to ‘interpret the tradition’ for audiences unfamiliar with it:³⁷

Familiar elements (such as Alec Roth’s use of Shakespeare) or melody give the Western listener a point of reference: when the listener focuses on a familiar element, it is possible that its relationship to musical structures and embellishments in which it is set may become more apparent. (Diamond 1992a: 122)

Diamond’s own work *In That Bright World* (to offer another non-UK example) was composed to serve that specific purpose, using Javanese traditional forms but setting American folk song *Poor Wayfaring Stranger*. ‘This was an effort to give the American listener a hint of what the Javanese might hear when they listen to gamelan and attempt to understand what the Javanese call *lagu*, the “inner melody”’ (ibid. 122-3).

Sometimes the initial impetus to mix styles comes from a prior decision to combine gamelan with non-gamelan instruments, whilst retaining technically and musically idiomatic ideas from their associated systems. Examples of this are Sorrell’s *Concerto for Prepared Piano* (Case Study I) and Mags Smith’s *Iron Pipes* for highland pipes and gamelan (case study E and below).

Interestingly, a disproportionate number of the most explicit fusions of musical style are in response to a commission or a specific performance opportunity. For example *Missa Gongso* was composed for Gamelan Sekar Petak’s first formal invitation to perform in York

³⁷ This is one of six ways Diamond suggests American composers writing for gamelan engage with the Indonesian traditions: emulating, translating, embellishing, modifying, acknowledging and bypassing. These effectively map from left to write on the *karawitan* → non-*karawitan* spectrum of this chapter.

Minster; John Jacobs's *Perkembangan Cinta* (Development of Love, which gave Messiaen's '*Développement de l'amour*' theme a syrupy *kroncong*³⁸ treatment) was created in response to a request for a gamelan first-half of a concert featuring *Turangalila Symphony*;³⁹ whilst an Inverness-based promoter's request to produce a Scottish-themed gamelan concert prompted Naga Mas member Mags Smith to collaborate with highland piper Barnaby Brown in creating *Iron Pipes*.

Why there should so often be an outside agent or situation involved in the decision to set out upon these deliberate syntheses of musical styles is a question worth pondering further. I tentatively suggest that it may have at its source the increasingly cautious and self-conscious approach towards 'East meets West'-type fusions that was touched upon above. In recent years, collaborations with non-Western musicians by artists such as Peter Gabriel, Jan Garbarek and Ry Cooder have prompted criticism from musicologists such as Stephen Feld (1994a, 1994b), Timothy Taylor (2007), Simon Frith (2000) and John Hutnyk (2000) to name but a few, who point out that such fusions are rarely conducted on an equal footing, tending to result in a veneer of the exotic Other represented through the medium of Western popular forms, subject more to the commercial hegemonic demands of the music industry than to any deeply considered integration of musical ideas. An awareness of these critiques, which question whether East really is meeting West or West is appropriating East, along with a more general consciousness of discourses such as Said's blistering attack on Orientalist mindsets, practices and language-use which questions the validity and purpose such divisions in the first place (1978) – has led musicians to increasingly adopt a wary, reflective approach to setting out on cross-cultural fusions, at the very least taking care over how they word the terms of engagement (i.e. probably avoiding contentious terms such as 'East', 'West' or 'fusion').⁴⁰

For example, when Mags Smith was informed of the commission for some Scottish gamelan music from Inverness, her initial reaction was one of disdain:

[T]he gamelan and bagpipe project ... was just suggested to me and I thought 'that's ridiculous'. I talked it over with Simon [van der Walt] first of all, about what the possibilities were.... [A]nd there was just

³⁸ *Kroncong* is a Portuguese-influenced Indonesian folk style dating back to 16th century. Bands typically include ukuleles or mandolins, guitars, cello, flute, violin and singers.

³⁹ A common request which mainly seems to be based upon Messiaen's naming of the percussion section as a *gamelang*, implying a vague, impressionistic inspiration.

⁴⁰ This shifting use of language and the way it reflects changes conceptions of nation, self and other, are examined more thoroughly through the medium of quotes from composers in Chapter 6.

this funny coincidence happened when the very next day this bagpipe player in the academy came up and started talking to Simon about gamelan and we thought ‘this is the man’. And he was!

(Interview transcript 2012: 1)

With the right people in place, this initial wariness soon gave way to a rewarding collaboration which produced several works including *Iron Pipes*, analysed in Case Study E. However, combining different distinctive musical systems without resorting to cliché can provide a challenge. As well as bringing sufficiently deep knowledge of their respective systems of music, collaborating musicians must create a space for original ideas and expressions to arise from the confluence of both musics, rather than simply aping the obvious features of one or the other. *Iron Pipes* seems to have achieved this well, and all the main participants (Mags Smith, the piper Barnaby Brown, and Signy Jakobsdottir, the musical director of Naga Mas) all spoke in glowing terms of the project. However, Brown expressed somewhat less enthusiasm for one of the other pieces created for the same Inverness concert, an arrangement of Bonny Anne and Berwick Bully for gamelan and pipes, explaining that ‘I really wanted to get away from the clichés of knocking out Scottish-sounding tunes on the gamelan. I suppose I was excited by new territory and new sounds’ as well as the possibility of exploring the deeper-level confluences in the music, such as the cyclical nature of *pibroch* (highland art music) and *karawitan* (interview transcript 2013: 5).

For Smith, the collaboration had the unexpected outcome that she ended up connecting to local traditions as well as developing her understanding of *karawitan* forms. Although a healthy discomfort with obvious manipulation of cultural stereotypes remains evident, the statement below shows that through engaging in a well-considered musical collaboration she found a way to negotiate a synthesis of musical idioms in a way that was more meaningful than the mere parading of clichés:

My experience of playing gamelan has led me to have more of an interest in Scottish-ness: getting involved in another culture’s music and related arts got me quite serious about some of my own.... When I was asked to do something Scottish with gamelan I thought what do I know about Scottish music? Very little. I learned a lot about bagpipes, exploring Celtic music alongside gamelan. I’ve always found it slightly embarrassing to be Scottish – we have a joke: ‘don’t come back as a

walking shortbread tin', you know, what's all this tartan about? So it's actually helped me connect to something of my own culture.

(Interview transcript 2011b: 5)

This brings us to an interesting aspect of gamelan composition in Britain and its relation to 'cultural identity': as more people study in depth – including substantial periods of study in Indonesian conservatoires – and increasing numbers make a primary career out of teaching and performing gamelan, participants become less likely to consider themselves as engaged in the 'music of the other' but are simply doing what they know best. At least four of the musicians I spoke to – John Pawson, Nye Parry, John Jacobs and Charles Matthews – consider gamelan to be their primary musical activity, and in the case of Matthews, his only area of in-depth musical knowledge.⁴¹ As Parry explains, 'I've now been playing gamelan for over half my life and I'm actually much more comfortable writing for gamelan than I am writing for western orchestra, for example' (2011:14). It is perhaps this sense of having internalised Javanese or Balinese gamelan music and incorporated it into a personalised, multifaceted musical identity that has many musicians find terms like East meets West problematic or feel that it does not represent what they are trying to achieve. For example, Mark Lockett says:

As a composer I was never trying to do East meets West fusion, you know, I was just writing a piece using these instruments – I wasn't consciously trying to make a point about global harmony. But I think possibly in the popular imagination that those issues are important. And it was, you know, East meets West was such a sort of marketing label wasn't it? (Interview transcript 2012: 14)

The act of referencing various musical systems in compositions for gamelan can be seen as a normal expression of a bimusical or multimusical (Hood 1967) background: an unsurprising manifestation of a contemporary world in which is found an ever-increasing level of cultural diversity and knowledge across multiple musical systems: a state which Turino defines as 'cosmopolitanism' (2003:62). It might even be regarded as the first stirrings of 'normalisation', the process by which hybrid forms become an accepted norm and are even adopted as an original local form as their diverse, multi-ethnic origins are

⁴¹ As is detailed further in Case Study M, Matthews does have longstanding involvement in and knowledge of electronica, but is ambivalent about whether he considers his electroacoustic endeavours to be 'musical'.

forgotten, as with reggae in Jamaica (Richard Lightman, by email 30 January 2013⁴²). Although gamelan may never acquire the truly ‘global music’ status held by pop music (a dubious honour at best), new, indigenous composition has an important role in the process of normalisation, which is exactly what Roth was driving at in the quote given at the start of this thesis:

It's simple botanical fact: if you're going to transplant this tender plant from an alien climate and soils and tradition and expect it to survive, then its got to take root. And its got to take root with new nutrients, new soils. So there's got to be new growth. It's the only way its going to take root properly. And I really believe that passionately.

(Interview transcript 2011: 16)

In summary, there are a number of motivations for engaging in deliberate code synthesis between disparate musical systems. In some cases, the composer wishes to draw on the best opportunities presented by both sets of musical codes, whilst for others it is a way of referencing *karawitan* whilst sidestepping accusations of pastiche or incompetence. It might be done to provide a way in to traditional gamelan music for audiences unfamiliar with its constructs. Sometimes the synthesis of structural codes occurs as a result of combining instruments from different systems (examined further in Chapter 5). And in some cases, bringing together musical styles is an exercise in positioning the gamelan in relation to local contexts, whether in response to opportunities presented by an outside agent, such as an idea for a concert, or as an expression of the composer's own complex and multifaceted musical identity.

Conclusions

As mentioned before, all pieces considered in this thesis involve some kind of code mixing. Some focus primarily upon *karawitan* (or other gamelan-related) musical structures and practices, whilst those at the opposite end of the spectrum treat the instruments as a sound source divorced from their historical musical context. Those in the

⁴² The term ‘normalisation’ has been coined by Lightman for his upcoming doctoral thesis, due to be completed in 2018, working title ‘The British Bhangra Coconut- Brown on the Outside but White on the Inside’. He explains: ‘I have coined the phrase in relation to musical hybridity and am working on further defining the parameters of the hypothesis. Normalisation is usually defined as making something conform to a standard. Audio normalization is the application of a constant amount of gain to an audio recording in order to bring the average or peak amplitude to a target level (the norm). I have incorporated these concepts into the hypothesis to illustrate that hybrid music can become a standard or “norm” relative to the target nationality or audience.’

centre seek a balance between all elements, highlighting points of connection or creating formats in which disparate styles can coexist. Some very deliberate centre-ground pieces, such as *Iron Pipes*, *Missa Gongso* and *Perkembangan Cinta*, are undertaken to fulfil a particular external situation, a desire or need to recontextualise the gamelan in order to acknowledge local physical, temporal or cultural spaces (a venue, a commemorative event, a concert commission).

But in many ways, recontextualisation is a feature of *all* compositions for gamelan in Britain (and elsewhere). Whilst ‘East meets West’ may have fallen out of favour as a label, the fact remains that playing a Javanese gamelan in Britain, or anywhere else outside Central Java,⁴³ is still considered a statement of a meeting of cultures (in the way that, say, a Chopin recital in Tokyo might not, because it has become the norm). Where the gamelan is presented only through performances of ‘traditional’ music, it does little to address the concerns of exoticism, beyond normalisation through exposure: average audiences in the UK are unlikely to bring the same appreciation of the finer nuances of the performance as audiences in Java, but will probably bring plenty of their own imaginings of a distant Other. The cultures may occupy the same physical venue for the duration of the performance, but the opportunity for meaningful exchange of musical understanding is limited. As Andrew McGraw puts it:

By presenting images of ‘tradition’ free of the signs of modernity and hybridization, ‘authentic’ performances freeze the other in a past that appears to deny potential transformation. Contemporary spectacles of hybridity suggest that it may be the assumption of authenticity that is the truly distorting exotification. (2013)

New, localised composition represents, for some, a way to draw closer to a mutual understanding between musical cultures (although some might argue that it is more a muddying of both waters). Looked at another way, it can be seen as a way to force the issue, to draw attention to the juxtaposition, to demand the audience seek out the familiar amongst the sonorous gongs and enchanting carvings. Works analysed in this thesis show how elements of Indonesian music can be combined with musical codes more familiar to audiences, offering a toe-hold, a pathway into the Javanese structures through their presentation alongside and in contrast to local idioms. This represents a classic example of code-mixing: combining disparate modes of musical communication to affirm something

⁴³ Including within Indonesia where the dissemination of localised styles nationally was an important tenet of post-independence nation-building efforts (Sumarsam 1995: 117).

about the coexistence of multiple identities in a single setting, whether that setting is a country, a building or a Turangalîla concert – or indeed within the composer.

However, it should be borne in mind that for many of the musicians interviewed, the act of composing for gamelan is not about a meeting of cultures or an expression of hybrid identities. Particularly amongst those who have made gamelan their main (or a very significant) musical focus, it may simply be a matter of drawing upon the musical tools and knowledge at their disposal to create the music they want to create.

Case Study A

Alec Roth: *Full Fathom Five*

Recordings and scores: recording R-A.1, S-A.1

Alec Roth (b. 1948) is an influential figure from the early days of the British gamelan scene. His first serious engagement with Javanese gamelan came as an undergraduate music student in Durham, when after the Oriental Music Festival (1979) he was asked to assist the group from the Academy of Indonesian Performing Arts (ASKI) Solo on their UK tour. Of this experience, Roth recalls:

Sometimes you come across some things in life that just resonate with you, which you seem to have always known somehow, they just suddenly resonate, and you just belong. And that's what happened with me.... I'd heard gamelan on recordings before, so it was the whole package really – it wasn't just the sound of the music, it was actually being in the presence of the gamelan, because you get a totally different feeling for the music when you can feel it as well as hear it. (Interview transcript 2012: 2)

As the group were leaving the tour bus for the final time at the airport, S.D. Humardani, director of ASKI Solo, took Roth aside: 'He'd seen that I'd been completely hooked by this and he made me this amazing offer: just if you can get yourself [to Java] I'll find you a room and you can stay as long as you like' (ibid. 2). Roth did just that, saving up for Java (meanwhile learning to play from Neil Sorrell who had initiated regular gamelan sessions at the Indonesian Embassy), and eventually going out in 1980.

On his return to England, Roth was offered a place on Durham's new ethnomusicology PhD course, and based his doctorate on compositional practices in Java. He was instrumental in setting up the Southbank Gamelan, and, as the quote at the start of Chapter 1 shows, has long championed new composition as an essential part of British gamelan practice.

Full Fathom Five was composed for the English Gamelan Orchestra's Contemporary Music Network tour in 1983, one of two settings of songs from Shakespeare's play *The Tempest*. The other, *Come Unto These Yellow Sands*, is not analysed here, although they were intended to be performed together. The idea to set songs from *The Tempest* for gamelan and voice was inspired, in part, by accounts from the voyage of the Golden Hind, the ship in which Sir Frances Drake circumnavigated the globe in the seventeenth century:

The description of the music of the island of Java from Drake's visit and Caliban's description of his isle ('full of noises, sounds and sweet airs') are so similar that I had a fanciful notion of Shakespeare sitting in a Southwark tavern, listening to some old veteran of the Golden Hind spinning his sea yarns. And Ferdinand's speech, which comes immediately after the song 'Come unto these yellow sands' and leads into 'Full Fathom Five', perfectly describes my own feelings of being drawn to the music of the gamelan from the moment I first heard it:

*This music crept by me upon the waters,
Allaying both their fury and my passion
With its sweet air. Thence I have followed it,
Or it hath drawn me, rather.*

[The Tempest, Act II Scene ii]

(Roth, by email 2013)

The setting of *Full Fathom Five* is based on *gendhing bedhaya*, a Javanese form used to accompany a sacred dance performed in court ceremonies and upon auspicious occasions, embodying 'esoteric spiritual values... based on Javanese concepts of mysticism, beauty and power' (Brakel-Papenhuijzen 1995: 2). Roth explains:

There's something about those words ... I just knew it was in this *bedhaya* style, this vocal style, it seemed absolutely perfect for the words, because they're very mysterious and, especially with the refrain at the end with the bells, it seemed absolutely just right. (Interview transcript 2012: 11)

Specifically the piece was inspired by *Bedhaya Pangkur*, which Roth had studied whilst in Java, with its slow, stately, static vocal line and use of *kemanak*, a pair of hand-held slit gongs associated with ancient ritual music. Due to the way these curved gongs are played, rolling them back into the palm after striking in such a way that the harmonics are damped at different rates, these are, to my ears at least, evocative of drops of water falling in a cave; certainly in the watery context of *Full Fathom Five*, such aquatic analogy is easily made.

Full Fathom also bears a more contemporary aqueous Indonesian influence, namely the use of a 'water-gong', an effect Roth had seen Indonesian composer A.L. Suwardi use 'to great effect' in one of his compositions (email to author, 2013): a *bonang pencon*, held upside-down by its rim with a small amount of water inside, and struck from underneath on the boss. After striking, the *pencon* is tilted and the sloshing water causes the pitch to bend.

Roth uses other (waterless) *bonang pencon* as bells, striking them upon the rim, producing unpredictable harmonics to illustrate the final line: ‘Hark I hear them, ding dong bell.’

Whilst the instrumental element of the piece is strongly Javanese, marked as being in *laras pelog pathet lima* and utilising traditional *garapan* for the *gender*, the text is in English. Reconciling these two elements was the compositional starting point for Roth:

And that was a particularly interesting exercise to do, because I did ... have to compromise: I'm setting an English text – not just an English text but a Shakespearian text – but it's going to be sung to a melody with Javanese contours.... So here's a very interesting marriage. But to me, a marriage on this sort of level seems to work, they seem to have things to say to each other and they seem to be able to get on with each other very nicely.

(Interview transcript 2012:10)

Roth approached the challenge by first setting the text against the colotomic structure of the *ketawang*, placing naturally emphasised words in relation to *gong*, *kenong* and *kempul* strokes. The setting also shows sensitivity to the semantic content of Shakespeare's lines. The poem consists of four pairs of rhyming couplets in an asymmetric distribution (AB AB CC DD):

Full fathom five they father lies;
Of his bones are coral made;
Those are pearls that were his eyes;
Nothing of him that doth fade,
But doth suffer a sea change
Into something rich and strange.
Sea-nymphs hourly ring his knell:
Hark! Now I hear them – Ding-dong, bell.

The meaning of the text, however, cuts across the couplets, with lines 1 – 3 (ABA) forming the first statement, and lines 3 – 6 (BCC) the second. This is reflected in Roth's setting, where the first two lines are set two *gatra* to a line, and third spread out across four *gatra*; in other words, the first statement, of three lines, is set to 16 *gatra*. The pattern is repeated for the next three lines:

Figure A.1: Setting of first six lines of text

The image shows handwritten musical notation for the first six lines of text. It is organized into four rows, each with a 'Big' part and a 'Chorus' part. The notation uses numbers 1-7 and letters b, p, ̄p, ̂ to represent notes and accents. Some notes are circled or have other markings. Below the notation are the lyrics in English.

Row 1:
 Big: 5 6 1 b 2 3 2 1⁵
 Chorus: 5 6 1 . ; 2 1 6 6 1
 Full fa-thon five ; thy fa- ther lies of his bones are co-ral made

Row 2:
 Big: 2 3 5 6 7 6 5 3²
 Chorus: . ; 3 6 6 5 6 5 3 6 5 3 2
 these are pearls that were his eyes

Row 3:
 Big: 5 5 . b 6 5 p 5⁵
 Chorus: . . . 1 1 1 1 2
 no-thing of him that doth fade but doth suffer a sea-change in-

Row 4:
 Big: 6 6 . b 5 6 7 6⁶
 Chorus: . 6 6 5 i 2 3 i . 2 . i 6 2 i 6
 to some-thing rich and strange

The third couplet represents a disintegration (or ‘sea change’) from the tangible to the ethereal, represented in Roth’s setting by a breakdown in the structural symmetry and harmonic integrity of the music. The first hint of the shift is painted onto the text, with an octave leap on ‘sea-change’ from low 6 to 6, leading to a *plesedhan* where the vocal line and *kenong* stroke at the end of this *gatra* anticipate the upcoming *gantung* 6 in the next line, rather than joining the *balungan* on 5. 6 is not a strong note in *pathet lima*, but one that (to my ears) generates a freshness, a hint of modulation to a brighter *manyura*-like mode.

The *gong ageng* on ‘change’ is the last of its kind in the piece. Up until this point, the *gendhing* follows a typical *ketawang* pattern of four-*gatra gongan*, but in the next line the word ‘strange’, which falls at the end of the third *gatra* after the *gong*, is marked by a *suwukan* instead of a *kempul* (a *suwukan* is an intermediate size between *kempul* and *gong ageng* but implies a final cadential point more akin to a *gong ageng*). At this point, the established colotomic structure breaks down, the *gender* switches to *slendro* which has the effect of smudging the *pelog*-based tonal environment, whilst the *balungan* ceases to play a melodic line, settling instead upon an insistent, repetitive, almost sinister bell-like ostinato in *pelog* – 6 5 6 5 (hinted at earlier in the first two *gatra* of the piece, but also reminiscent of the ancient two-note *kodhok ngorek* form).

The structural breakdown through the line ‘rich and strange’ also occurs on the level of *pathet*: prior to this, the piece has been solidly in *pelog pathet lima*, with a hint of 7,

used as an exchange note for 1 at the word ‘pearls’ in the fourth *gongan*⁴⁴ (unusual but acceptable in *pathet lima*). At the word ‘rich’ in the sixth *gongan*, the 7 reoccurs, but is this time set *against* a high 1 in the vocal line: a dissonance less likely to be found in traditional usage of the *pathet*,⁴⁵ resulting in a dense – indeed, rich and strange – cluster of notes. In the third *gatra* of this section (the one culminating in a *suwukan*), the *balungan* line is 5 4 3 2, a passage that would almost never occur in any traditional *pathet*, as 4 is only ever used as an exchange note for either 5 or 3 (usually only for 3 in *pathet lima*).⁴⁶ This *balungan* is anticipating the *seleh* 4 about to occur in the chorus, painting the word ‘strange’ with this uncomfortable, unstable note: one which is rarely used as a *seleh* note, and particularly not one marked by a gong (the *suwukan* standing in here for the *gong ageng*). The clash of the 4 in the chorus against a 2 in the *balungan* line at the *seleh* note is also conspicuous: in traditional *gendhing* such juxtapositions on *seleh* notes do occur, but these are usually *plesedhan*, resolving in the next *gatra*, as with the clash of 5 and 6 on ‘sea change’. Here though, at the final point of disintegration, as the stately *bedhaya* dissolves into the watery realm of the sea nymphs, the dissonance is left unresolved, a wash of sound blurred further by the delicate tones of the *gender* in *slendro*.

For the last couplet, the sea nymphs are introduced with an eerie female vocal line, overlapped by an echo from the chorus. The voices give way to the ‘sea bells’, represented by the ‘water-gong’ and *bonang* bells, in an open-scored section that draws the listener into a surreal underwater soundscape, whilst the rest of the gamelan continues to play the 6 5 6 5 motif, and with an unsettling *kempul* 6 alternating with the *suwukan* 1: a static yet ever-moving sonic medium that tugs and releases, to-and-fro like undersea currents.

⁴⁴ Counting *gongan* from after the first gong, i.e. not including the *buka celuk* (introduction).

⁴⁵ Hastanto, ‘Concept of *Pathet* in Javanese Music’, 182.

⁴⁶ Hastanto identifies one occurrence of the juxtaposition of 5, 4 and 3 (ibid. p182): a piece called *Ladrang Turunsih* which contains the passage 6543 3324. He says ‘My colleagues and I have tried to play this *gendhing*, and the sound was awful to our ears. We asked [our teacher] Pak Mloyowidodo for his opinion and he said “In more than 60 years’ experience of gamelan music, I have never heard a *gendhing* as awful as this” (p224).

Figure A.2: Last three lines of text

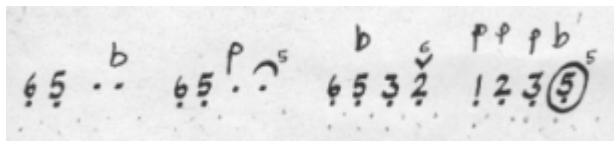
Handwritten musical notation for the last three lines of text. The notation includes Balungan (Blg) and various vocal parts (Horus, Solo, Chorus) with lyrics. The lyrics are: "to some-thing rich", "and strange", "sea nymphs hourly ring his knell", "hark! now I hear them", "ding", "dong", "bell", "BELLS", "Ageng", "Ageng". The notation uses numbers 1-6 and dots to represent notes and rests, with some notes circled or underlined. There are also some annotations like "BELL" and "Ageng" with circled numbers.

The marriage of Javanese *balungan* with English text is expressed not only through the rhythmic setting of the words, but through a very different feel to the melodic contours of each. The *balungan* line, at least for the first five *gongan*, is typically Javanese in writing, with a conservative approach to *pathet*, as described above. Meanwhile, the vocal line has a somewhat more Western feel, especially in the dirge-like passages which sit on a single note. It is not really possible to say that the vocal melody is Western and the instrumental setting Javanese: in fact, the first four lines of text are set much as might be expected in a *gendhing*, with the chorus and *balungan* line closely related and if not finishing on the same *seleh*, any disagreement being swiftly resolved by the start of the next *gatra*. It is in the dirge-like passages that the divergence is clearest: not only would this kind of melody not occur in typical *gerongan*, but Roth makes no attempt to reflect it in the instrumental line, setting it instead against a reprise of the first *gongan* of the piece:

Figure A.3: Full Fathom Five dirge-like figure

Handwritten musical notation for the Full Fathom Five dirge-like figure. The notation includes Balungan (Blg) and vocal parts (Horus) with lyrics: "no-thing of him that doth fade", "but doth suffer a sea-change in-". The notation uses numbers 1-6 and dots to represent notes and rests, with some notes circled or underlined. There are also some annotations like "BELL" and "Ageng" with circled numbers.

Figure A.4: *Full Fathom Five* first *gongan*



That his marriage of Javanese and English elements was successful was confirmed by Roth's discovery that it was being used as a teaching piece in ASKI (ISI) Solo:

The head of vocal studies there came over on one trip here and he heard this piece and took it back with him to Java, and said 'here's how to write a new style *bedhaya* melody!'... [T]he contour of the melody is very Javanese, but the rhythmic structure, the rhythmic life of the melody, is very English. So that's what, to his ear, that's what was the attraction: it was something new, something different. (Interview transcript, 2012: 11)

The success of the marriage also lies in Roth's confident handling of the Javanese material: his performer's knowledge, learned in Java, of *pathet*, *bentuk* and *garapan* give him the freedom to be at play with these things as a composer: to disintegrate his established *bentuk* and muddy the *pathet*, to write *balungan* and vocal lines that both integrate and diverge, and to do so without undermining the musical integrity of the piece.

Case Study B

Neil Sorrell: *Missa Gongso*

Recording and score: ‘Kyrie’, recording R-B.1, score S-B.1a (gamelan), S-B1b (choir).

Missa Gongso, or Mass of Bronze,⁴⁷ was composed for a concert in York Minster in 2005 entitled 'Sounds and Songs of a Spiritual Quest'. The event, which involved several University of York ensembles alongside the gamelan, was conceived as a true promenade concert, set up in the nave with all the pews removed, leaving audience members free to wander around or sit on the floor as various groups scattered around the space performed in turn. *Missa Gongso* was intended to exploit the acoustic of the Minster, which resembles the reverberant *pendhapa* in Javanese courts where gamelan is traditionally played:

[T]his combination of resonant, palatial acoustics and free and informal audience involvement created a performance context far closer to that pertaining in Java than would have been the case in the traditional concert-hall format. (Sorrell 2007: 43)⁴⁸

It also paid homage to the sacred nature of the space, resolving Javanese-inspired music for gamelan with that more traditionally performed in church: a choral mass. In this respect, *Missa Gongso* can be seen as a step in Sorrell’s ongoing exploration into how to reconcile Javanese and Western musical idioms, moving beyond pastiche *karawitan* into a genuine dialogue between two contrasting ways of organising sound. In this endeavour, Sorrell acts as something of a successor to Lou Harrison, whose early attempts to write for gamelan in a gamelan-like way and to combine gamelan with other instruments laid the groundwork for much of the compositional activity described in this thesis.

Whilst Sorrell expresses a great deal of affection for Harrison and his works, he is not immune to compositional issues within them; in a 2007 article he takes Sri Hastanto’s (1985) lead, questioning the potentially confusing use of terms such as *ladrang* in the gamelan accompaniment to the *Double Concerto for Violin and Cello with Javanese Gamelan* (2007: 41). For Sorrell, an important consideration in composing for gamelan is how to avoid ‘pale pastiche’: aping easily-grasped aspects of Javanese gamelan music

⁴⁷ *Gongso* is a deliberate misspelling of *gangsa*, Javanese for the type of bronze used to make a gamelan. The misspelling was to facilitate correct pronunciation and also 'to avoid confusion with "gangsta"! as Sorrell points out on the inside cover of the choral part.

⁴⁸ Sorrell, 'Issues of Pastiche and illusions of authenticity in gamelan-inspired composition', 43.

without fully understanding their implications, and drawing upon such structures without bringing anything new to the picture.

[T]he use of terminology implying procedures that are not followed as coherently as expected leaves open the question of whether the composer was aware of the discrepancy, and pastiche that leaves the question unresolved without seeming to bring something new to the tradition is the kind I describe as 'pale'. A better-nourished kind would be perhaps where the composer has managed a synthesis of what he or she is taking from Javanese tradition and what he or she can bring from another tradition. (2007: 42)

Whilst not suggesting the *Double Concerto* is mere pale pastiche (the use of violin and cello alone brings a fresh perspective to the composition), Sorrell does offer *Missa Gongso* as a response to the question of how one might best draw upon multiple musical influences in compositional endeavours.

One of challenging aspect of combining gamelan with Western idioms can be resolving differences in the tuning systems (see Chapter 5). In *Missa Gongso*, Sorrell takes the approach of 'leaving tunings as they are and enjoying the difference' (2007: 32), stating in the score that:

The choir (who are almost certain to learn their parts away from a gamelan) should maintain their usual intonation and not attempt to force it to fit with that of the gamelan. The piece was composed to work in this way and adopting intonations to which the singers are not accustomed would probably result in a major intonation fiasco, as well as conflict with the aesthetic intention of the piece. (*Missa Gongso* vocal score)

In practice, the choir intuitively may adapt somewhat to the pitches of the gamelan, and as the composer puts it, 'Part of the fun of such ventures is the expectation of a huge variety of unforeseen possibilities' arising from this (2011 programme note: 9). However, Sorrell was at pains to compose in such a way that such adaptations were unnecessary:

Whereas tuning was a matter of great concern to Harrison, my policy in the Mass was deliberately to let the choir sing in the tuning familiar to them, having observed, incidentally, that Javanese singers do not always pitch their notes exactly to those of the gamelan anyway... During the compositional process I checked passages, especially if the gamelan was

in *slendro*, where the discrepancies between choir and gamelan might be uncomfortable. (2007: 42-43)

Not only are contrasting tuning systems permitted to co-exist, the challenge of resolving Javanese gamelan structures with Western choral writing is also met by creating framework within which both can co-exist, as in the ‘Kyrie’, which presents the marriage of choral fugue with a *karawitan*-like gamelan cycle. It begins with an unaccompanied, homophonic choral statement (bars 1-8) which opens with a Bb chord and ends on the modal dominant (devoid of a major 3rd). The gamelan then enters on a gong 6 (Bb) and plays what sounds like a perfectly acceptable Javanese *gendhing* in *slendro*: notated with a single *balungan* line, inviting a fairly standard *garapan*, with the exception that the colotomic parts – *kenong* and *kempul* – fall in odd and irregular places, often implying six-beat phrases cutting across the notated four-beat *gatra*:

Figure B.1: Excerpt from gamelan notation for ‘Kyrie’

```

g6 [5 6 5 3 5 p6 2 =3 2 1 2 +3 5 6 5 =3 5 p6 2 2 1 y 1 2 5 3 5
+6
5 6 5 =3 5 p6 2 3 2 1 2 +3 5 6 5 =3 5 p6 ! +6 3 p5 6 +5 2 3 5
g+6

```

The reason for the irregular gongs becomes obvious once the choir enter: the *balungan* is in fact a supporting line accompanying the choir and underpinning its harmonies; the colotomic strokes coincide with significant points in the fugue, each *kenong* or *kempul* marking a new statement of the subject, until the last three *gatra* where they simply increase in density, raising the intensity in the lead-up to the gong, whilst the choir sing swiftly-modulating episodic material.

The implication of the colotomic markings raises questions as to whether the player should *garap* to the end of each *gatra*, or to treat the irregular colotomic points as *seleh*. Sorrell began rehearsing the piece with no strong opinion on this; indeed, having composed the *balungan* to fit the choral fugue, he had not particularly considered the implications until the *gender* player (John Jacobs) asked how he wished the implied 6-beat structure to be *garaped* (p.c. September 2013). Sorrell replied that he had not really noticed the *kenong/kethuk* played every 6 beats, and that players were free to devise *genderan* as they saw fit. Jacobs chose to use a mix of four- and two-beat *cengkok* to catch both the ends of *gatra* and colotomic strokes.

The marriage of Western and Javanese idioms works with pleasing neatness: both parts are coherent upon their own terms, yet meld together smoothly. The gamelan part

stands alone as an acceptable *gendhing* (if not one which conforms to a ready-made Javanese *bentuk*) when it is played alone at the start of the movement. Yet there is something of an aural double-take when the choir enter and the strongly Javanese-style gamelan part is suddenly resolved or reconceived as an accompanying line to the choral fugue, with a new role in contributing to the Western harmonic rhythm. The mapping of *slendro* to Western notes runs as follows:

s1 = Db

s2 = Eb

s3 = F

s5 = Ab

s6 = Bb

S3 and s1 are the most ambiguous, being particularly far from equal temperament equivalents; nevertheless, they do not sound especially ‘out-of-tune’ against the choir. I propose a few reasons for this. The first is that the tonality of the choir dominates: with long sustained vocal writing against percussive, short-lived *balungan* notes (which are in any case submerged into a sea of shimmering *garapan* with *gender* and *gender panerus* usually covering all five notes in the mode within any given beat), the choir wins out. Secondly, there is the possibility that the choir may sometimes bend their pitch slightly under the influence of the gamelan. The other reason I suggest is that the gamelan itself is vague at best in terms of absolute pitch: its octaves are stretched – to a far greater degree than would be found on, say, a piano – and there is little agreement on a single note between instruments, with variation of a few Hertz between instruments (see Chapter 5, figure 5.3). This creates a high degree of tolerance for inexact tuning. As Sorrell alludes to above (see also Martopangrawit, cited in Brinner 1995: 194), Javanese singers (and *rebab* players) do not overly trouble themselves to perfectly match the *embat* of the gamelan with which they play, rather compromising between that and their personal *embat gawan*, and one of the reasons that this works is that the gamelan sound itself offers a plethora pitches on any one note. In the case of the ‘Kyrie’, the imperfect pitch-match between gamelan and choir falls, to my ear, within this tolerance.

The thoroughly hybrid nature of *Missa Gongso* is reflected in the persona of Napoleon Sutono, a fictional Yogyane composer invented by Sorrell as a proxy composer for the work. ‘Born’ to a Javanese mother and Italian father and sporting a passion for J.S. Bach and Renaissance polyphony, Napotono (as he was apparently known to friends) was ‘even more bi-musical than I could hope to be’ (Sorrell 2007: 44). The reasons for inventing

Napotono were complex, but essentially seemed to stem from a concern about the high-profile nature of the original performance: having negotiated for many years to secure a gamelan concert in York Minster, he was concerned that the ‘powers-that-be’ – the University of York concerts committee and the York Minster authorities – would not welcome a proposal to write a mass from a British academic who was not even an official ‘card-carrying’ composer, thinking they might look more kindly upon something from an ‘authentically’ Indonesian artist:

I can put my hand on my heart and say it was not pretentiousness or some sort of weird modesty or anything like that...: I just did not think I could swing this thing... [T]his opportunity came up, with the Minster ... But then you go to the Concerts Committee and say, ‘Well I want to do a Mass, it's going to take half an hour and use all these people’ ... I could just see them saying, you know, bog off, how dare you suggest such a thing. So I had to doll it up...

GH: So was it an exercise in legitimation? Did you feel there was some perception from the Concerts Committee that it wouldn't be a ‘valid’ piece if written by a Brit?

NS: Yes! No! Or by me – or by a Brit. But both, I mean. The idea of saying we're going to take over a concert, more or less, plus student forces and everything ... And if they said well, ... who are you, can you even compose?! (Interview transcript, 2012c: 19)

There are some important issues to unpack from this. One is the concept of being a composer or not being a composer. Generally speaking, there tends to be less distinction between musicians and composers in gamelan communities than might typically be found in, say, an academic music department. This may well arise from the more collaborative nature of *karawitan*, which blurs the boundaries between composition and performance as players realise their parts from a central melodic thread. Certainly gamelan seems to create an atmosphere conducive to even novice players who have never composed to try out ideas. In Sorrell's case, despite being a prolific and experienced gamelan composer, he still doubted whether, in the context of an academic music department, his proposal to write a Mass for gamelan would be taken seriously, highlighting the conceptual gulf between the two systems when it comes to defining musicians' roles.

The other is the issue of authenticity, credibility and who has the ‘right to write’ for gamelan. When the English Gamelan Orchestra started in 1980, debates over these issues

were raging, and accusations of appropriation and cultural imperialism being hurled in every direction. Sorrell, Alec Roth and other EGO composers situated themselves within this debate by vociferously defending the group's approach to new music, on the basis that for gamelan to thrive in its Northern European context, new hybrid, local forms must be created: an argument which is explored more fully in Chapter 6.

Case Study C

Daniel March: *Pieces of Five and Three*

Recordings and scores:

Pieces of Five and Three, *tumbuk 6* version: recording R-C.1; score S-C.1

Pieces of Five and Three for Vibraphone and Gamelan Gadhon was written for Gamelan Sekar Petak and premiered at the Cheltenham Festival in 2001. As well as several performances by Sekar Petak, the piece gained interest from other groups, and has been performed on the Cambridge, School of Oriental and African Studies and Royal College of Music gamelans. This last performance required the piece to be rewritten, as the Royal College gamelan is *tumbuk 5* (*slendro* and *pelog 5* the same), as opposed to Sekar Petak's *tumbuk 6* (*slendro* and *pelog 6* the same). This results in different intervallic relationships between the *slendro* and *pelog* notes which, as we will see, are a key compositional feature of the piece.

The composer, Daniel March, was a member of Gamelan Sekar Petak for many years, through undergraduate, postgraduate and postdoctoral study at the University of York. March speaks of two main non-musical influences on *Pieces of Five and Three*. The first was a visit to the Jewish Museum in Berlin, designed by architect Daniel Liebeskind:

I remember being amazed by what he'd done in that space, and the idea that there could be a way of communicating things through what you build.... For example, some of the flooring in there is on a slant ... and the idea is that it represents, to a certain extent, the difficulty in terms of journeys... And there's a staircase that goes up and it goes up... and then it stops, it doesn't go anywhere. And then there are also these voids in place in the middle of the building, so you can see them but you can't get at them. And all these sorts of things ... which are obviously filled with potency in that ... context, ... things that are no longer there and places you can't reach and staircases that go nowhere and all those sorts of things. It was very much ... in my mind when I came back. (Interview transcript 2011: 9)

The other influence was the works of Georges Perec, a French author of Jewish descent, known for literary works bound by seemingly-impossible constraints. His best known

work, *Life, a User's Manual* explores the stories of residents in a Parisian apartment block but can only move between the grid-like living spaces in the manner that a knight moves around the chessboard. Each story also features a number of items that must be slipped into – or omitted from – the narrative, piling layers of complexity onto the writing process. Due to the way the narrative moves through the space (like a knight) and time (a snapshot of the building in a single moment), there are places in the apartment block that are never reached, absences and empty rooms that can never be filled and a project - to describe all the inhabitants - that is impossible to complete. Perec's novel *La Disparition*, was another influence; translated into English as *A Void*, the book – in both its original form and in translation – never uses the letter E.

Such absences, voids and unreachable places bear obvious connections to Liebeskind's architecture, and both could be said to be a poetic reflection of the irretrievable loss caused by the Holocaust:

I tried to respond to Perec's fascination with simultaneous narrative threads, with number and constraint, and with incomplete or unperfectable projects. The gaps and omissions that occur in so much of Perec's work connect to the voids – empty spaces which can be seen but not reached – which Liebeskind places at the heart of his building, and traces of both are to be found in this piece, the short silence at its centre being the most obvious. *Pieces of Five and Three* is scored for a type of *Gadhon*, ... which enables three intonations - [*slendro, pelog*] and 12-note equal temperament – to coexist and interact. What results is a kind of intense chromaticism which gives the music a particularly delicate and mournful sense, and although this wasn't consciously part of my original conception, the piece now seems to have taken on the character of a memorial. (March, notes to score, 2001: 3)

A good starting point for analysis is spotting Percian restraints in the piece. The name of the work, *Pieces of Five and Three*, is a reference to an unfinished work by Perec called *53 Days*; 'pieces of' immediately suggests 'pieces of eight': $8 = 5+3$. As might be expected, the piece is replete with fives and threes: there are five players; the kenong notes used in the original version are 5 and 3 in *slendro* and *pelog*; all bars have five or three beats. One interesting point is that in both rehearsing this piece and analysing it, I conceived of it as having five distinct sections, not including a restatement of the opening at the end (and it is analysed in this way here). However, on reviewing this case study, March pointed out that

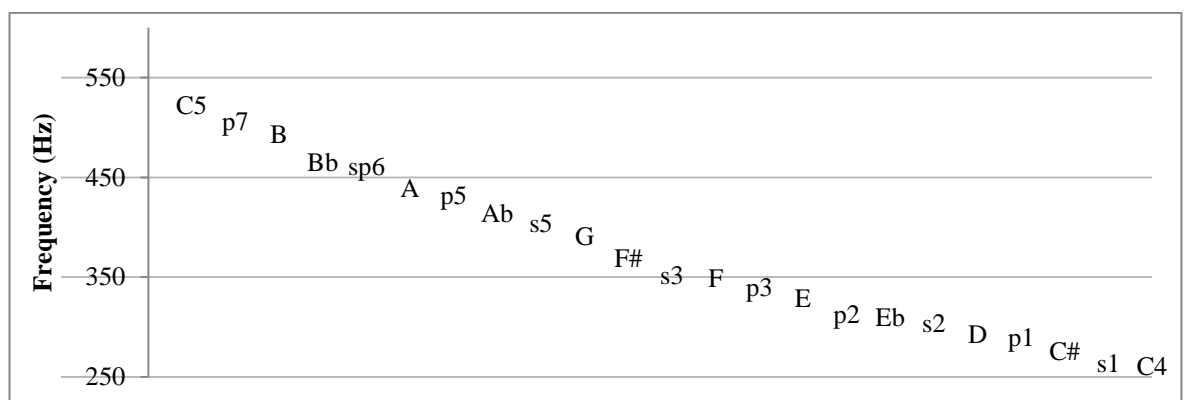
he had conceived it as being in eight sections (with what I call Section 2 split in half at bar 41, and counting the central 20 second silence and the restatement of the opening as distinct sections). Agreeing, however, that to a listener it does seem to fall into five sections, March found this to be ‘a nice ambiguity’ (email 28 August 2012).

One further Perek-like restriction is that each section should have one musical idea carried through from the previous section (like the word game where new words are created by changing one letter at a time of the previous word) and that the piece should, ‘by following this chain of similarities’, arrive back at its starting point (interview transcript 2011: 10).

Whilst compositional constraints abound, one thing that is richly profuse is the pitch set. By using all five notes of *slendro* and the five-note *pelog* barang scale (2,3,5,6,7), plus all twelve equal temperament notes, March develops a palette of 21 notes to the octave to work with (p6 and s6 taken as being indistinguishably close, less than 1Hz difference). In spite of the closeness of many of these pitches, the fact that the piece is scored for struck metallophones means that even the smallest microtonal differences must always remain as gaps, sonic voids that cannot be breached.

March wrote the work with the assistance of a midi keyboard, programmed to play the pitches of Sekar Petak, as well as a written table of all the notes in order (now lost). I have constructed my own table using recordings of *gender* from Sekar Petak made in 2010⁴⁹ and a table of A440 equal temperament pitches.⁵⁰

Figure C.1: Chart showing *slendro*, *pelog* and equal temperament relative pitch relations with Gamelan Sekar Petak *gender* (*slendro* and *pelog* barang), central tessitura only



A table listing the individual frequencies can be found in Appendix 1. The note order holds true for the upper and lower octaves, despite the ‘stretching’ of gamelan octaves.

⁴⁹ Recordings available on <http://soundcloud.com/gamelan-sekar-petak/sets>. Fundamental pitch identified using spectrum analysis tool on Audacity software.

⁵⁰ As listed at <http://www.phy.mtu.edu/~suits/notefreqs.html>

Although Sekar Petak has been slightly retuned since March wrote the piece in 2001, the current tuning (analysed in 2010) appears to be similar enough to give the descending chromatic lines that feature in the first movement, and so can be assumed to be broadly the same.

The following analysis contains descriptions of harmony from a Western music perspective that require some prior explanation. Whilst a 21-note scale can hardly be expected to conform to traditional descriptions of Western harmony, the work does make some use of harmonic movement, tension and resolution, and there are tonal centres, hints of V-I sequences and so on, even though some of the *slendro* or *pelog* notes may not exactly fit such chords. When questioned about whether he was thinking in terms of vertical harmony when composing the work, March responded:

[I]t wasn't a question of deliberately setting out to involve common practice tonality in the piece, but more that in writing a work that involves 'harmony' (in the sense of notes sounded as verticals) there were certain habits that I suspect I developed in terms of how tension is generated and released, which also involve voice leading. So in moving from one harmonic field to another there may well be 5-1 movements (call it *kempyung* or a fifth), but these are individual solutions to how to create harmonic and linear flow rather than anything more systematic. (Email to author, 26 July 2012)

Section 1

The opening movement introduces two major themes that occur throughout the piece: microtonally chromatic descending lines and intervals of a fourth. These ideas are displayed concurrently, through a series of chromatically descending fourths of various flavours: perfect fourths on the vibraphone and *gembyung* (intervals separated by one key, similar to a fourth in *slendro*) on the *gender*. These fourths begin by more-or-less working their way down the 21-note scale in figure C1 (omitting Eb/Bb), but towards the end of the phrase the spaces between adjacent chords become greater, skipping notes from the series, giving the feel of tumbling down towards a cadence in bar 9, as represented in figure C3 below.

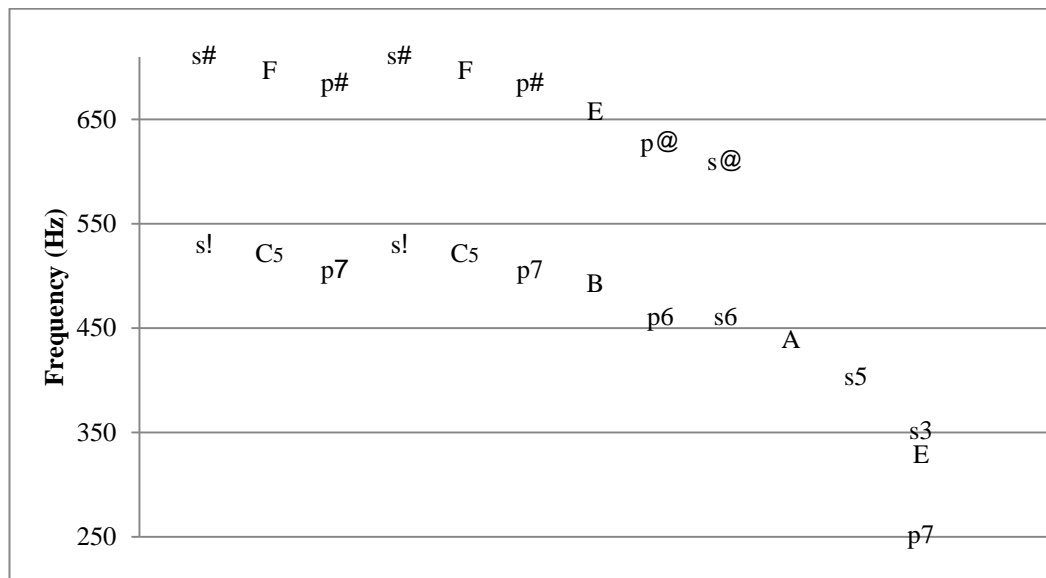
As the score uses a mix of Western and gamelan notation, and because it is not easy for any reader who is not profoundly familiar with the Sekar Petak's pitch set to identify the intervallic relations without referring back to figure C1, the descending chromatic

element of the first phrase is transcribed here by plotting the relative frequencies on a non-logarithmic scale (as above). No attempt is made to represent rhythm in this graph.

Figure C.2: Section 1, bars 1-9

The musical score shows four staves. The top three staves are for Kenong, Slendro Gender, and Pelog Bar Gender, all in 5/4 time. The Slendro Gender and Pelog Bar Gender staves include dynamic markings like 'Soft' and 'p', and articulation like 'mallets'. The bottom staff is for Vibraphone in 5/4 time, showing a descending melodic line with some chords. The time signature changes from 5/4 to 3/4 and back to 5/4 throughout the section.

Figure C.3: Graphic representation of descending chords in Section 1, bars 1-9



The whole of section (figure C4) generates for me a strong sense of F/s3/p3 as a tonal centre, opening with a series of chords microtonally similar to F plus C (s1 plus s3 and p7 plus p3), further supported by low F on the vibraphone in bar 3. A faster-moving motif with the rhythm **nUq** also helps emphasise the harmonic movement of the section.

Appearing for the first time in bar 6 in a harmonically ambiguous, questioning phrase, on its reiteration in bar 14 it gives a sense almost like that of a plagal cadence, suggesting the thus-far ubiquitous and harmonically ambiguous fourths resolving onto a major third above the tonic, p3/ F. Both occurrences of the motif are circled in the excerpt below.

Figure C.4: Section 1

Figure C.4 shows the musical score for Section 1, measures 1 through 10. The score is written for four instruments: Kenong, Slendro Gender, Pelog Bar Gender, and Vibraphone. The tempo is marked as quarter note = 70. The key signature has one flat (F major/D minor). The time signature is 5/4. The Slendro Gender part is marked 'Soft mallets' and 'p'. The Vibraphone part is marked 'Medium soft sticks' and 'p'. The score shows complex rhythmic patterns with various rests and notes, including some circled notes in the Slendro Gender and Pelog Bar Gender parts.

However, the last two bars of the section (15-16) undermine the sense of F as a tonic, preparing the ground for it to be revealed as a long dominant pedal to Section 2, which is characterised by a strong $sp6/Bb$ tonic.

Section 2 (recording CR1: 1m16s)

Several threads of musical ideas are carried from the first to the second section: we see again the use of perfect fourths in the vibraphone part up to bar 41, and in the descending tremolo chords in bar 60 - 66. The descending, microtonally chromatic melodic lines manifest themselves in what is now a much livelier *gender* part, starting off with two-bar phrases with an overall descending line, extended for the extra beats in the 5/4 bar.

Although it is not obvious from the score, the ear picks out two overall descending lines: one formed by the highest pitch sounding at any time, and one around a fourth lower:

Figure C.5: Section 2, *gender* parts, bars 19-20

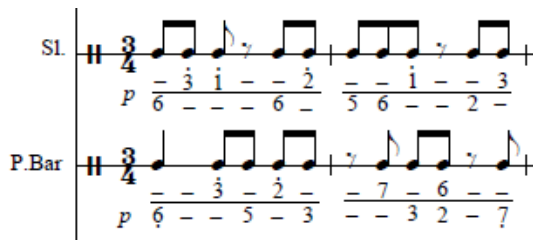
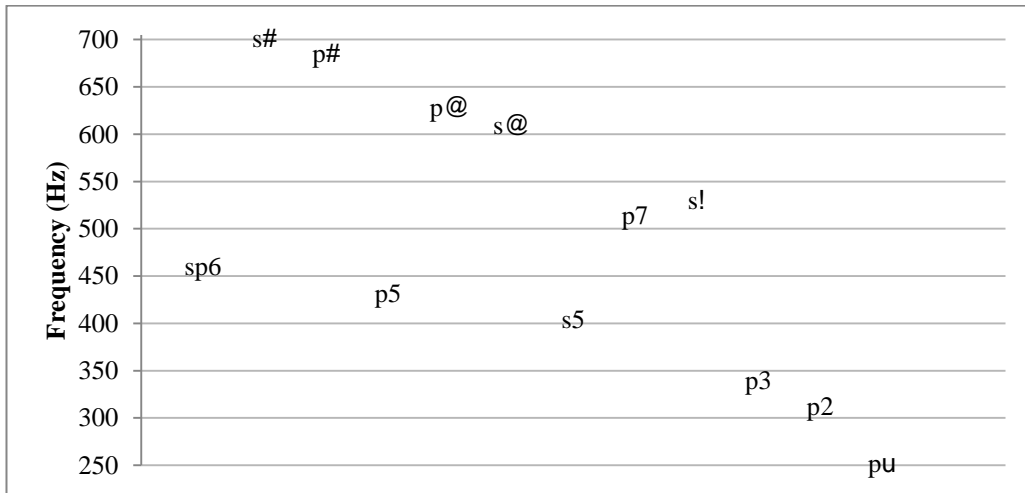


Figure C.6: Bars 19-20 *gender* parts represented graphically



This pattern is repeated three times, extended the third time for the 5/4 bar and to settle on an F-based chord in bar 25. Meanwhile, the vibraphone picks out perfect fourths, participating in the *genders'* microtonal descent:

Figure. C.7: Section 2, first phrase

The musical score for Figure C.7 shows the first phrase of Section 2, starting at measure 19. The tempo is marked as $\text{♩} = 90$. The score is written for four instruments: Kenong, Slendro (Sl.), P. Bar, and Vibraphone (Vib.).

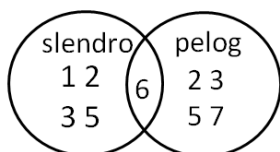
- Measures 19-24:** These measures contain a rhythmic phrase. The Kenong part is a continuous line of notes. The Slendro and P. Bar parts feature rhythmic patterns with slurs and fingerings. The Vibraphone part provides harmonic support with chords and slurs.
- Measure 25:** This measure is a single note for each instrument, marked with a fermata and the letter 'A'. The Slendro part has a fingering of 1, and the P. Bar part has a fingering of 5.

The whole phrase is repeated, this time with the *kenong* adding the occasional *slendro* and *pelog* 3 and 5 to the mix.

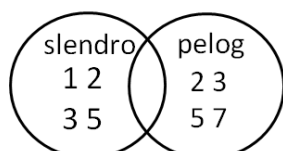
One nice hidden constraint in this movement is a palindromic mode structure in the *gender* parts, reducing in the number of notes towards the centre and expanding out again towards the end. The opening statement has nine notes, reduced to eight in the next phrase, the central section has six, then the music works its way back through these in reverse order:

Figure C.8: Modal structure of Section 2

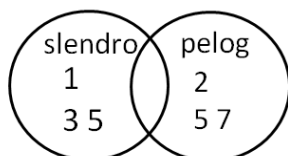
Mode A = Bars 19 – 32 and 60 – 66:



Mode B = Bars 33 – 40 and 53 – 59:



Mode C = Bars 41 – 52:



The effect of this palindromic structure is a sense of contraction in towards the centre of the piece, from an opening which seems almost exuberant after the tentative, spacious first movement into a more ambiguous and mournful tonal environment at bar 33, to a darker, constrained central section (further accentuated by vibraphone tremolos) before expanding out again to a shortened restatement of the opening.

Section 3 (recording CR1: 3m27s)

This lugubriously slow section is rhythmically very simple, with a note (or change of note in a tremolo chord) on every beat apart from the second beat of bar 69. Maintaining the descending chromatic melody theme, the vibraphone here plays tremolo chords descending by a semitone at a time (apart from a couple of jumps in bars 76 and 77). The four kenong join in with the tremolos at various points, whilst the *gender* play single notes or two-note chords.

Silence

Between sections three and four is a silence for two bars: 3/2 plus 5/2 (around 20 seconds) - the void referred to by March in his programme note, which, in the context of the piece, evokes the minute's silence observed for the dead.

Section 4 (recording CR1: 5m55s)

This section is built of lush chords making full use of the harmonic possibilities of the 21-note scale; after the sombre emptiness of the long pause, the warmth and richness of the writing provides a gentle release. March exploits the closeness of certain notes to create interference patterns or beats which come out more clearly in this very static writing than in any other section, but harmonically it is very simple, with a strong feel of oscillating mostly between tonic (C) and dominant (G), low notes which are picked out on the vibraphone.

Section 5

The whole of this section gives a certain impression of previous musical material being played in reverse, not least because the melodic contour of dominant phrases (the ones that ring out as the top line) is predominantly ascending rather than descending. This lends it something of a more optimistic, almost whimsical feel, although it ends on a questioning chromatic descending passage, which prepares us for a brief return to the descending microtonal scales of Section 1.

There is plenty more to be found in this piece than this analysis has uncovered, remaining pieces of the puzzle which must be left for others to find. But the work is more than a set of puzzles, an intellectual exercise in imposing restrictions: the complex, compositionally challenging structures March has chosen to work within are key to the success of the piece. A listener (or indeed performer) may not be intellectually aware of a palindromic mode structure in section two, but the sense of tonal constriction towards the middle of the section and expansion out again are intuitively apparent and enhance the satisfaction of that return to the opening phrase in bar 60.

With a non-standard palette of 21 notes to the octave, the composer must, of course, write his own rule book to create a piece that holds together as a piece: March's Perceian restrictions seem to be a highly effective way of doing this. However, the music does not rely on following rules or intellectually solving the conundrums imposed by the restrictions alone; it was not composed 'by numbers' but with a constant awareness of the sound. The keyboard tuned to play all the notes was an important tool:

I did spend a long time 'learning' the tuning, particularly as it fell under the hands on the keyboard, so that it becomes playable in the same way as equal temperament – you know what certain combinations are going to sound like

before you put down your fingers and in that way you can compose with it, either at the keyboard or simply using your inner ear.⁵¹

Nevertheless, some of the more obvious harmonic relationships (the senses of V-I cadences for instance) are completely undermined or lost when the work is let loose into the world and performed on other gamelans.

Pieces of Five and Three is one of many gamelan compositions composed outside Indonesia with a particular gamelan and based very much upon the intervallic relationships within that *embat*. This can be a risky approach, as is demonstrated by the sorry tale of *Xerxes Tripod*, a double-*laras* ‘extravaganza’ by AlphaBeta Gamelan member Dave Stewart, written for the Southbank’s gamelan at a time when its *embat* was relatively close to Western pitches. Because the piece was harmonically conceived and mixed *slendro* and *pelog*, when the gamelan was retuned in the mid-2000s it effectively became unplayable. Sadly, as no good quality recordings have survived, the piece is effectively ‘lost’.⁵²

In *karawitan*, the precise intervallic relationships are not of fundamental importance: indeed, many pieces can be performed in multiple *laras* and *pathet* (for example, *Ladrang Wilujeng* has versions in *slendro manyura*, *pelog barang* and *pelog lima*). They are also, of course, performed on different gamelan with different *embat*. An educated audience will identify the piece whatever the tuning: melodic contour, bentuk and, to some extent, lyrics⁵³ are far more significant factors.

Several British composers – usually those more experienced in traditional gamelan music such as Channing or Roth – write works specifically with this in mind, making sure their works are translatable to other gamelans. *Pieces of Five and Three* is slightly unusual in that it was written specifically with for Sekar Petak’s *embat* and is predicated upon on the intervallic relationships between that gamelan and 12-tone equal temperament, yet it has been performed by other gamelans, although in one case requiring a re-write.

One of the key tests about transferability is whether the opening chromatic descents will still work. When Rob Campion played it on the Cambridge gamelan there were a few pitches in this opening section that end up being almost identical, but at least they don’t go *upward*! As a result, we left it as it was, and rewriting it for each tuning seems excessively laborious (for the

⁵¹ March, Daniel. Email to author, 13 July 2012.

⁵² The Southbank gamelan has since been retuned again, to an *embat* apparently something between the two, though to my knowledge nobody has tried to play Dave Stewart’s pieces on it.

⁵³ Only to some extent because several different *gendhing* use the same texts, for example *Ladrang Wilujeng* and *Ladrang Pangkur* both use the text beginning ‘*Parabe sang*’.

[Royal College's] *tumbuk 5* version I had to go through and recompose every pitch!). (March, email to author, 13 July 2013)

The condition, then, for *Pieces of Five and Three* working on other gamelans and other tunings is not the absolute pitches of notes and how they sound together in chords, but melodic contour: it depends on the order of notes in the three scales. *Tumbuk 6* gamelans are likely to follow similar patterns with regards to how the *slendro* and *pelog* notes relate to each other: s5 and p4 are likely to be close if not the same, as will s2 and p2 (Sumarsam, n.d.). But *tumbuk 5* operates on a substantially different system, hence the need to rewrite.

The first obvious problem with rewriting for *tumbuk 5* is that s5 and p5 are the same note. This meant March had to sacrifice his 'five and three'-related use of *pelog* and *slendro* 3 and 5 kenong, as this would have only given him three kenong pitches instead of four. Instead he used three kenong from each tuning: s2, s3, s5 and p2, p3, p4, because 'the fact that they were in threes probably felt that it didn't bend the rules too much' (ibid.).

The most noticeable thing about the *tumbuk 5* version (recording C2) is that the tonal feel of the original is gone. Whilst the melodic contours hold true, this feels (from a Western harmonic perspective at least) a far more abstract piece of music: gone are the clear tonics, dominants and inversions that created points of stability and instability, tension and release in the original. It makes it a less easily accessible piece of music, but March sees merits in both:

I'm not sure that I have a preference [for the *tumbuk 6* and *5* versions] – they seem to be rather different in sense to me. There are individual places in each one where, for example, an individual chord or sonority seems 'more beautiful' than in the corresponding place, or perhaps works better in terms of the flow of the music ... but I'm not sure one has more than another. In general, the [*tumbuk 5*] version seems to give rise to a richer combination of intervals, though I'm not sure that in places the sense of harmonic flow is quite so strong.

It seems as if in escaping the original *embat*, the work has escaped the limitations of the composer's intuitive tonal preconceptions and morphed into something which relies neither on Javanese harmonic structures nor Western: it is a purer work, in which the primary structural device – contour – rules unchallenged; it has moved beyond the original aesthetic intentions of its creator and taken on an unpredictable life of its own.

Chapter 3

Creative process

Chapter two explored approaches to composition based upon the degree to which the composer drew upon structural codes from *karawitan* (or other gamelan forms) and those from elsewhere. Chapters 3 and 4 focus more upon processual codes, the actions and behaviours occur particularly in relation to the creative process (how a work was devised) and transmission (how ideas are communicated, rehearsed and performed).

These issues relate to the following taxonomical questions:

- Was the piece the output of a single composer working alone or was it collaboratively realised?
- How much of the piece was composed before the rehearsal process began/ to what extent was it a rehearsal-based compositional process?
- Were elements of the work improvised/extemporised⁵⁴ during performance?
- To what extent was the work notated? What was the nature of the notation?

Creative process and transmission are closely interlinked: for instance, a collaborative creative process might involve aural learning, a good deal of discussion and negotiation, perhaps improvisation, and is quite likely to involve open-ended, non-comprehensive notation, if using any at all. Meanwhile, a single author of through-composed music is quite likely to produce a fixed, prescriptive score (although there are through-composed works taught aurally). As such, it is difficult to unpick whether an element such as rehearsal-process is part of the creative procedure or transmission: in certain cases it is both. However, creative process and transmission do offer different perspectives on how people behave when making music, and as such are considered in separate chapters, with a cross-chapter summary at the end bringing the two strands together.

⁵⁴ Improvisation is a problematic term, in that it tends to mean different things to different people. Even players of soft instruments in a Javanese gamelan tend not to think of themselves as ‘improvising’, more extemporising within the bounds of the idiom. On the other hand, a jazz or rock musician keen to emphasise the improvisatory aspects of his/her art may well be drawing to a large extent on his/her pre-existing vocabulary, in some cases offering only small variations on a quite carefully worked-out solo.

Creative processes in context

In Chapter 2 it emerged that a significant proportion of British gamelan works seem to involve some collaborative element in their creation and/or performance, certainly to a greater extent than might be found in a random sample of pieces from composers operating within the Western art music sphere (though here too collaborative practices are becoming more mainstream⁵⁵).

In many cases, this collaborative element arises as a direct result of adopting Javanese structures, whereby players are invited to *garap* their parts from a core melodic idea, giving performers of more complex instruments a creative role (albeit a limited one) in generating the piece. Or, considered another way, the appeal of taking a *karawitan*-based approach sometimes relates directly to the collaborative aspects of that system, allowing the composer to draw upon the knowledge of every musician in the group, enabling the generation of a particular kind of rich complexity and variability with a strong sense of ‘feel’ for the music amongst players, as described in the previous chapter (or, on another level, simply allowing an inexperienced composer to bring in a one-line idea for a piece and have it turned into something performable by the group).

These advantages can also apply to other kinds of collaborative music making found within sphere of gamelan composition, such as graphic scores, text instructions, mobiles, aleatoric processes and various systems for improvisation.⁵⁶ Such methods for sharing creative input are all familiar from the recent history of Western art music, where, along with the kinds of musical advantages mentioned above, their development has been driven by socio-political ideological shifts, a general societal trend towards interdisciplinarity and – in something of a feedback loop in this context – a greater exposure to non-Western systems for organising sound and organising the people that make the sound, including practices found in Java and Bali. Other collaborative approaches which commonly crop up bear more influence from rock, pop and jazz – also significant influences upon many of those involved in new music for gamelan.

The common use of collaborative practices within the realm of British gamelan composition can be seen, then, as the result of a convergence from all these directions. There is the flexible decision-making shared between key performers and the idiomatic extemporisation of elaborating parts that underpins *gendhing*; the twentieth century quest

⁵⁵ See, for example, Roe 2007; Steiner 1992;

⁵⁶ Although it is worth noting that not all such pieces are in fact collaborative – some can be as prescriptive as any staff notation score.

within Western art music circles for ways to devolve responsibility from the composer to the musicians; and practices familiar within many popular forms where individual band members might contribute to building a simple idea for a song into a performable piece.

Historical perspectives on collaborative music making

To understand this convergence, it is worth considering the question of collaboration in gamelan composition within the broader context of this changing creative practice in Western art music throughout the twentieth century (but particularly from the 1950s onwards when the quest for less hierarchical, more interactive approaches became increasingly mainstream). Such an approach immediately begs the question: why peer through the lens of Western art music when many of the composers discussed here were more involved in jazz, rock or electronica prior to gamelan, or indeed consider gamelan to be their primary area of musical activity? Composer Peter Moran, whose main pre-university musical activities were playing guitar and writing songs for rock bands, articulates the reason well:

The very idea of calling myself a composer and producing scores and parts like this [shows that the Western classical] tradition has clearly influenced me far more than any other. And also the institutions I'm a part of: you know, there are organisations that promote my work and archives ... there's a whole industry centred around the idea of the composer and his relationship to his work and to his performers and his audiences and all those things.

(Interview transcript 2011: 6)

As this quote indicates, regardless of whether or not they are trained classical musicians, Western art music has a profound influence on the way people conceive of creative practice and ownership in the UK (and any country where Western music is mainstream): in particular the dominating classical paradigm in which composers, song writers and so on are considered to have a more important creative role than that of the performers, even when those musicians have devised or improvised their own parts.⁵⁷ The whole concept of an identifiable 'composer' who creates an independent, reproducible work is a particular feature of Western classical music, and it is indicative that almost all of the musical

⁵⁷ This paradigm is particularly problematic when considering music such as mainstream jazz, where an individual's interpretation of a standard may involve considerable innovation compared to the original 'head', yet is not legally recognised or financially rewarded as a composition.

creators interviewed in this study refer to themselves, albeit in some cases unwillingly, as composers (see ‘When is a composer not a composer?’ below).

Compared to other types of music found around the world, the classical Western model is quite unusual in that works traditionally have a single, identifiable creator who, the stereotype suggests, slaves away in isolation to produce a score which then becomes the ultimate representation of his or her intentions. Performers must attempt to convert this written representation into sound as precisely as possible, changing nothing in the way of fundamental pitches or rhythms and offering only subtle nuances of interpretation through timing, dynamics and occasional ornamentation to personalise their performance.

Whilst the roots of this situation can be attributed to the development of staff notation, allowing ‘the work’ to exist as an independent, reproducible object (a score) with an identifiable creator, the importance of the composer as an individual did not develop into the fully-fledged personality cult of the ‘hero composer’ until the nineteenth century. Attali attributes this to the commodification of music, leading to the promotion of personality cults around famous composers by publishers who needed a large, concert-going, score-buying public fan base to pay for what was effectively post-feudal capitalist-infrastructure patronage of the arts (1985: 68-72).

As with much else, concepts surrounding the role of the composer began to be challenged by experimentalists in the twentieth century, with many (such as Cage, Stockhausen, Cardew, Brown, Wolff and Feldman) seeking ways to devolve creative power to the musicians or chance procedure or interactions with the surrounding environment. Whilst it is challenging to confidently assign shifts in musical style to specific elements of socio-political change, some (for example, Taruskin 2005: 55) suggest that such developments cannot be considered outside the context of a growing post-war mistrust of paternalistic, hierarchical systems of governance, and the desire to create a more equal society in which individual freedom and self-determination are prized. Certainly there has been a distinct twentieth century movement within the arts to renegotiate the role of the creator and blur the boundaries between what were previously unquestionably distinct entities such as composer, performer, instrument, work, audience and venue. This has been achieved by devolving power from the composer, demanding more creative input from performers, integrating external environmental elements (such as noise) into performance, and raising the perspective of audience members from passive observers to that of participants whose ‘reading’ of a work is as valid as the composer’s original intentions (Nattiez 1990: 16-17).

In seeking ways to renegotiate these boundaries, many within the experimental movement looked beyond Western art music, in what might nowadays be termed Orientalist appropriations of an exotically spiritualised ‘other’. Born and Hesmondhalgh, for example, question whether such interactions are truly the ‘open-minded and empathic gesture[s] of interest in and fascination with marginalised music’ that they are commonly represented as, or whether they represent a tendency to treat ‘non-Western cultures purely as a resource for the reinvigoration of Western music’ (2000: 8 and 15). However, as Corbett points out in the same volume, such unrelentingly negative readings of the situation can represent an unhelpful interpretation of a complex situation, especially when ‘certain of the Orientalist appropriations have long since been reappropriated by non-Western agents and put back to use in varied ways’ (2000: 163). Whilst many within the avant-garde were using aleatoric devices (e.g. Cage’s use of the *I Ching*), graphic scores (e.g. Earle Brown) and text pieces (e.g. Phillip Corner) to generate processes freed from the rigid constraints of European tonalism or serialism, others sought from musical ‘others’ more direct, technical inspiration. Driven by the perceived ugliness of atonal serialism arising from its rejection of all hierarchical connections between sounds, some sought in non-Western musics alternative relational systems and organisational principles which offered classical structure and beauty outside the rigid constraints of European tonal harmony (for example, Colin McPhee [1944:16] and Lou Harrison [Miller 1999:151]). Some were intrigued by differing human organisational principles: systems which granted performers more creative freedom, through improvisation, or at least through parameters within which individualistic variation was permitted (see quotes from Alec Roth and John Jacobs in Chapter 2). Some sought new ways of generating complexity, for example, the use of microtones in Indian classical music, rhythmic devices from West African drumming practices or the rapid intricacy of *kotekan* from Balinese gamelan (the latter two are often linked to minimalism, though the influence if any is best considered as being on an impressionistic level). Many (for example, McPhee, Harrison, Reich and the majority of composers discussed in this thesis) were – and still are – simply engaging with the wide range of world musics to which they had increasing exposure through recordings, ethnomusicological texts, visiting performers, university faculties or study periods abroad (as discussed in Chapter 2 and more thoroughly in Chapter 6).

It was in this context that gamelan was hailed in the West – initially and especially within American West Coast universities such as UCLA, Wesleyan, Cal Arts and San Diego – as providing a refreshing alternative to classical Western models: a non-

hierarchical (or at least less hierarchical) ensemble in which complex effects such as *irama* change could be achieved by a sense of shared feel for the music without need for a conductor (p.c. William Brooks). As McGraw puts it, ‘For some Western performers it has become an incarnation of an idealized humanity, a harmonious, non-conflictual form valuing group over individual’ (2013). In terms of the question perplexing other twentieth century experimental composers as to how to devolve creative input away from the composer and towards the players, the gamelan offered a number of tempting solutions for achieving this without abandoning melodic and other structures which are readily comprehensible to both players and listeners.

One early adopter of these possibilities was Cage’s contemporary and fellow American, Lou Harrison, who in the 1950s rejected the dissonant serialist style in which he had previously engaged, in favour of ‘melodicism, diatonicism, and transparent textures’ and exploration of the Asian influences remembered from his West Coast upbringing (Miller 1999:151). Whilst many composers before Harrison had taken impressionistic inspiration from gamelan (Debussy, Messaien), others borrowed the formal structures (McPhee, Britten) and some had even written for the instruments themselves (Ton de Leeuw), Harrison was amongst the first to write *balungan*-based music for Javanese gamelan instruments which left space for players to *garap* their own parts, although he was hampered somewhat by his own limited knowledge of *garapan* and misconceptions about the nature of melody in *karawitan*, as discussed in Chapter 5 and Case Study I.

As well as a *karawitan*-based model for collaboration, the gamelan has played host to a reconvergence of these two strands, with composers such as John Cage, Phillip Corner and Pauline Oliveros, and in the UK Clive Wilkinson and Nye Parry, writing works which make use of text instructions, graphic scores, mobiles, chance procedure and related techniques. Why such a convergence should happen in the realm of gamelan music (when there is little in the way of, for example, aleatoric composition for *sitar* and *tabla*, or graphic scores for Chinese silk and bamboo ensemble) is worth pondering. One obvious answer lies in the ubiquity of gamelans in university music departments, along with a large number of composers who are familiar with avant-garde experimentalism: by sheer dint of numbers, this kind of convergence is likely to produce a certain number of composers interested in writing collaborative, avant-garde-style gamelan pieces. Whether there is a particular shared affinity for gamelan and experimental process music is difficult to state, based on discussions with the small sample of composers I have encountered; there seem as many who are strongly influenced by Stravinsky as by Cage, and probably more who

choose to write fully-scored, through-composed works than those who work in an open-ended, collaborative manner. Similarly, I know plenty of composers who are passionate about experimentalism and have no interest whatsoever in gamelan, despite having spent several years in a department with one. However, it is not unreasonable to speculate that the collaborative aspects of traditional *karawitan* might well prove attractive to composers who already have an affinity for improvised, non-prescriptive music making. In a similar vein, composers interested in devolving their creative role might find more willing musicians who are comfortable with non-prescriptive notation and a degree of self-determination in a gamelan than other kinds of ensemble (although a collective interest in applying these skills in contemporary music is certainly not a given).

Whilst twenty-first century academy-trained musicians are increasingly flexible and conversant with a wide range of idioms, from orchestral playing to improvisation (personal observation; see also Cottrell 2007: 94) such people were harder to unearth in previous decades, and often tended to group around what mainstream musicians considered to be off-the-wall ensembles like gamelans.⁵⁸ For instance, Clive Wilkinson, discussing his improvisatory work *English Garden* (1992 – case study D) says:

I think I wouldn't have done it for other ensembles because of the difficulty at that time of getting together a group that's prepared to improvise in other forms; around the [University of York] music department I think that would have been hard, whereas in the gamelan there was probably a little bit more acceptance of that kind of material.

(Interview transcript 2013: 2)

A further reason for this convergence may be found by looking to the influence of Indonesian composers who, in part under the influence of Humardani (see Chapter 1), had been creating experimental gamelan music for decades before the UK even had a single, playable gamelan. This brings us to the second important contextualisation of collaboration in British gamelan music: the influence of Javanese creative practice.

⁵⁸ Speaking of the University of York, Mendonca describes the “‘slightly oddball cachet’” of gamelan, which in my time’ (which coincided with Wilkinson’s) ‘was a meeting-ground for various composers types, Partch fiends, a few early music specialists and several others who did not quite fit in elsewhere in the department’ (2002: v).

Concepts of creative process and ownership in Javanese gamelan music

Until the twentieth century, concepts of ownership and the identity of the composer were profoundly different in Javanese gamelan and Western art music traditions, as Sutton describes:

When we say Beethoven composed his Eroica symphony, we mean he made the choices which determined each tone of every part and that he wrote out all these parts in a score. When a Javanese says *Gendhing Madu Kocak* was composed by His Highness Paku Buwana IV (a contemporary of Beethoven), he means something quite different. Most Javanese indicate that such a statement means that one of Paku Buwana IV's subjects, probably a court musician, conceived of a skeletal melody (*balungan*)⁵⁹ within a certain formal structure with perhaps a general plan for the contour of the voices and multi-octave instruments of the gamelan. The piece, so far as is presently known, would not have been written down in any form, since Javanese did not begin to notate gamelan music for over a half century after the death of Paku Buwana IV (1820). (Sutton 1987:66)

There are two important issues collapsed in this statement. The first is that the identity of the individual responsible for creating the content of the work may be difficult to attribute, and was considered insignificant in that cultural context. The second is that such compositions themselves only existed in basic, orally transmissible forms, leaving the rendering of them in performance open to interpretation by individual musicians according to personal and regional styles.

Sumarsam, in his gentle correction of Western musicologists' focus on *balungan* (i.e. the parts played by *sarons*) as the driving force in *karawitan*, presents evidence that a pre-existing vocal melodies, such as *tembang* sung poetry forms, often formed the starting point for a new *gendhing*, and that the role of the gamelan would be more to form a coherent shape around such melodies (1995: 164). It is interesting to consider whether court musicians engaged in this process of marrying sung poetry with instrumental music would consider themselves to be creating new works or not. It is also unclear whether a single musician would have been involved, as Sutton suggests, or whether members of an

⁵⁹ Sutton's foregrounding of *balungan* (explicitly translated as 'skeleton melody') as the starting point for this musician (we will come back to his assumption of a single musician later) is an attitude which has been challenged by Indonesian academics such as Sumarsam (1975, 1992), who instead offered the concept of 'inner melody' discussed in Chapter 1.

ensemble would have collectively settled upon *garap* for a known vocal melody according to local stylistic rules and aesthetics. From this perspective, it is not just that the concepts surrounding creative practice were different from those in Western classical music (for example, the question of who is described as the ‘composer’), the actual mechanisms involved in creating a piece were, it seems, profoundly different.

The contemporary situation in Indonesia has moved somewhat towards the Western paradigm: there are many internationally famous composers, such as Rahayu Supanggah, I Wayan Sadra and Iwan Gunawan, who create original music for gamelan. In Indonesian state conservatories where composition is part of the curriculum, it is necessary to identify student composers in order to grade their work. However, the process of creation does tend towards the collaborative. Alec Roth’s thesis describes such rehearsal processes in the conservatory in Solo (then called ASKI, now ISI), for example following the progression of a student composition by Pradianto, who brought basic ideas which his fellow students helped evolve into a piece, reorganising sections and discarding material that did not work (1986: 175). Many of the compositions explored by Roth were collaborative and attributed to multiple composers, with accompanying notes identifying who was responsible for which aspects. This is not solely attributable to a kind of cultural inclination towards collaborative work: the expense of convening an ensemble with time to work on a new composition can be considerable, as the composer is expected to provide refreshments for all the players; multiple composers can split this cost between them, a significant benefit for students on a shoestring budget (1986: 78).

Indonesian creative practices are undoubtedly an influence within the British gamelan scene. Many of the composers discussed in this thesis have studied in Indonesia where they have been involved in new music (e.g. Roth, Channing, Jacobs, Pugh, Matthews), whilst Indonesian composers working abroad have also had a substantial influence (Joko Susilo had a residency in Glasgow working with Naga Mas, Joko Purwanto studied for his Masters degree at the University of York, Rahayu Supanggah has undertaken several residencies with the Southbank Gamelan). As a result of these influences, but also of the open-ended, collaborative nature of traditional *karawitan* practices, many musicians who grew up within the Western composer/songwriter paradigm have felt encouraged to adopt collaborative, rehearsal-based, group-oriented approaches to composition when working with gamelan.

Theoretical approaches

There is an increasingly large literature on collaborative compositional , some of which is of use in following discussion. In their 2007 study ‘Collaboration and the Composer: Case Studies from the end of the 20th Century’, Hayden and Windsor investigate and assess a range of approaches towards collaboration, categorising creative practices and highlighting the role played by notation:

DIRECTIVE: here the notation has the traditional function as instructions for the musicians provided by the composer. The traditional hierarchy of composer and performer(s) is maintained and the composer aims to completely determine the performance through the score....

INTERACTIVE: here the composer is involved more directly in negotiation with musicians and/or technicians. The process is more interactive, discursive and reflective, with more input from collaborators than in the directive category, but ultimately, the composer is still the author. Some aspects of the performance are more ‘open’ and not determined by a score....

COLLABORATIVE: here the development of the music is achieved by a group through a collective decision-making process. There is no singular author or hierarchy of roles. The resulting pieces either (1) have no notation at all or (2) use notation which does not define the formal macro-structure. In (2), decisions regarding large-scale structure are not determined by a single composer. Rather, they are controlled, for example, through live improvised group decisions, or automated computer algorithms .

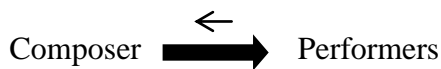
(Hayden & Windsor 2007: 33)

For the purposes of this thesis, which tends towards considering taxonomical spectra rather than distinct entities, I would consider Hayden and Windsor’s central ‘interactive’ category a form of collaboration, and even expect to see aspects of collaboration in ‘directive’ works where performers negotiate minor details with the composer, or simply make decisions as they interpret the score. However, the terminology is extremely useful, in allowing a distinction between, for example, an interactive *karawitan*-like approach such as those employed in *Full Fathom Five* or *Fair Roses* (case studies C and G) and a fully collaborative work in which there is no single clear composer. One particularly useful aspect is that it eloquently alludes to the direction of the interaction between the

composer(s) and performer(s), as visualised below. In ‘directive’ works, this interaction is mainly one-way, from composer to performer, with musicians perhaps questioning the composer on how to interpret the piece but unlikely to suggest more than subtle nuances of gesture unless there are elements which are actually unplayable. In ‘interactive’ works, the performers have input, but the composer still controls the overall result, whilst in ‘collaborative’ works, multiple parties interact on a fairly equal basis.

Figure 3.1: Mapping interaction between composer(s) and performer(s)

Directive composition



Interactive composition

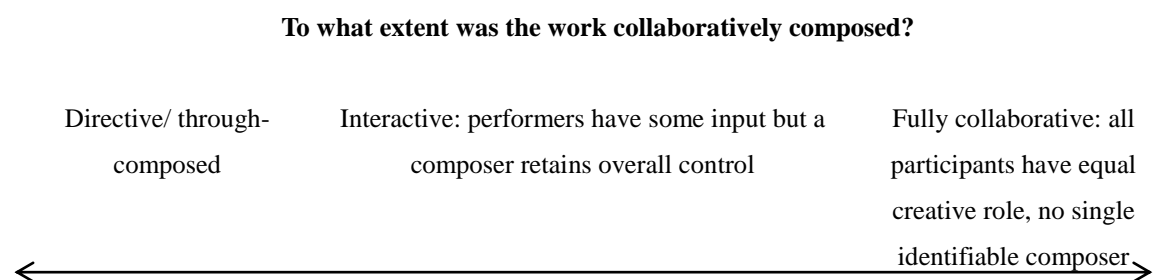


Collaborative composition



As mentioned above, rather than consider these approaches as separate entities, it is more helpful to consider them as areas of a spectrum:

Figure 3.2: Directive/collaborative spectrum



Hayden and Windsor (2007) offer some other useful terms, drawn from Argyris and Schön’s 1974 work *Theory in Practice*, of type I/closed-loop and type II/open-loop approaches. These terms describe more the attitude of the composer than the resulting piece, allowing the distinction that even where the composer’s stated intention is to work collaboratively, he or she may still wish to retain a high degree of creative control:

Type I interactions are characterised by individuals having a fixed and defensive view of what their role is, whereas individuals engaging in type II behaviour are able to question such ideas about their own role. Type I is often characterised as ‘closed-loop’ and type II ‘open-loop’ behaviour. Type I interactions follow the assumptions of both parties: for example, performer and composer tacitly agree that the role of the composer is creative and the role of the performer is technical.... A Type II interaction allows either party to question such assumptions about the constraints.

(Hayden & Windsor 2007: 30)

One final piece of terminology is referred to by several authors, including Steiner (1992: 13) and Hayden and Windsor (2007: 32) of a process-oriented versus outcome-oriented compositional approach. The implication is that a collaborative approach represents a process-oriented composition, where the important factor is the creative journey from the first conception of the work to the performance, with perhaps a higher degree of focus on the experience of the performers than on the actual resultant piece. Meanwhile, there seems to be an assumption that an outcome-oriented composer would probably wish to exert a high degree of control over all elements of the work (i.e. write a prescriptive score) in order to ensure the quality of the final work.

In light of certain works explored in this thesis, I would argue that this is not a safe assumption. Although there are situations (such as the kind of group improvisation approach undertaken by Good Vibrations practitioners working in prisons,⁶⁰ in which the value of the process far outweighs concerns over musical outcome) as discussed in the previous chapter, several composers (for example Roth and Jacobs) adopt an interactive/collaborative approach based on traditional *karawitan* practice specifically in order to achieve a richly textured variability that would be possible to achieve through prescriptive notation. The motivations for doing this are at least as much outcome- as process-oriented, although arguably their approaches represent a middle way where both fixed and collaborative elements can interact. Then there are also works which shift from a process-oriented to an outcome-oriented approach between inception and performance, for example, beginning with open-ended, improvisatory sessions and progressing through stages of refinement to a final work in which significant elements of the music are fixed,

⁶⁰ See Mendonça 2010.

thus representing a collaborative system which is both process- and outcome-based. Nevertheless, the terminology is very useful in understanding how musicians negotiate the balance between the two factors and understanding the fundamental motivations behind their creative practices.

Why write collaborative gamelan works?

In answering this question, there is a high degree of overlap with discussions in Chapter 2 on the appeal of using *karawitan*-based ideas, but it is worth considering motivations for collaboration from a more general perspective, in that it applies to many different collaborative forms.

Produces something greater than the knowledge of individual collaborators can achieve

Collaboration offers the opportunity to combine contrasting, exclusive sets of expertise to produce an artistic work which is richer and more complex than any of the individual artists could have achieved alone. This applies to collaborations which involve artists from different fields (for example, dancers, visual artists, librettists), between people working in similar areas but with different perspectives (such as the collaborations between gamelan and highland pipes) and even between artists working in the same genre but with complementary skills and ideas.

Collaboration between different fields can generate fresh perspectives and responses to ideas and the resultant creative feedback can take the artwork in new directions. For instance, Jon Hughes discusses the difference between producing a purely instrumental piece, which is performed in a concert hall to polite applause, with the experience of collaborating with dancers:

[W]orking with dancers, you know, they're physically moving, like making paintings out of their bodies to your music, so it's the most lovely process. 'Cos you're sitting in the studio on your own sometimes for hours making this stuff, but then suddenly it's coming alive, and people are really physically responding to it, so there's no ambiguity: unless what you're doing is having an impact emotionally, they don't want to move, Simon [the choreographer] doesn't want to choreograph. So you know that he means it, and you can see in the movement the commitment of it. So you get this immediate, really interesting response to your music; you suddenly see it springing into life physically. (Interview transcript, 2013: 8)

In the previous chapter, the advantages of drawing on *karawitan* expertise within the group were explored (it may be greater than the composer's own knowledge, or it may allow a more experienced composer to achieve more complex works by building on that knowledge base). An open, Type II approach provides space to incorporate suggestions which may be knowledgeable and insightful, even when the work itself is directive and through-composed, as Peter Moran relates discussing his *Bonang Quartet* in which he was also involved as a performer:

[T]here's bits of collaboration in that - it really just comes down to John [Jacobs]. When we were rehearsing the quartets he had some very useful suggestions that found their way into the music, he just had that extra insight into the instruments and the forms and what we were doing, and so we used some of them ... The accelerandi at the half way point and the end point of the first quartet were his idea, in that way that a traditional piece might speed up towards a dramatic ending.... And then working out how to do that and keep all four of us together - that was an example of a group discussion, and we decided that the *slendro [bonang] barung* that had the steadiest rhythm was our clearest cue for the speedup, so after a few rehearsals we decided to let Peter [Rocker] on that instrument give us that cue. (Moran, interview transcript 2011: 16)

Rehearsal-based compositional process

This leads to another key advantage of collaborative approaches: that the composer gets to hear the work as it is being formed, and to work on what he or she hears. It is, for many, one of the main attractions of writing for gamelan: that in most cases, the composer can work with a group of players week-by-week, a luxury not usually encountered when writing Western art music. Gamelan thus offers a completely different way of composing to those who wish to embrace it, as Nye Parry describes:

I prefer the idea of making cakes to writing recipes, ... I like to work with the material until it sounds sweeter, rather than giving people instructions for how to make things sound sweet. And I think maybe composing for gamelan is a bit more like that because you are actively involved with the musicians while you're teaching the piece, constructing the piece.

(Parry, interview transcript 2011: 3)

Parry's point about involvement with the musicians is particularly interesting. A rehearsal-based process also allows the composer to tailor the piece to the skills within the group –

particularly important when working with amateurs with limited experience. This is alluded to by Mags Smith, who describes

having an idea of different levels of ability within the group: some people read music, some are good rhythmically, some play better by ear, some are natural players, others have far more training – a real mix. Somehow working on some music together ... can bring out some of the strengths; it ... produces a piece that is kind of what the group can play. (Interview transcript 2011b: 2)⁶¹

A rehearsal-based compositional approach also allows the composer to hear a work that might otherwise be difficult to ‘auralise’,⁶² whether due to the *embat* of the gamelan being less familiar to somebody raised on 12-tone equal temperament, or because aspects of the work may not be under the complete control of the composer, having perhaps been left up to individual performers or chance procedure (or simply because the composer finds working with instruments easier than mental auralisation). This is why, for instance, Naga Mas director Signy Jakobsdottir favours starting the group playing a piece when it is still in a fairly unformed state (as described in Case Study E). Dave Stewart, who worked in a similar way with rock groups for years before writing for gamelan describes the usefulness of being able to try material out:

Symon [Clarke] used to say that I was quite a tactile composer in the sense that I would say ‘could we just play that bit?’ and they’d play it to me and they’d play it really well, but I’d hear that I could actually improve the arrangement, you know. I remember on *Eleanor Bronze* I kept mucking about with the gender part in the bridges and I just said ‘look try it like this, try it with softer mallets.’ I kept rewriting it – must have driven him up the wall – but on about the fourth attempt I got what I wanted, I thought okay. I can hear it now, it is right, it fits with the rest of the instruments. (Interview transcript 2012: 6)

For many composers, the social aspects of rehearsal-based processes are particularly appealing, allowing a connection with musicians that is usually missing when writing for a Western-style ensemble, as Clive Wilkinson relates:

I thought ... getting pieces played by a good ensemble, professionals, would be the more interesting thing, but actually what I really enjoy is the

⁶¹ See also Miller 2005: 103-4.

⁶² Like visualise, but with sound.

process of working with musicians, often having to perform in my own piece, just working with people intensely within it, changing things as you go along, and then eventually performing it two, three, four times, whatever. Whereas ... when I had a piece done by a music project London, even though it was quite a successful piece, the fact that I was outside of it, and the conductor ... took control, [made] it seem so distant from me; in the end I thought I don't really like this very much – I like to be involved with the group. So it was ... small chamber ensembles or gamelan being the ideal because it's kind of everyone struggling to do it, there's no conductor, and it just takes on a different kind of feeling.

(Interview transcript 2011a: 11)

Sociable, communal music-making

Wilkinson's comment raises another important motivation: that for many, collaboration is simply more fun than working on musical ideas alone. As well as the social aspects, a successful collaboration provides opportunity for positive reinforcement of good ideas, and a mechanism for filtering out weaker ones, as Charlotte Pugh describes:

I think it's that sort of connection with other people ... working with other people and enjoying yourself, ... feeling like you get affirmation from other people as well. Because if you're on your own working you sort of think "Oh this is good," but then you think "Oh, what if it's terrible?" and you don't know if it is, but if you're working with other people and it's going well, someone's going "Yeah that's great," and so you feel like you've got all this positive support all the time ... and then ideas really seem to flow. (Interview transcript, 2013: 6)

Jon Hughes describes how the process can lead to a multiplication of artistic creativity when (and this is also a very important distinction) the relationship between artists is fruitful:

It's about finding people that you really relate to and that you have a spark with, and then once you've found that with people ... you're like whoa, this is really cool. And then you collaborate, you'll have a thing that's more than the sum of its parts, like a relationship, you know. There's a thing when you two are together that is different to, that is unique to itself. (Interview transcript 2013: 9)

Also, as discussed in the previous chapter, the shared sense of ownership which arises out of collaborative approaches can be appealing to both composers and musicians. Dave Stewart's description of working on *Pig in the Kraton* with fellow AlphaBeta Gamelan member Andy Channing provides a nice insight into this, an experience he contrasts (in a non-judgemental way) with playing through-composed works:

In the case of a piece by, let's say, Symon Clarke, every note would be in place, it would be very, very thoroughly worked out and properly thought through and sort of 'heard' if you know what I mean ... because he's an experienced composer, he knew exactly what he was doing. But I never, ever felt I would want to say Symon, hey, why don't you change that note, you know? With Andy Channing it was a bit different. When Andy brought in this song *Pig in the Kraton* – the Number One gamelan hit – it was just a sort of riff, with a sort of *kotekan*-y bit, and I said – in the same way I would have said to ... one of the guys in one of my rock bands⁶³ ... 'Why don't you put in a stopping bit, Andy, that goes Bonk!' And he said 'Oh yeah, cool,' and then he went off and scribbled that down, worked the rhythm out of the accents of the stopping bit. So that was a sort of bit of input that you could make with somebody like Andy, because like me he comes from a rock background and that's how, often, tunes get worked out in rock bands, and people put their bits and pieces together, and everyone has always got some input. So, you know, it was kind of nice to be able to ... vary that: there were some composers that wouldn't have been appropriate with, but with Andy it was nice. For me personally, you think oh well *I* thought of that little bit, you know, and it gives you a sort of, a bit more ownership of the piece, in a way. (Interview transcript 2012: 5)

⁶³ Dave Stewart's extensive career as a rock and pop musician includes recording the number one hit 'It's My Party' with Barbara Gaskin.

Music retains a freshness and newness

Many find the freshness and unpredictability of open-ended works with improvisatory elements appealing, as for instance, Barnaby Brown describes in the *Iron Pipes* case study. For some, the idea that the piece takes on a life of its own, beyond the boundaries of the original ideas, is aesthetically desirable. In the second culinary metaphor of this chapter, Alec Roth this effect in his interactive, *karawitan*-based works:

I like to think of compositions as recipes. Each time they are cooked, the ingredients, spices, utensils, cooking times and temperatures may all be slightly different, so even though it is the same dish, hopefully the taste is always fresh and satisfying. For me, that's the essence of composing within the gamelan tradition and why I love it so much. (Songlines, online interview)

As Diamond discovered in her interactions with Indonesian composers, collaborative works are not reproducible in their original form once the participants have changed. This can be particularly appealing for composers who are happy to relinquish control and see their works go out into the world and evolve and develop an independent life of their own. Wilkinson describes the life of *English Garden* (see Case Study D) in two performances over a decade apart:

[A]ctually, the group has an impact on it, so the composition has to reflect that if it's to come back at a future date. So we were able to do *English Garden* a long time after it was written with a completely new group,... people who were really into improvising and performed it really brilliantly. I thought, this is a fantastic piece now. I always liked the *shakuhachi* part, but the gamelan players' improvising ability in that particular group, [they were] really kind of good at it. And so yes, ... the piece develops and has had a longer life now than the [pieces with] fixed scores. (Interview transcript 2011: 20)

Despite writing pieces which are relatively directive and through composed, Peter Moran explains that he is

quite interested to see what different forms my music can take. I'm not precious about it and I'm very curious to see what people do with it, and gamelan is a great example because they're going to have to make changes, they can't possibly recreate what we did... [For example], there's the piece I wrote for the bells of York Minster which was based on

gamelan, and then Emily [Crossland]'s version of that piece for *bonangs*. So perfectly interested to see how people take those ideas and translate them into different instruments, different settings, performers, contexts.... I'm quite happy to see what anyone else does to my gamelan pieces in order to make them fit their gamelan, I'm really keen to see how that plays out. (Interview transcript 2011: 19)

Indeed, the experience of writing for gamelan led Moran to question assumptions he had made about the composer's role in other contexts, allowing him to unify his rock music background with his academy-trained composer status:

My experience of gamelan has influenced me ... to change how I think about composers and performers and contexts. And as for my role as composer, it's a combination between that influence and especially the rock music where I might write a piece for keyboards bass drums whatever, but there could be an acoustic guitar version, and no one will question that it's the same piece. So in my journey of trying to align my background with my classical training, if you like, I had to wonder why there's only one form of classical pieces: why is it the thing you write and if I change anything it's a different piece? So I started writing pieces that I could change the instrumentation of freely, and I could let other people do the same thing, so everything could exist in different forms,... you know having one piece played by a contemporary music group but having the same piece reworked and re-imagined by a klezmer group. Or having a jazz singer do a classical piece that was influenced by jazz harmonies, things like that. (Ibid.)

Helps place gamelan works in the context of local cultures

There is an ongoing question which hangs over all composition for gamelan in the UK (perhaps less in the minds of current composers and performers than in the past) about gamelan's relevance to, and place within, the local cultural scene. One way to assert this relevance is by recontextualising gamelan through reference to local cultural markers – mythologies, folk tales, literature. This helps to counteract the sense of 'alien-ness' or exoticism that is often generated in the presence of the instruments (which may appeal to audiences but can be a source of irritation to practitioners, for many of whom playing gamelan is a normal part of their musical life).

Mythology is a common starting point, such as the collaboration between Javanese *dhalang* Joko Susilo and Gamelan Naga Mas to create *Wayang Cuchulain*, a shadow puppet play based upon Celtic myth. Literature is another, for example, composer Jon Hughes's collaboration with academic Richard Rowland to stage Rowland's translation of Sophocles' play *Women of Trachis*. And, of course, musical forms – from piano concertos to bagpipe collaborations – are a common area for cross-fertilisation. Whilst collaboration is not essential to this kind of recontextualisation, it can help: bringing together individuals steeped in their own areas of expertise creates the potential for a deeper, more artistically relevant cross-fertilisation.

Funding

To end on a rather prosaic matter, anyone who has filled out funding applications in the UK in the last ten years will be well aware of the prevalent nudge towards collaborative works. Arts Council England, the major UK distributor of government and lottery funds, actively encourages projects to seek out both creative and logistical partners, for example, asking applicants to specify 'How you will involve other artists or people with other skills?'⁶⁴ This encouragement is at least partly because projects with multiple partners have a greater chance of success, as different organisations have a stake in making it work. That aside, the Arts Council seems to actively encourage collaboration from an artistic viewpoint. Given the extent to which artists in all fields are increasingly collaborating, and the proliferation of interdisciplinary, multimedia creations, it begs the question of whether the shifts in creative practice discussed at the start of this chapter are, to a certain extent, generated by funding bodies, or whether funding bodies are merely responding to societal

⁶⁴ Arts Council. *How to apply*, p23. <http://www.artscouncil.org.uk/funding/apply-for-funding/grants-for-the-arts/how-apply/>. Accessed 3 August 2013.

shifts in creative practice. In reality, it is probably something of a ‘chicken and egg’ situation. When I put this question to Penny King, Senior Officer, Music and Dance at Arts Council England (and also a gamelan player), she replied:

As you say, there has been a clear shift in society and increase in the access that artists from a range of cultures and disciplines have to each other’s work. In a fairly crude/unscientific way you could point to some high profile examples in the rock/pop world of collaborations taking place which perhaps provide a good indication that things have been moving in this direction for a while regardless of funders.

The interest of funding bodies has most likely grown from priorities around the diversification of the funded arts and their audiences, and therefore the need to support the creation of new music in a range of genres and disciplines. It’s probably true to say that this has also led to artists and organisations pursuing this kind of work, as it’s seen as being attractive to funders. We’re always looking for exciting new ideas, and collaborations often provide great opportunities to create something which is both new and attractive to wider audiences. (By email, 9 April 2013)

In other words, the shift towards collaboration across the arts in Britain can be seen as something of a feedback loop, that there is in any case a cultural trend towards interdisciplinary collaboration, that this seen as attractive by many funders as a seedbed for new and exciting ideas, which leads more funding-hungry artists to pursue such approaches.

Having said this, however, I have yet to meet an artist who pursues collaboration because it is a good way to get funding, although I have met artists, such as Jurrien Sligter in Holland (where the situation is not dissimilar to the UK) who bemoan funders’ lack of support for individual composers, favouring instead what he refers to as ‘populist’ performances:

So it’s getting very hard – you have to apply for special projects, then you ... can [still] find funding.... [H]ere normal concerts are more and more difficult to sell, it has to be somehow an event.... Not just music but multimedia, theatre, dance, and that’s why our last project [for gamelan and video animation] is very successful: not so much because there’s

gamelan in it but because it's a multimedia event as well. (Interview transcript 2012: 12)

When is a composer not a composer? And when is 'not a composer' a composer?

One important theme to arise out of all this is that the term 'composer' in its original European classical sense is rather outmoded, and fails to convey the nuances of shared creative practice which are at play not just in the world of gamelan composition, but increasingly in the Western art music scene. The word 'composer' sets up a dichotomy between the recognised creator (who is rewarded at least with kudos if not coins for his work) and the performers, the passive recipients and reproducers of the composer's ideas. Whether or not this accurately represents the creative process in a given work of music, the conventions of the concert hall (in which the majority of UK gamelan performances take place) generate pressure to place a name next to a work in the programme – unless the work is of 'traditional' repertoire, that wonderfully vague, arbitrary and subjective label usually appended to works such as *Ladrang Wilujeng*, which are part of a widely shared repertoire and not attributed to a composer as such.⁶⁵

There are many different ways the cultural/institutional inertia towards naming a composer are dealt with by the, shall we say, main instigator(s) of collaborative gamelan works. Groups such as Naga Mas and Sekar Petak, which employ group compositional approaches as a core activity, seek instead to represent through their concert programme booklets the range of contributions which have gone into a piece, as in Mags Smith's programme note for a set of bagpipe and gamelan collaborations created for a commission in Inverness:

Roles in the collaboration: co-composers, devisors, music creators

Each time I go to write a programme note, I get stuck for hours trying to assign an identity to each role within the group. Who composed the music? Who is the director? Who's responsible for all this?

First of all, Barnaby is creating the piping music in real time. His part is pre-prepared in essence, but the detail is spontaneously improvised, different every time.... His energy and enthusiasm in all the meetings, not to mention his brilliant piping, has been a magical force in

⁶⁵ Even where these works might be attributed to a feudal lord, as in Sutton's example above, this name rarely appears in Western concert programmes, as it would necessitate a fairly lengthy explanation that the named person is the patron rather than the creator, and that the creator/creators' identity/identities are unknown.

this collaboration between Scottish and Indonesian traditions. Simon has taken a lead with the *kecak*, and Signy has kept us all in shape musically...

My thanks to Barnaby Brown and everyone in Naga Mas for collaboratively co-composing, devising and creating these new moves in Scottish Bali & Iron Pipes.⁶⁶

A more extreme approach is where those who are, arguably, mainly responsible for the existence of a work simply wriggle out of being identified at all. One attempt to do so was Jacobs's first work for gamelan ...*if it ain't got that gendhing*, in which the gamelan provides a riff and harmonic accompaniment for a jazz trumpet solo. Jacobs requested not to be named in the programme as composer, but although his name did not appear next to the title of the work, he was pinned down in the programme note written by group director, Neil Sorrell: 'John Jacobs put it together (he eschews the title of composer) as a result of conversations with fellow students on last term's gamelan course' (Gamelan Sekar Petak, Sir Jack Lyons Concert Hall programme 21 May 1997: 3).

The boundary between 'putting together' or combining pre-extant material and 'composing' is at the heart of this linguistic conundrum. Although the term 'composer' originates in the French '*composer*', to 'put together', it has come to mean something more, implying a novel creative role and a sense of ownership far more deeply ingrained than the Indonesian equivalent '*penyusan*'. For example, Southbank Gamelan Player John Pawson, allowed his role in devising the musical aspects of *Wayang Lokananta* (Case Study N)⁶⁷ to be described only as 'Musical Coordinator', vetoing the title of 'Music Director' (which would have implied a creative role), and certainly not allowing himself to be called a composer, even though certain sections of music were devised by him. For instance, a violent, unwinnable battle scene between gods was accompanied by an intense sonic/harmonic texture created by layering a *slendro* two-note *kodhok ngorek* riff and two *gatra* of *Ketawang Subakastawa* in *pelog nyamat*, underpinned by a devastating, relentless gong cycle. Despite the fact that the result was completely original, Pawson felt that the process of recombining extant material – including layering themes simultaneously to create new and decidedly non-traditional textures – did not count as composition.

When interviewed about whether he sees himself as a composer, Pawson's comments indicate the extent to which the term 'composer' itself is limited, too fixed in its

⁶⁶ <http://www.nagamas.co.uk/index.php/home/31-past-performances/90-scottish-bali-and-iron-pipes>

⁶⁷ A massive collaborative wayang kulit involving 15 UK gamelan groups and over 200 performers.

meaning, and incapable of reflecting the full spectrum of creative practices involved in generating new music, such as the instant when an ‘arrangement’ actually becomes a ‘new composition’. This is highlighted by the tentativeness with which Pawson discusses his role in the one work he does consider himself to have ‘composed’ which was the encore for performances of a 2011(?) collaboration between Rahayu Supanggah, electronica duo Plaid and the Southbank Gamelan Players:

[It] started off as an arrangement of a Plaid tune ... lets take some pre-existing Plaid music, I'll arrange it for gamelan and then they can put their stuff on top of it. But actually ... you'd need to listen very closely to actually hear what's being arranged and actually what the connection is between the original and my arrangement. And then ... we sang [ketawang] *Kinanthi* along with this arrangement basically. And that's the nearest I've ever got to sort of composing anything....

I'm quite keen to do some more, but it's something I really shy away from, which I think is largely about fear. But I also know that I'm not a composer, in the sense of I can't hear everything in my head. I can hear the pitches in my head really very clearly, but I can't hear the differences in the timbre of the different instruments and whether this is going to sound balanced against – you know I've not got a really well-tuned ear compositionally. (Interview 2012: 17)

Pawson seemed surprised and somehow relieved when I responded that for precisely this reason, many compositions in York were created in rehearsal by trying ideas out with the group. His surprise illustrated the profound difference between the kinds of approaches to new music for gamelan discussed in this chapter and those adopted by groups Pawson had been involved with in the past – AlphaBeta Gamelan and the Southbank New Music Group – in which many members seem to have displayed a more ‘Type I’ fixed view of what a composer is and does, and tended to produce through-composed, fixed, fully scored works (also explored in Chapter 4):

G: So that [rehearsal-based approach] didn't happen so much with AlphaBeta or the Southbank New Music Group?

J: No, not very much at all. You know, I think some groups have a snobbery around the whole idea of composition and the idea that the composer does have to – you know I remember being asked [about the arrangement of *A Short Ride in a Fast Machine*], ‘Oh would you like this

bit *mp* or *mf*?' and me thinking, well I don't know until I actually hear you doing it, and then feeling a bit, you know, actually like somebody was trying to make a point, score points against me, and thinking oh god, that's why I'm not a composer. (Interview transcript 2012: 18)

From a different perspective, as an improvising musician, Signy Jakobsdottir also displays an ambivalent attitude towards the definition of a composer:

I think the word 'composer' is misleading,... I'm not sure that I fully believe in it. A composer is just someone that's deciding what we're all doing, basically.... I am an improviser, and I've been improvising fundamentally and massively for years.... [For instance,] I'm playing drums in a dance class and I'm improvising,... I'm watching the dancers and going, 'Oh I really like that rhythm, that really works with that movement, I'm going to try and remember that', next day I come back and I can slip into that same thing and try it in a different way, and it keeps evolving and evolving.... So for me, that's my process of composition, if you like – from that point of view I think that all of us are composers, but certain people get to wear the hat that says they're a composer, and I think that's really misleading.... I do see myself – I have always thought about that situation, that word 'composer' and what does it mean to me – and I am a composer even though I'm not actually composing a piece.

(Interview transcript 2013: 6)

So we see here both situations where those who would be considered a composer in most Western music contexts evade the label in recognition of the contribution of others or out of doubt over what it is 'to compose', and those who would definitely not describe themselves as composers admitting to taking a very active, creative role in generating collaborative music. In this respect, the far vaguer concepts surrounding the 'composer' or *penyusan* in Indonesia – including the abovementioned relatively relaxed attitude towards ownership and originality – provide a much more subtle tool to accurately reflect the range of activities involved in creating new music, and one which is not only relevant to discussing gamelan composition, but to all kinds of improvised, open-scored and collaborative music making in all kinds of genres.

Process-oriented and outcome-oriented approaches

This chapter does not contain a section discussing why composers choose non-collaborative, through-composed approaches, as there is relatively little to say on the topic that is not covered in Chapter 2, in the section on ‘Why avoid *karawitan* structures?’ To recapitulate, the work may be based on a musical idea that is best served by through-composition, as in *Pieces of Five and Three*; or, as with Ensemble Gending, the group may prefer to save rehearsal time by only working with complete scores. Often, it is simply that writing a score is what the composer is accustomed to and prefers. Indeed, asking such a question of composers whose main background is Western art music can seem almost ridiculous; composers who write collaboratively tend to have plenty to say about why they do so, often having given considerable thought to why they act outside of the (Western classical) cultural mainstream, whilst those who write through-composed works in my experience rarely demonstrate any personal need to justify their approach, even in relation to Javanese gamelan where a highly prescriptive, directive approach is not the *karawitan* norm.

However, given that the context *is* gamelan, I think provides a space for questioning whether a through-composed approach should be blindly accepted as a default position, or whether a composer choosing to write in this way should consider his or her reasons as carefully as those choosing collaborative approaches tend to. As well as many works in which a through-composed approach is completely justified, there are no shortage of works in which I feel the composer could have achieved the same effect far more easily by other means. For instance, there are many pieces which emulate the sounds and textures of traditional *karawitan* by writing out each part prescriptively (for instance some early works by Lou Harrison, Colin McPhee’s orchestral arrangements, or individual instrumental strands of Symon Clarke’s *Strange Attractor*⁶⁸). At best, such works can be frustrating to play, especially for people like myself (Andy Channing, John Jacobs and Alec Roth all express similar preferences) who enjoy gamelan specifically as a means to escape scores and conductors and to interact creatively with the music. In the most extreme cases, the result can prove the worst kind of ‘pastiche’, because such pieces provide an image, a simulacrum of *karawitan* without utilising the underlying structures which give it life: they mimic the structural codes without acknowledging the processes embedded in them, such as the freedom to *garap*, flexibility within the *bentuk* to choose when to go to another

⁶⁸ See Chapter 4 for more details.

section, or the pleasurable interactive challenge of playing *imbal* or *kotekan*.⁶⁹ Even when the composition is not *karawitan*-like, there are cases where the kind of complexity the composer is aiming for could conceivably have been achieved in a more lively manner if the musicians were simply granted greater freedom over small details.

So why is it that a through-composed approach remains the default position? Why, despite the experiments of the twentieth century described above, is a ‘composer’ still primarily thought of as someone who writes a score laying out their ideas as precisely as possible? Is it just inertia, or does it also speak of preconceptions as to the limits of what can be achieved when creative input is shared, a certain disdain for the ‘quality’ of improvised music (however that may be measured)?

To explore this, let us consider an important point which distinguishes collaborative composition for gamelan from that found in much Western art music of the mid-twentieth century to the present day. Returning to the question of process-oriented versus outcome-oriented approaches, writing about collaboration within the Western art music idiom, Haydn & Windsor discuss the expectation that a collaborative, Type II work may be more process-orientated, sacrificing outcome, suggesting that ‘a focus on collaboration may move the working style away from a tendency to prioritize the output of composition towards a desire to reflect on and improve the processes which come prior to this’ (2007:31). In a similar vein, Steiner argues that Cornelius Cardew’s radical rejection of ‘the traditional values and processes of Western art music’ in favour of more open, improvisatory approaches to music failed to have any significant long-term effect upon musical practices, in part because it rejected ‘all the elements of [the tradition’s] language and aesthetic, and all concepts of product-oriented practice. It did this in favour of an exclusively process-oriented practice’ (1992: 13). Whilst these writers do not explicitly state that collaborative music = process-orientated (i.e. perceived quality is not the primary concern) and through-composed music = outcome-orientated (i.e. the composer wants control to create something ‘perfect’), this assumption – or the assumption that people may have this assumption – underpins their arguments.

Jakobsdottir reflects on this as a common perception relating to improvised music, when she points out that ‘in the early days the word improvisation connoted something like, you know, when you say improvisation, immediately you hear a type of music that’s really austere and kind of atonal’ (interview transcript 2013: 6). Similarly, I would attend a

⁶⁹ In this regard, Miller (2005: 93) cites the example of imitation *kotekan* lines in McPhee’s *Balinese Ceremonial Music* in which the pianists play the entire melody rather than interlocking parts.

concert of music by John Cage expecting to be interested in the ideas and the way the musicians have interpreted them, rather than to be entertained with a pleasant sonic experience in which I can identify structures, themes, harmonic development and so on.

These preconceptions arise from the limitations implied by collaborative music-making.⁷⁰ For a collaborative or aurally-learned⁷¹ work to display *cohesive* intricacy (by which I mean a structured complexity which can be described analytically and – hopefully – comprehended by players and audiences) it must either sacrifice ‘newness’, making heavy use of pre-extant material (as with *karawitan*-based works), or the musicians must commit a great deal of rehearsal time to developing original structures from scratch. The other option for those interested in working collaboratively but with limited rehearsal time is to sacrifice complexity of structure: either writing something very simple (like a rock riff) or set up freer improvisatory scenarios that do not lead to coherent, intricate, tightly defined structures, (such as Wilkinson’s *Spindrift* which ultimately produces something far beyond the composer’s control and has limited structural coherence).

In other words, to borrow a popular aphorism from engineering, ‘collaboration complexity, newness: pick any two’ (assuming for the moment that short rehearsal time is a curse which affects all groups equally, and is less a compositional decision than a set of circumstances). So a composer wishing to write complex, original material and get it to performance standard within a reasonable rehearsal schedule, is usually restricted to a through-composed approach. In the kinds of collaborative approaches common to experimental/avant-garde music, intricate complexity tends to be the one that is dropped, instead setting up parameters within which free improvisation can take place, or relying on chance procedure or environmental influences to direct the outcome; the composer surrenders his right to control the output, but the resulting music may be difficult to follow on a structural level, hence Jakobsdottir’s observations about how collaborative music tends to be perceived.

From this arises the implication that collaborative works are process-oriented, whilst directive (through-composed) works are ones where the composer is more concerned over the outcome. *Karawitan*-based gamelan composition, by instead sacrificing ‘newness’ and making only relatively small steps away from traditional structures, offers a third choice: to choose collaboration and complexity. This is why such approaches can be harnessed by

⁷⁰ I am very much indebted to conversations with John Jacobs in developing the following discussion.

⁷¹ As mentioned before, aurally-learned music is not necessarily collaborative, but the overlap between the two approaches is such that it is worth including aurally transmitted works in this discussion.

composers such as Roth, Sorrell and Jacobs to produce aesthetically cohesive, outcome-oriented music, whilst retaining the advantages of a collaborative process in performance: a strong sense of feel for and commitment to the music by the performers. It can even be done, as works like *Full Fathom Five* show, whilst still giving the sense of newness – a water-filled *bonang* or a *slendro genderan* over a *pelog* riff present no great challenge to the musicians, but provide a fresh take on the genre that carries the piece beyond possible accusations of pastiche. A similar approach is found in many contemporary jazz ensembles, which also rely on a shared, pre-established practice for improvising around a core idea, such that the performance is completely fresh and original whilst keeping it easy for audiences, and more importantly musicians, to keep track of underlying structures.

So in summary, I certainly do not wish to imply that all composers should consider a collaborative approach first: some of the most beautiful pieces discussed in this thesis are through-composed and could not possibly be anything else. However, for composers engaged in the quest for alternative approaches to creative process, gamelan – especially the processual codes embedded in the performance of *karawitan* – has much to offer, providing fertile ground for the exploration of more open-ended formats in which the composer can retain a high degree of control and craft something beautiful whilst harnessing the richness, variability and enthusiasm generated by collaborative music-making.

Case Study D

Collaboration in the works of Clive Wilkinson

Recordings: R-D.1 (*English Garden*)

Score: S-D.1 (excerpts)

York-based composer Clive Wilkinson composed has over a dozen works for Gamelan Sekar Petak over nearly three decades covering a range from fully scored to highly improvisatory text pieces. The type of compositional approach he adopts depends very much on the current membership of the group which will perform it. His first work for gamelan, *Lagu Sue* (1985) was a *karawitan*-like composition with a *balungan* which was *garaped* and otherwise developed by the current gamelan group at York, a particularly keen and committed group, many of whom went on to professional careers in the UK gamelan community. Similarly to Jordan's *Mabon*, the piece was developed during rehearsal with input from the players:

I wrote the *balungan*.... And then people like Bob Gilmore added an *imbal* with David McGuinness, somebody else thought up the gong pattern, Maria Mendonça. So it was kind of a collaborative project.

(Interview transcript 2011: 2)

However, Wilkinson's next piece, *From the Flowering Currant* (1986),⁷² composed for an academic submission, was completely through-composed with a prescriptive staff notation score: a way of working he found himself disinclined to return to again. Questioned about this decision, many years later, Wilkinson reflects that:

[I] probably got more laid back and probably realised that there were two different ways to approaching it, and gamelan was perhaps exclusively gamelan and wasn't fitting into the contemporary music scene - there wasn't any interest in it, so I just started to absorb how the group was. Then I think the group started, like it is now, to have [former members] who were still hanging around, who were coming in and performing, so it had quite a good performance level.... And so I responded to the people who are in the group, I think, when I was writing a lot, ... it becomes about the group, from then on in.

(Interview transcript 2011: 7)

⁷² Later renamed *A Frail Bridge*.

Freed then, from concerns over fitting in with ‘the contemporary music scene’ of the 1980s (when there was probably even more of an expectation than now that composers – especially students in an academic department – would deliver detailed scores) and encouraged by the openness of current group members to pieces which involved improvisation and collaboration, Wilkinson used the gamelan to explore interests in systems for sharing creative input.

In one such piece, *English Garden* (1992), originally written for *shakuhachi*, violin and gamelan (but later performed without the violin), Wilkinson incorporated several non-*karawitan*-like collaborative elements such as unmetered scores, mobiles, text instructions, player-devised sounds and a high degree of performer choice on all levels. The piece arose from an opportunity to collaborate with York-based *shakuhachi* player Yoshikazu Iemoto. The Japanese connection inspired Wilkinson to look to Cage’s Zen-inspired ideas for using chance procedure and giving performers choices about what to play, and the name – horticultural, as many of ex-gardener Wilkinson’s works are – was driven by musings on hybridity and the history of Japanese influence in Western art forms:

So I thought about other art forms,... that painting in France was influenced *ukio-e* woodblock printing.... And I thought of pottery because there was a revival of pottery... in England with Bernard Leach: he went and studied in Japan the art of making pots.... And then I thought of one, because I was originally a gardener, and of course, a garden consists of plants from all around the world ... basically, an English Garden is anything but English ... a lot of plants come from America, lots of plants come from China and Japan and India ... you know the rose, we think of as an English plant: well there might be an English rose, but it's all been crossed with flowers from China.... So you get this crossing of plants, hybridising, and you have Henry Cowell talking about how a lot of the best music was hybridised, and is a mixture of several things. So that was it, English Garden, so here we are, we bring in the *shakuhachi*, that's just another influence, so we tie it up with Indonesian: it's a bit like an English garden, it consists of all these things, but it creates some kind of identity.

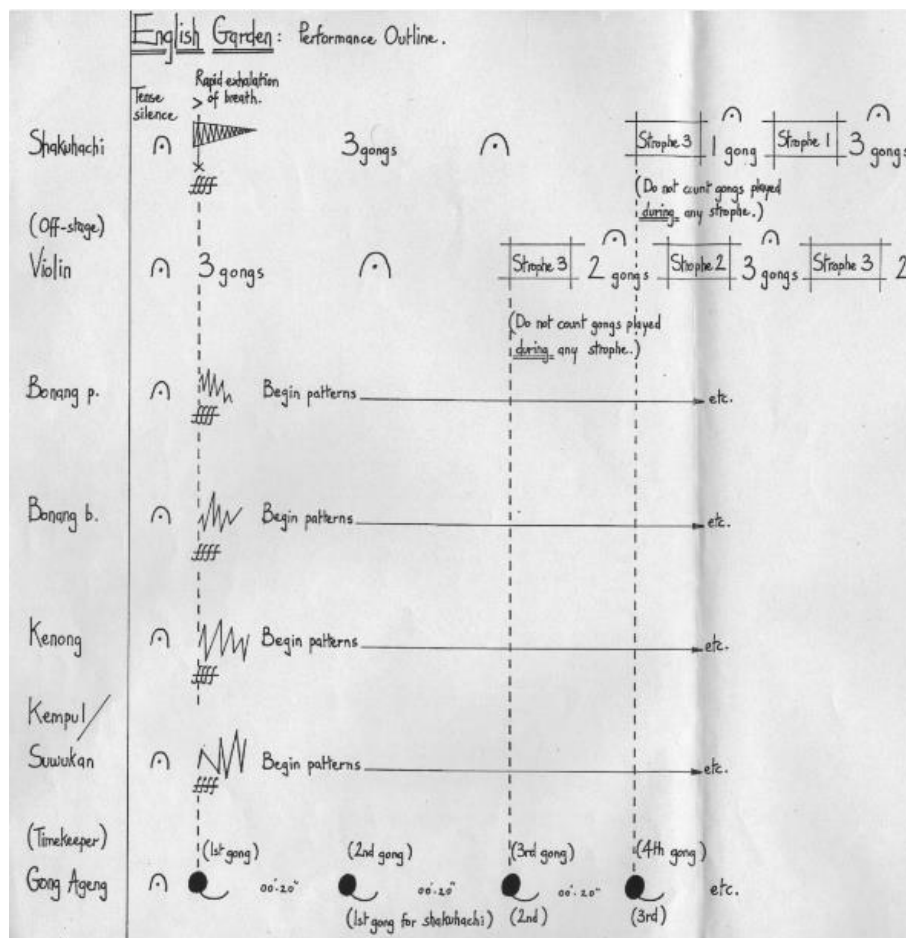
(Interview transcript 2011: 30)

Apart from the use of gamelan instruments, the most obvious tie-in to Indonesian ideas is that the work is underpinned by a *gong ageng*, scored to sound every 20 seconds, although, Wilkinson explains:

I think that was something that eventually broke down because I think I would leave it longer than 20 seconds and would vary it when I did it and when Garrett did it a couple of years ago, he kind of felt when to do it. So ... my initial idea had completely changed. But then it was all done so sensitively that I didn't really worry about it. (Interview transcript 2011: 18)

The gong provides a structure from which other players' decisions hang: for example, the *shakuhachi* player must wait a certain number of gongs between playing discrete blocks of material, whilst the other gamelan players can choose to change their patterns or continue doing the same at each gong.

Figure D.1: Excerpt of performance outline for *English Garden*



The *shakuhachi* part consists of a number of free rhythm 'strophes' – essentially mobiles, separated by a certain number of gongs. The performer has some choice about the

order in which they play these: there are four Strophe 3s and two Strophe 2s, although only on Strophe 1.

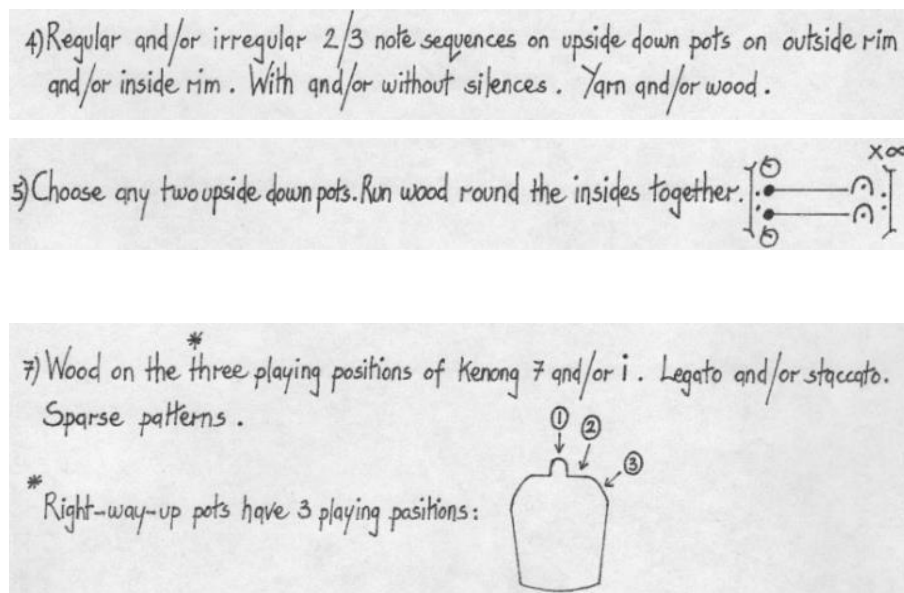
Figure D.2: One of four ‘Strophe 3’ s from *English Garden*



According to Wilkinson (Interview transcript 2013: 5), pencil notes on the score used in the first performance indicate Iemoto’s preferred order, which he determined during the rehearsal process and stuck to for the performance. Joe Browning who performed the piece in 2009 also fixed the order of strophes he was to play, because this performance also incorporated dancers from the Northern School of Contemporary Dance whose choreography was based on the graphic elements of the strophe notations, necessitating their order be pre-determined.

Aside from the *gong ageng*, there are parts for the three other *pencon* groups: *kempul/ suwukan*, *bonang* and *kenong* which consist of seven text instructions per instrument, varying from prescriptive (silence) to completely open (sound/s of your own invention) with varying degrees in between which specify or offer choices as to the part of the mallet used to strike the instrument, the position in which the instrument should be struck and so on. For example:

Figure D.3: Excerpts from text instructions for *kenong*



The piece enters its final section cued by the *gong ageng* after the shakuhachi has played all seven strophes.

Both the original performance and its revival in 2009 occurred at a time when Sekar Petak had several members who were interested in improvisation and the interpretation of indeterminate scores. Two years after writing *English Garden*, Wilkinson produced *A long way of seeing...* (1993) for piano and gamelan, which also incorporates aspects of player choice and chance procedure, although it is more closely scored and tightly structured than *English Garden* (Case Study I). Unfortunately, it was composed just before a significant exodus most of the experienced and experimental players from the group, making its name somewhat prophetic as it was a long time (seventeen years) before Wilkinson would see it performed. Wilkinson explains that 1993

was a sort of transition point: the gamelan [group] had been quite experimental, and [*A long way of seeing...*] was definitely written for those people ... who were a very strong kind of group. And then the group changed to a much more conservative kind of group at that point and that just didn't seem like – I didn't want, because it had some experiments in it, to introduce that to that kind of ensemble. (Interview transcript 2011:16)

Although Wilkinson continued to write for gamelan, his subsequent pieces in that period were all more conservative, and although he did not write any completely prescriptive works, they tended to involve no greater levels of self-determination than *karawitan*.

More recently, however, he wrote *Spindrift* (2009), a text piece commissioned by 'Gong Agenda', a sub-group of Gamelan Sekar Petak formed in 2008 by members who were interested in experimental, improvisatory performance:

Figure D.4: *Spindrift* score

Spindrift

Sounds to be created using traditional gamelan instruments. Pelog and slendro scales may be combined.

Non-gamelan instruments may be included.

Voice may also be used as part of a sound.

3 players minimum.

Each player creates three long sounds – sounds that appear to have no beginning or end.

Each player creates two short/ percussive sounds – never played as a regular pulse.

Each player creates a silence – the silence should have personal identity –
“active”.

Sounds should not be like those used in traditional gamelan music.

Each sound may consist of more than one source – timbral complexity.

Each sound should be different from each other in some way.

Each player to create gamut of sounds separately/ individually.

Feldman – “...*Know your material...*”

Rehearsal and performance

Decide on numbers 1-5 for individually created sounds – numbered in order of
creation.

Before each rehearsal and performance each performer must arrange the order of
their sounds using chance. Once decided on, remains the same throughout rehearsal/
performance – [31524] x. The cycle is interrupted by your “silence”. Your silence may
appear anywhere any number of times – never fixed for place or duration.

How to start?

By chance decide if tutti or solo or all stages between.

If solo use chance to decide who starts.

Other possibilities available?!

Performance

Combining your sounds/ silence with others, or solo – continual exploration of the
possibilities of the chosen sound. Use our silence to good effect. There will be many
combinations possible.

Performance mode = attentive to both your sounds and other player's sounds.

Attempt to work out in performance each player's cycle. When achieved a deep
exploration of the available combinations is possible.

Duration of each sound not fixed. If not “working” stop – here silence is very useful
– and move on.

Overall dynamic quiet, unforced and meditative.

Ending

Signal from agreed player: complete your cycle.

If situation demands, duration for the piece may be decided on.

Having performed *Spindrift* myself, observed performances by others and used it in a
beginner's gamelan workshop to encourage players to listen to each other, I feel it
represents a kind of logical endpoint of open-scored, improvisatory, collaborative music.
Whilst anyone can sit down and play it, its development into a performable piece of music
tends to be achieved through discussion between participants, firstly of how to interpret the

score, and then of how the improvisation went and what could be done to improve or refine it. In this respect it is interesting in that it has a single, identifiable composer who issues clear instructions, yet is at the same time an almost entirely collaborative work where each person who performs it has as much creative input as anyone else, and arguably even more than the composer.

It also represents an end point for collaborative gamelan pieces, in that it could be for any instrument, unlike English Garden with its specific instructions as to how to hit specific instruments relating to specific timbres which can only be obtained from a gamelan. Although composed for gamelan, Spindrift can be performed on any instrument, or even adapted as instructions for dance choreography, and is therefore, by certain standards, not strictly speaking a gamelan piece. However, the absence of structure, which requires players to listen to each other, placing their sounds in response and reach collective group decisions provides perhaps the only remaining link to gamelan: drawing on the sense of shared feel and responsibility which, for example, governs the slowdown to the final gong in a *gendhing*.

Case Study E

Mags Smith, Barnaby Brown and Gamelan Naga Mas: Iron Pipes

Recording: R-E.1

Score: S-E.1

Iron Pipes (2008) was co-created primarily by Naga Mas member Margaret (Mags) Smith and Highland piper Barnaby Brown, in an interactive-collaborative process in which group composition elements were facilitated – as are most Naga Mas compositions – by group director Signy Jakobsdottir. Of all works arising from the collaborations between Brown and Naga Mas, *Iron Pipes* is, to the greatest extent, Smith's composition.

Smith considers herself to be primarily a community musician, and has been heavily involved in the Naga Mas's outreach work with schools groups and families, children and adults with additional support needs, and also works with Good Vibrations which runs gamelan workshops in prisons. It is perhaps this interest in community music-making that informs her approach to composition: her pieces tend to be conceived from the outset as collaborative works, with carefully prepared starting points from which the group can create a performable piece. Speaking of the compositional process, she explains:

I prefer to work in terms of devising music – coming in with a bare bones structure, filling it out, making decisions together.... I don't compose a lot, it's not my main thing, but I love making music in groups and I love sharing ideas and ideas growing in a group. For me, it's being part of a music group for a period of time and playing music together and having an idea of different levels of ability within the group: some people read music, some are good rhythmically, some play better by ear, some are natural players, others have far more training – a real mix. Somehow working on some music together ... can bring out some of the strengths; it can be challenging as well, but I think it then also produces a piece that is kind of what the group can play. (Interview transcript 2011b: 2)

Iron Pipes originated from a request by a venue in Inverness for a concert of gamelan and Scottish music. In initial discussions of ideas on how such a fusion might be made to work,

a gamelan-and-bagpipe collaboration was jokingly suggested.⁷³ By a strange coincidence, says Smith, “The very next day this bagpipe player in the [Royal Scottish] Academy [of Music and Dance] came up and started talking to Simon⁷⁴ about gamelan and we thought, ‘This is the man.’ And he was!” (interview transcript 2011: 1).

The man was Barnaby Brown, a former flautist specialising in contemporary music who is now an expert in Highland pipes, *canntaireachd* chant and the northern triple-pipe. As a musician with an interest in collaborative, collective ways of working, Brown had been somewhat disillusioned by other attempts to ‘collaborate’ with bagpipes made by orchestral composers:

Well, I’ve always had a very low opinion of bagpipe and orchestra collaborations.... I mean I’ve done *An Orkney Wedding at Sunrise* ... and you know as a piper you play eight bars in that piece. They’re repeated about four times. It’s absolutely trivial ... I mean orchestrally it’s beautifully scored, fantastic virtuoso stuff, but it doesn’t at all understand the bagpipes, and that condescension sums up the relationship of the bagpipes to mainstream Western music in ... the nineteenth and twentieth centuries, really. It was only the end of the twentieth century it begins to be the kind of respect where a musicologist bothers to address the ignorance, and so I think I felt much more comfortable with the idea of collaborating with gamelan than with a Western orchestral scenario. I mean, I am an orchestral flute player, ... I am happy reading graphic scores and all of that, but did feel it was all terribly pretentious, and I did get quite angry sometimes that composers took credit for things that we, the performers, were doing [laughs]. (Interview transcript 2013: 6)

Brown’s intuition that working with a gamelan would be different was well-founded.

Describing the experience, he says:

The collective aspect of it I find very appealing. And yes, this is a reaction against the cult of the individual, the composer, the conductor. Yes, I feel very much part of – I don’t know whether it’s a movement, but the idea of

⁷³ Although funnily enough, this was very far from being the first ever gamelan and bagpipe collaboration. For example, the home of Gamelan Madu Sari (Simon Fraser University, Canada) doubled up as a bagpipe practice space, leading to a spate of gamelan and bagpipe collaborations, such as I Harjito’s *Sekat*, I Wayan Sudirana’s *Marathonologue*, O’Neill’s *Lessons of the Garden* (with the Evergreen Club Gamelan) and Welch’s *Pak Gusti Aji* (del Tar, 2010).

⁷⁴ Smith’s partner, Simon J. van der Walt, a composer and member of Naga Mas.

collective composition, and creating things in ways that one individual couldn't achieve, and also the ownership in the music being with the performers, and, to a degree, in the moment of performance....[T]hat's where I feel comfortable, and that's ... one of the things I most enjoyed about collaborating with gamelan Naga Mas. (Ibid.)

Brown, Smith and van der Walt held an initial meeting in which they sketched out some ideas and came up with a format whereby the group would set aside a 'devising weekend' to work on material for the Inverness concert. The programme would include an arrangement of a traditional gamelan piece to include pipes, a couple of Scottish airs arranged for gamelan and an entirely new work (this was to become *Iron Pipes*).

Describing the start of the creative process, Smith recalls:

Before the weekend ... myself and Barnaby sat down and played, and I marked out parts for some of the gamelan.... I sketched a few sections of music for the new piece and wrote down some ideas for what they'd do. So I had kind of a *balungan* and thoughts about the different bits and how they might go, and that's what we brought to the weekend.

(Interview transcript 2011: 3)

The subsequent devising sessions were facilitated by Jakobsdottir, as group director. Jakobsdottir is someone who would probably not describe herself as a composer in any situation, but as a musician has a profound interest in collaborative creative processes:

I get to observe dancers' processes a lot:... when a choreographer makes a work, they have their dancers in front of them and they get them to improvise, and then they get to observe what they've improvised and then they get to kind of mould and sculpt that. And my observation is that ... that's a really cool way to work, as opposed to the way ... composers often work, which is composing something far away from the musicians, just completely separated from a group.... [T]hat's a kind of an extreme version of what composers do, but certainly in the old days that's kind of how they were expected to work. And I've always ... found that really difficult to relate to, that way of working; there has to be a place in between where the composer is with the group, and gets a chance to feel their ideas evolve, and not have them all made in advance, ready, you know? (Interview transcript 2013: 1)

With this in mind, Jakobsdottir's approach when a composer brings an idea to the group is to get the musicians playing it as soon as possible, and to begin developing ideas and refining them towards a performable piece:

[I]f I'm rehearsing a [gamelan] group, I'm aware that ... often those musicians are not professional musicians; ... possibly they will not have played for a whole week, they will only be playing during that rehearsal, and therefore it's a priority for me that they play as much as possible during that time.... [So] when I work with a composer, I try and immediately get an idea, translate it into a playing situation, so if they're like 'Oh I'm not sure, I had this kind of idea but it's not quite, I haven't quite figured it out,' I'll just try and as fast as possible get people playing something of that idea, just so that ... people are playing, the composer is getting to hear something – and then as quickly as possible stop it, and then feedback, ... find out if it needs to go faster or slower or darker or lighter, less people playing more people playing, and then quickly implement that, so that you're evolving things through playing, rather than through sitting about waiting or thinking ... because you learn more that way than you do by thinking things out, and people are also getting a chance to practice.

(Interview transcript 2013: 10-11)

Describing the experience of working with Jakobsdottir, Brown enthuses:

Signy is the most wonderful facilitator. Behind the scenes, just gently helping things to happen.... [S]he's somebody who's really easy to gel with,... she deals with egos brilliantly and she makes people feel [they] have ownership, but she also knows when to bring things to order and when to drive things forward, so she's not afraid to command and she does, in her quiet way she does command.... [A]lthough we did work to plan things in advance, Signy responded to what I did and I responded to what Signy did. And that – and because I'm used to that from having done collaborations with Indian musicians – that really worked. We enjoyed that.

(Interview transcript 2013: 1)

The ideas sketched out in the initial meeting were presented to the group, which expanded upon them through the rehearsal process in what became something of a group compositional process. The notation, given below in excerpts, represents the original ideas

jotted down by Smith, and is in some places quite different from the performance in the recording. Sometimes these differences simply represent the relatively simple process of filling in colotomic or embellishing parts from the *balungan*, but in other places the performance departs more significantly from the written material. The gap between the two representations provides fascinating insight into the collaborative composition.

The work had several (Smith recalls five [email 19 Aug 2013]) outings and continued to grow and develop with each one. According to Brown, his role in the piece continued to evolve with every performance, and he describes his input, which was largely improvised, as ‘seat-of-the-pants’ (interview transcript 2013: 1).

One important idea that came out of the rehearsal process was a need for a ‘playing in’ section in which the gamelan and piper could get used to each others’ tonalities and settle into the piece. In terms of actual pitches, Brown had taped the holes on his chanter in order to tune his pipes to the gamelan as closely as possible, but the ‘playing in’ section was more an opportunity to acclimatise to each others’ timbral, expressive and other sonic qualities than an issue of tuning. The ‘playing in’ idea developed into an introduction with fairly free improvisation on the pipes and interjections from the gamelan, controlled by cues from the drummer (Jakobsdottir). On each cue, the gamelan plays one note at a time from a series of pitches, in a rhythm dictated by the preceding drum cue, chosen at the discretion of the drummer. Where no rhythm is shown for the gamelan, they simply play a single note on the gong:

Figure E.1: Iron Pipes - Introduction

The image shows a handwritten musical score titled 'Iron Pipes - Introduction'. It is divided into two main sections: 'Tuning In' and 'Pipes improvisation - series of drum cues for gamelan notes'. Under 'Tuning In', there are four drum cues: ① 11 11 ④, (loud) ② 11 11 ④, ③ ~~~~~ shimmer, and ④ ? 11 11 11 11 11 11. Below these are the corresponding gamelan notes: 5565, 7677, 611, and 343.

As can be seen from the notation, drum cue four was not notated by Smith (given only as a question mark) but created in the rehearsal by Jakobsdottir. The note 4 near the end of the series (recording R-E.1, around 2m24s) helpfully provides an audible cue for the piper that the series is near the end; note 4 is used sparingly in *karawitan*, usually as an exchange note for 3 or 5, and could be thought of as the eccentric note in a pentacentric⁷⁵ scale.

⁷⁵ The term pentacentric is used to describe a scale which has five main pitch centres, but also makes use of other, less significant pitches in passing.

Although the term ‘discordant’ has debatable meaning in this context, 4 is certainly a note which easily stands out from the others.

The rest of the piece alternates between ‘jig’ sections, characterised by a triple-time metre, and material drawn from Javanese sources in four-beat *gatra*, with labels such as ‘*lancariron*’ (a combination of *lancaran* and iron) or *gangsaran*. Jig sections are written with the strong beat at the start of each *gatra* (or perhaps, in this case, ‘bar’ is a more appropriate term), whilst Indonesian-influenced sections are written with strong *seleh* notes at the end of the groupings.

The first ‘slow jig’ section is probably better described as ‘jig-inspired’, as at such a low speed, it has more the feel of simple triple 3/4 time than the compound duple 6/8 beat common to jigs. Although *balungan* melody does not play in the typical lilt of a jig, the rhythm of the *kempul* in the background does allude to this.

The slow jig is followed by a transition section in which duple-time gestures are played against the triple-time structure, with the drum and colotomic parts continuing to play three-beat patterns, while the *balungan* play every two beats and then (not written on this notation) every four notes. Having prepared the ground for the next section, the music grinds to a halt before picking up for the *lancariron* with a perky drum cue.

Figure E.2: *Iron Pipes* - Slow jig; Transition; *Lancariron*

Slow Jig 3 times

A section
 || ① 5 6 1 6 5 1 5 6 1 6 5

Kempu
 [i . . i . 7]
 [5 . . 6 .]

5 || x2

B section
 || 5 5 5 5 5 5 6 6 6 6 6 6
 4 4 4 4 4 4

5 || x2 lower line 2nd time

transition
 4 . 4 . 4 . 4 . ①
 ① t t p b p p p p ⑤

Lancariron once only
 1 5 1 5 1 5 6 5 2 5 2 5 2 5 2 5 x2
 6 5 6 5 3 5 3 5 2 5 2 6 2 5 2 5 x2

The *lancariron* section provides melodic material for the ‘fast jig’ section. The transition to the fast jig is instant: the tempo pulls back slightly, then simply doubles, with one *gatra*/bar becoming two. This section is recognisably jig-like, with a lilting melody beginning on the *peking*:

Figure E.3: *Iron Pipes* - Fast jig

Jon
Fast Jig
3 times
(3 X total)

A section

① · 1 5 · 5 | 1 · 1 5 · 5 | 1 · 1 5 · 5 | 1 · 1 5 · 5 |

N1 NS N1 NS

2 · 2 5 6 5 | 2 · 2 5 6 5 | 2 · 2 5 6 5 | 2 · 2 5 6 5 || x2

N2 5 2 5

B section

⑦ 6 5 3 · 3 | 7 6 5 3 · 3 | 7 6 5 3 · 3 | 7 6 5 3 · 3 |

2 · 2 6 · 6 | 2 · 2 6 · 6 | 2 · 2 6 · 6 | 2 · 2 6 · 6 || x2

The first cycle is sparse, with only peking, slenthem and colotomic instruments. In the second cycle, the gamelan fills out the texture with bonang countermelodies in a lovely illustration of the difference between a musical idea in its fairly raw form (as notated) and how it sounds after elaboration through Naga Mas's group-compositional process. The pipes join the gamelan in this section with a strident counter-melody. The following very rough outline transcription is based on the Rutherglen recording and not necessarily representative of all performances:

Figure E.4: basic transcription of pipe solo in the 'fast jig' section

A section:

[! 0 ! 5 0 5 ! 0 ! 5 0 5 ! 0 ! 5 0 5 ! 0 ! 5 0 5
5 6 5 % 0 0 0 5 6 % 5 6 5 6 5 % 0 0 5 6 % 5 6 %]

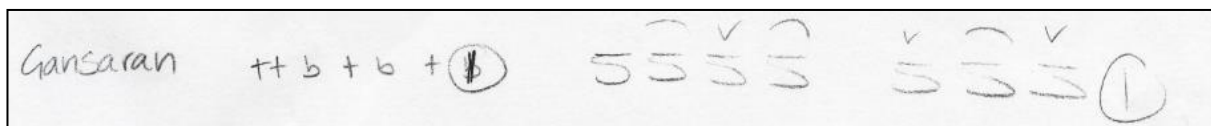
B section:

[# 0 0 7 5 7 # 7 # % 0 0 7 5 7 7 0 0 7 5 7 # 7 #
5 6 5 % 0 0 0 5 6 % 5 6 5 6 5 % 0 0 5 6 % 5 6 %]

As can be seen and heard, at least for the first time around the AABB cycle, the pipe sticks to the notes played by the gamelan in each line, although its emphasis of the p5 in the second line creates a certain astringency, as this is an augmented fourth away from the stronger note p2 in the gamelan. In the recording [time], as the tune comes around for the second time with pipes, the gamelan goes back to A, whilst the pipes initially play the first line of B section. Whether this was intended or was, as Brown puts it, a 'seat-of-the-pants' moment, it provides an exciting extra-modal feel for a brief moment before the pipes revert to their normal 1 and 5 pattern for this section.

The fast gig is followed by a solo pipe improvisation, before heading to a final raucous section labelled *gangsaran*, a simple form borrowed from ceremonial *carabalen* gamelan music, characterised by a melody on one note (Pickvance 2005: 72).

Figure E.4: *Iron Pipes* - *Gangsaran*



One interesting feature of *Iron Pipes* arising from its collaborative nature is the difference between the notation and what is heard in the performance. The fragments of notation given above represent the initial ideas brought to rehearsal by Smith, so the differences between these and the performance (as heard on the Rutherglen recording) provide valuable insight into the creative process. The question mark for the fourth drum cue in the introduction (Fig. E.1) has already been mentioned. More intriguingly, the *kempul* part in the slow jig and transition (Fig. E.2) is substantially different from the written notation, showing that such works can take on a life of their own, sometimes to a far greater extent than the composer initially envisaged. Having a gentle dig at her partner, van der Walt, who was also present during this interview, Smith explains of one of the more divergent sections:

Simon and Jon [Keliehor], two of the significant composers in the gamelan, took it upon themselves to always play something different in [the transition] section, and it became... bigger and bigger. It was really nice that this was allowed to happen. I don't think any other composer would have allowed that!

(Interview transcript 2011: 4)

Van der Walt describes his and Keliehor's role in more detail:

[T]here's a bit ... which me and Jon do on the gongs and [we] sort of know what we're doing. We've never done it the same twice. Sometimes we've done it in a way that both of us would feel is wrong ... [T]he tune that you have ... goes in 4s and 8s and 16s and things, and Jon or I would kind of change on 3 or 7 or 5 if we felt like it – we never really fixed it.

(ibid.)

In the slow jig, the notation suggests a *kempul imbal*, split between two players (see Fig. E.2, box on the top right):

! 0 0 ! 0 7
0 5 0 0 6 0

but in the recording two different kempul patterns can be heard, neither of which match the above. The patterns correspond to the A and B sections marked in the notation. The A section pattern centres on note 1, whilst the B section pattern emphasises 5:

A section:

! 0 0 ! 0 7
0 6 0 0 6 0

B section:

0 0 6 0 7 0
5 0 0 5 0 0

However, the change from one pattern to another does not happen at the section change, but in anticipation of it, usually somewhere in the last four bars of the repeat.

Even more conspicuous is the *kempul* players' contribution to the transition section, (the passage referred to by Smith in the above quote). Upon entering the transition section, the *kempul* continue to play material inspired by the slow jig material, but become increasingly irregular and unpredictable until grinding to a halt with the final gong, which occurs considerably later in the recording than the four *gatra* marked in the notation.

Whilst Smith drops hints that she would have liked the wayward *kempul* players to fix their parts a little more firmly, it seems clear that the freedom to interact with the work in a more spontaneous manner was precious to these players, and one they were not afraid to insist upon. This brings us to an important question that underpins collaborative relationships: if a composer brings a work to the group with the stated aim of it being collaborative, to be devised and developed by group members, then to what extent can and should the composer exert their own creative discretion? One of the *kempul* players, Jon Keliehor, describes his own thoughts on the role of the composer:

The ability to say no to something is just sometimes more powerful than the ability to say yes. Yes is always good, but no is far better.... And to say stop, whilst something else is going on. (Interview transcript, 2011 : 8)

In this case, Smith clearly decided not to exert that composer's veto; she was content to let the players develop the section as they wished and resigned to the slight risk involved in an unpredictable performance.

All this provides an interesting illustration of the kind of dynamic that must be negotiated in collaborations between what is open-ended and what is fixed, and also highlights the often-missed distinction between something being collaborative and something being improvised. Obviously, there is overlap: if a work has any improvisatory element and more than one participant, it is to some degree collaborative. However, not all collaborative approaches involve improvisation: some group composition processes, for example, can produce works which are completely fixed by the time they are performed.

Of the three pieces created with Brown for the Inverness concert, *Iron Pipes* was probably the one Smith had the greatest sense of ownership over, and as a result, her desire to fix the major structural elements through the rehearsal process was by-and-large respected (albeit with some pushback from recalcitrant gong players). The structure devised for *Iron Pipes* struck a good balance between fixed and improvised elements, giving space for Brown, and to a certain extent the *kempul* players, to improvise and push at the boundaries of the work in such a way that each performance was unpredictable, but fresh. As Brown puts it:

I think we were all very committed to that process. I certainly enjoyed it and I think that, you know, for most gamelan groups you've always got mixed ability, and so having that balance of fixed and 'seat-of-the-pants' is good, it's important. Having the unknown element is what makes it exciting, though, and I think everyone enjoyed that, Mags included.

(Interview transcript 2013: 6)

Chapter 4

Transmission

We face a dilemma. On one hand we are concerned with the lack of an extensive notation for *karawitan*, but at the same time we realize that notation is not very important. In fact, the absence of it enriches our tradition by allowing many possible interpretations.

There are similar considerations in the use of notation for new compositions. One can write some notation for the musicians or none at all. For certain purposes notation may be necessary, but it is often used just for remembering what took place in a rehearsal. Frequently the notation is not binding or does not represent what actually happens in the performance. When using notation, the composer and the musicians must agree what the notation represents and how it will be used.

(I Wayan Sadra 1991: 22)

This chapter explores transmission: how musical ideas are conveyed from the composer's mind to the performers, or between co-creators in collaborative endeavours. This issue is closely interrelated with the questions surrounding creative process explored in the previous chapter as to whether the piece was the output of a single composer or collaboratively realised, the extent to which it was improvised/extemporised during performance, and to what extent the creative process took place during rehearsals.

However, the interrelationships are not always as straight forward as they might at first seem. Although a through-composed work with each note predetermined by the composer is highly likely to be fully scored, whereas a more collaborative work may have less in the way of notation (consisting, for example, of a *balungan*, a graphic score or text instructions), this is not exactly a deterministic relationship. As we will see, a highly fixed, through-composed work may be un-notated and aurally taught, whilst works with strong collaborative or improvisational elements may be notated to widely varying degrees without much affecting the actual end result or the way the musicians conceive of the music. Likewise, although a collaborative approach implies that a lot of the creative work will be done during rehearsals, there are also composers who write completely through-composed pieces, yet undertake much of the compositional process during and between rehearsals, for example bringing ideas, trying them out and refining them further before the next rehearsal, thus blurring the processes of creation and transmission.

Despite the unpredictability of correlations between transmission and creative process, there is nevertheless a high degree of overlap in discussions of these two topics. Therefore,

whilst this chapter primarily explores various forms of transmission – full notation, partial notation and aural learning – it also touches upon how the means of communication reflects the creative process and the relationship between composers and performers. It closes with conclusions that draw on materials from both this chapter and the last, merging the discussion of creative practice with that of notation and its absence.

.....

John Blacking famously described music as ‘humanly organised sound’ (1973: Chapter 1) Giving weight to the emphasis on actual sound, most people would agree that music exists in its most fundamental manner when being played. However, the development of notation in European music led to the act of musical creation being seen primarily as one of writing, with the composer’s ideas captured in a coded set of instructions for performance, often celebrated primarily on the merit of the score. Notation has come to be seen as a purer representation of the work than the performance, the closest possible connection to the music the composer wished to convey. As Nettl points out:

[Western urban society] use[s] the term ‘writing music’ broadly, substituting it for ‘composing’ ... whether notation is involved or not. We think of a piece of music as existing in its truest form on a piece of paper. The academics among us can hardly conceive of discussing music without knowledge of a single, authoritative, visible version. ‘I can’t say a thing until I’ve seen the score’, critics may say upon hearing a new piece, because the true representation of music is the written form.

(2005: 32)

The concept of a ‘single, authoritative, visible version’ based on the score has been challenged even within the realms of European classical music, with writers such as Roman Ingarden (1983: 1-7) questioning the fundamental existence of such a thing, pointing out that the experience of the composer, the interpretations of performers, and the various perceptions of listeners inevitably multiply something as familiar as a Chopin sonata into myriad ephemeral forms.

This is even more so the case in British gamelan works where – less likely to feel restrained by assumptions of ‘Western urban society’ as to how musical ideas can be transmitted, and potentially more influenced by practice in Java and Bali – many composers eschew prescriptive scores, preferring instead to take a more open-ended approach, perhaps based on *kepatihan*, perhaps a system of their own devising, or teaching aurally without any notation. Such approaches are facilitated by the fact that the composer

is quite likely to be a member of a regularly rehearsing group, allowing a less-than-prescriptively scored work to be taught/developed with the players over a number of weeks.

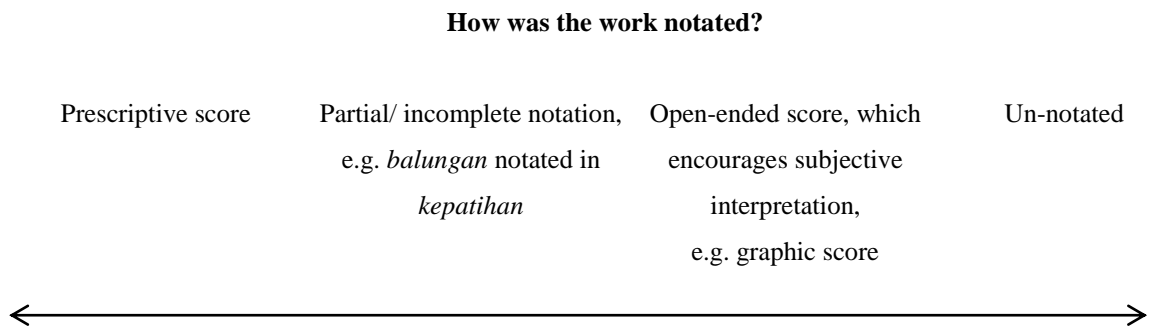
Whether the composer presents a full score in staff notation, a *balungan*, or teaches the piece entirely by ear, notation (and its absence) remains an important – and often emotive – aspect of gamelan composition in the UK. Both individuals and groups tend to display distinct preferences towards a particular approach towards transmission, and a composer can face significant opposition or irritation from players if the nature of the notation (including the existence or absence of it) is not to the liking of players.⁷⁶

Rather than allowing an unacknowledged bias to colour the following discussion, I may as well ‘set out my stall’ here. My personal preference – as both a musician and a listener – is for music to be aurally learned and performed without notation, or with only minimal notation – where possible and appropriate. As a poor sight-reader who finds it easier to learn by ear, I came to gamelan – and other musics I have flirted with over the years such as jazz, klezmer, Irish folk and Carnatic – almost as much out of a desire to escape notation as out of passion for the music. Notation has many benefits in many circumstances: it is convenient and efficient, and there are many fantastic works which could not possibly be anything other than prescriptively scored. Yet where I perceive there to be a choice, I cannot avoid betraying a preference for aural transmission (and collaboration/improvisation) of some kind. Of course, this is an idealistic bias, a frequently impractical bias, and one which I have often failed to apply in both writing and rehearsing my own compositions. However, I believe it is worth challenging the default position that a score is the simplest and most effective way to convey musical ideas, when in certain cases leaving musicians to devise their own parts, or teaching a catchy melody by ear, can produce far superior results.

Approaching notation in gamelan music in terms of a taxonomical spectrum is not as straightforward as in previous chapters, as the responses are not so easy to place along an axis. The problems encountered in attempting doing so, however, highlight some important considerations when discussing notation in gamelan music and are worth discussing briefly here. Consider the following:

⁷⁶ This is not unique to gamelan; the issue often crops up in contemporary art music, where composers’ attempts to communicate through novel adaptations to staff notation are often met with irritation by musicians, who find such constant reinventions unintuitive and overly-complex. From my own perspective as a violinist in a band, being presented with a tightly scored arrangement for a new song – even when justified musically – can be a source of mild frustration, since I prefer the autonomy to devise my own parts.

Figure 4.1: Notation spectrum



Although the graduation from completely aurally transmitted works to those which are fully and comprehensively notated seems fairly straight forward, there are troublesome instances which show the limitations of this system. For example, composer Andy Channing usually writes scores for his pieces which set out each part fairly comprehensively, but never lets anybody else see them, preferring to teach aurally in order to generate a strong sense of group ensemble and energy (interview transcript 2011:12). Given this, a Channing piece, being both fully notated and aurally taught, would have to be placed on this spectrum in some kind of quantum superposition, simultaneously occupying opposite ends, resolving only when considered either from the composer's or the performer's perspective.

Another caution to sound is that this spectrum may seem to indicate something profound about compositional approach and philosophy, when in some cases it is simply relating a set of circumstances. For example, John Jacobs' work *Lancaran Bentwrong* (2009)⁷⁷ was mainly taught aurally, including a *balungan* from which soft instruments had to *garap* their parts; performers were welcome to jot down their own notes if they wished, but no notation was provided. The following year, he wrote *Fair Roses* (Case Study F), but due to a much shorter rehearsal period, wrote down the *balungan* for convenience and speed. Both pieces had a very similar approach in terms of which elements were fixed and which were open to interpretation, as well as the possibilities for *garap*, yet one was notated and one was not – a fact which made next to no difference to performers, most of whom swiftly memorised the latter work (all eight *gatra* of it) in any case. So despite overwhelming similarities in terms of compositional approach, the difference in notation would have *Lancaran Bentwrong* and *Fair Roses* occupy very different points on this spectrum, whilst telling us little about the actual pieces, and not even a great deal about

⁷⁷ <http://php.york.ac.uk/library/dlib/johnjacobsphd/>

transmission, as the rehearsal processes were relatively similar: heavily based on aural learning and background knowledge of *karawitan*.

A third problem is that whilst there is a spectrum from ‘no notation’ to ‘fully scored’, the order in which works in the middle of the continuum should fall is far from clear. For example, although I have placed ‘partially notated’ work closer to prescriptive scores than ‘open-ended’ scores such as graphic notation or text instructions, this does not necessarily represent how restrictive/free the actual music is. Work communicated through open-ended instructions such as a graphic score or a text piece may, in fact, be very precisely conceived. For example, at a gamelan composers’ forum in London in 2013, US composer Philip Corner presented his work (*Gamelan*) *DUA UNI (2=1)*,⁷⁸ for which the score is text instructions for a very loud, high pitched, short note to be followed by a very quiet, low, long note. The musicians (a mix of gamelan and Western instrumentalists) having worked on the piece by themselves from these instructions were surprised to discover, in the one final rehearsal attended by the composer, just how specific, precise and restrictive his ideas in fact were, and that the composer felt there was very much a right way and a wrong way to perform the piece (p.c. Charlotte Pugh, 2013). Similarly, John Cage scores often look as if they should be very open-ended and non-specific but on further examination turn out to be very precise, giving musicians very little freedom in what they play: particularly in his earlier works, Cage relinquishes his own creative input not to the musicians but to chance procedure or input from the environment in which his pieces are performed, leaving these factors to control the musicians as closely as any composer of classical-romantic orchestral music (Cage 2004: 178-9).

So in one way, the existence or non-existence of notation and the nature of that notation does not always reveal as much as might be expected about how a piece works. Yet at the same time, the presence or absence of a score – whether in the composition phase, rehearsal phase or performance – can have profound and audible effects on the resulting music and the experience of the performers.

In some ways, then, it is not so much the graduation from fully-scored to un-notated as from transmitted using notation to transmitted aurally which is of interest in this chapter.

⁷⁸ Programme note: ‘(gamelan) DUA-UNI (2=1) consists of the fusion of extreme degrees of time space intensity in a polar complementarity: Surely short high loud belong together, leaving long low soft (very much) to equalize each other. They alternate. And since that contains everything in the universe there remains nothing to do but repeat. Endlessly. Some of the versions (it adapts to any possible instrumentation imaginable) are utterly without variation, while this one made especially for the occasion features precise changings in ensemble density and tonecolor.’

However, that spectrum itself leads to difficulties, as it fails to distinguish between works which are through-composed but taught aurally (hence Type I/closed-loop), and those in which the musicians have more creative freedom (Type II/open-loop). The following discussion, which examines different kinds of transmission and how they relate to compositional process and the negotiation of creative roles between composers and musicians, takes a hybrid approach: looking first at fully-scored/through-composed works, then at partially-notated/non-prescriptive scores, then at works taught entirely aurally (including Type I and Type II).

Notation systems

Before going on to consider the range of approaches in more detail, a brief overview of the two significant systems of notation used in British gamelan works – staff notation and *kepatihan* – will be helpful.

Staff notation

Staff notation is rather unusual compared to most other types of notation from around the world, in that it does not provide instructions as to how to produce the music from the instruments it is scored for (as does the tablature used in Chinese and Japanese classical music or in guitar tabs) but rather provides an intuitive, graphic illustration of how the resultant music will sound, leaving it up to the individual musicians to determine how to produce these sounds on their instruments. This representation is, however, far from comprehensive; whilst pitch and duration are specified, staff notation is less eloquent on matters such as timbre, relying instead upon more indirect instructions to musicians such as dynamic markings, attack, bowing or blowing techniques.

One of the major limitations of staff notation, relevant to its use in gamelan, is that although the pitches it represents are not absolute (a Bach keyboard score, for instance, can as easily be played on an equal-tempered as a well-tempered instrument) they do relate to a fairly specific tonal system: one with twelve notes with a gap of around 100 cents between them. Not only does it struggle to represent microtonal intervals, it becomes burdensome when dealing with pitch sets of more than seven or so notes, as anyone who has tried to read a 12-tone serialist score can attest. Where staff notation is used in gamelan compositions, various adaptations must be used to get around the issue of pitch.

Nettl's jibes about overreliance on the score aside, the power of staff notation to enable the entirety of a work to be made apparent to a trained observer at a glance, without the need to hear it performed, makes it a powerful tool both for composing and rehearsing.

Kepatihan

Kepatihan is a semi-prescriptive notation, usually providing the medium-density line played by the *saron*, vocal melodies, and sometimes colotomic marks (although it is often assumed that players will know where these fall), but leaving more subtle interpretation open to local custom and personal style. In Indonesia, *kepatihan* is often used in teaching, and occasionally as an *aid memoire* in performance, but is far more likely to be relied upon in countries such as the UK which are traditionally more score-dominated.

Whilst *kepatihan* offers more information about what the music sounds like than tablature, giving actual notes as numbers, this information is not graphically presented as in staff notation, and might be considered 'incomplete' by someone more familiar with Western notation, in that it does not cover the parts played by all instruments. An experienced musician can look at the *balungan* of a *gendhing* notated in *kepatihan* and imagine more-or-less what the other parts will sound like based on experience, but will not be able to anticipate every note, not least because *garap* of more complex instruments is subject to the whims of individual performers.

One of the main advantages of *kepatihan* is that it was developed for gamelan and is very easy to map onto the instruments. The system for numbering notes is simple to follow, enabling complete beginners to sit at a *saron* and start playing from notation, if that is the way the teacher wishes to approach things. It also gets around the problem of different intervallic relationships on different gamelans by its lack of graphic representation; in that sense it is a bit like tablature, in that you play the 'numbers' without necessarily being able to anticipate the sound that will come out (although variable-pitch instruments like *rebab* must make some accommodation to the *embat* of the gamelan).⁷⁹

Kepatihan deals concisely with scoring colotomic parts, using symbols above notes, rather than separate staves denoting each part. It is highly appropriate for notating cyclical music with unspecified performance order: instead of a strictly sequential score, it presents blocks of material (such as *merong*, *umpak* and *inggah*) within one or two pages which the

⁷⁹ I know of at least one gamelan teacher (Nikhil Dally) who vehemently eschews not only the use of notation but the common practice of singing the cypher pitch numbers whilst memorising *balungan* lines, thus encouraging students to remember melodic contour rather than a string of numbers as a proxy for the actual music.

musicians can cycle or move between according to cues from the leading instruments without troublesome page turns, which has obvious advantages in performances of contemporary composition, especially given most players keep their notation on their lap or tucked in front of their instrument.⁸⁰

Another advantage of *kepatihan* for new music is that if the ensemble already plays *karawitan*, members will be familiar with the notation and may well exhibit a strong preference for it over staff notation, if they even all read staff notation (which is not a given). (Although conversely, if the group do not have a grounding in *karawitan* – for example, Cragg Vale Gamelan and Ensemble Gending – they may prefer staff notation, being unable to interpret *kepatihan*.)

One significant disadvantage of *kepatihan* for notating new music is that it is rather poor when it comes to notating rhythm: without adaptation, it can only provide instructions for half, quarter, eighth (etc.) notes. Also, if used to notate un-*karawitan*-like music, it can be hard to auralise what the music will sound like from the string of numbers, especially if the score involves multiple contrapuntal parts.

Transmission methods

The next section of this chapter takes a closer look at three ways compositional ideas can be communicated: prescriptive scores, open-ended scores and aural learning.

Prescriptive scores

According to its purest definition, an absolutely prescriptive score is something which cannot exist, in the same sense that a map can never be the territory, regardless of how much information is piled into it. Even the most detailed New Complexity score cannot prescribe every aspect of how the music will sound, failing to account for room acoustics, the precise timings of audience coughs, or the rate at which the tension of a string or the diameter of an air column changes, microtonally altering the tuning of an instrument as it is played. So for the purposes of this thesis, what I refer to as ‘prescriptive’ or sometimes ‘comprehensive’ scores tends to be notations in which the composer has defined every note, its duration and the order in which they are played from the beginning of the piece to

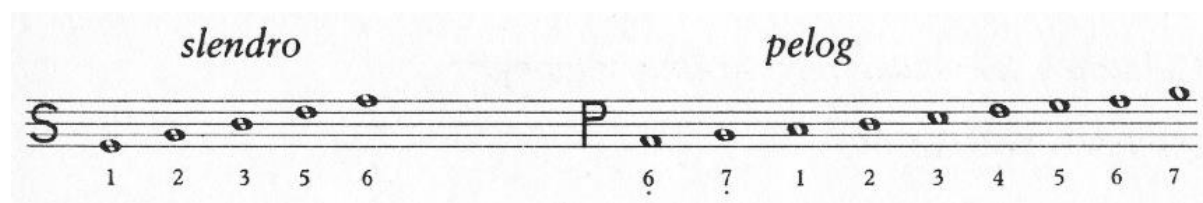
⁸⁰ Occasionally groups using low music stands are encountered (as in the Ensemble Gending videos below) but this is unusual – probably less due to the difficulty of sourcing low music stands, than to a general sense amongst most gamelan groups that notation is bad: even if they do use it, they might not wish to advertise the fact they are doing so. Others may find stands a source of clutter which interrupts the visual aesthetic of the gamelan and places a barrier between players, a point of focus other than one another.

its end, along with any relevant articulation marks and dynamics. There are, of course, degrees of prescriptiveness, but hopefully my use of this term, and its counterpart ‘non-prescriptive’, should be clear in context.

Composers choosing to write a comprehensive score potentially face a more complex set of decisions than if writing for, say, Western orchestral forces, as both the sounds they wish to represent and the requirements for communicating with gamelan players can be profoundly different. Neither of the obvious candidates – staff notation or *kepatihan* – are perfect for the job; staff notation is ill-suited to represent *slendro* and *pelog* notes, whilst *kepatihan* is a blunt tool when it comes to rhythm and also not great at representing multiple parts in a full score. So the first decision is whether to use staff notation, *kepatihan* or a hybrid of the two (I have yet to encounter any highly prescriptive score that does not employ one of these methods).

If using staff notation, the composer must first decide how to map the amorphous pitches of *slendro* and *pelog* onto a five-line staff. For the purposes of transcription in his *Guide to the Gamelan* (1990: xv), Sorrell maps the five notes of *slendro* onto the five staff lines and *pelog* onto both lines and spaces, replacing clefs with symbols S and P for *slendro* and *pelog* respectively:

Figure 4.2: *Slendro* and *pelog* mapping in *Guide to the Gamelan*

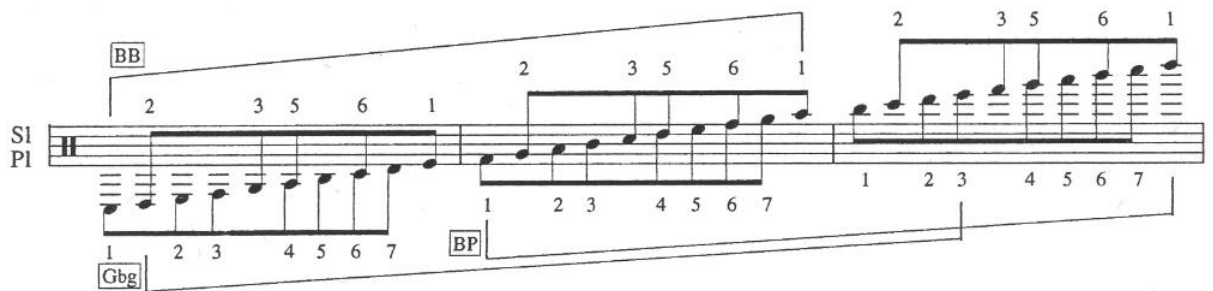


Whilst this is useful enough for transcriptions of *karawitan* pieces aimed at presenting Javanese theory to an audience trained in Western music, it has not, as far as I am aware, been used to compose new music for gamelan, not least because its author favours using *kepatihan* to notate gamelan parts in his own compositions. Were it to be used, the system could cause problems to composers wishing to mix *slendro* and *pelog* in the same piece, as it misrepresents the intervallic relationship between consecutive notes in each tuning and, when the two are combined, the order of pitches in which they come. More fundamentally, the space used to represent an octave range in *slendro* is substantially larger than that in *pelog*, such that although the 6s are on the top line in both tunings, the low 6s appear in completely different positions (not shown in *slendro*, but it would be one ledger line below

the staff: equivalent to an octave plus a fourth to anyone imagining the staff working in a Western sort of way).

Symon Clarke, in *The Magic Mirror* (1994), uses staff notation to lay out *slendro* and *pelog* notes in pitch order (ignoring the varied intervallic relationships), basing his system upon a fairly typical *tumbuk 6* gamelan in which *slendro 6 = pelog 6* and *slendro 5 = pelog 4*. In a visually intuitive solution, he positions the stems upwards or downwards to indicate which *laras* is represented:⁸¹

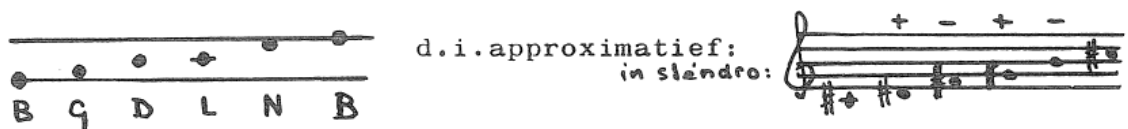
Figure 4.3: *The Magic Mirror*, introductory notes



For somebody analysing the score, this makes things very clear; however, it does require players to memorise which positions on the staff correspond to which notes on the gamelan

For his pioneering gamelan piece *Gending* (1975), Dutch composer Ton de Leeuw eschewed the use of five-line staff notation because ‘it implies an exactitude in pitch which is not relevant in gamelan music’, replacing it with a system that works along similar principles, but with fewer horizontal lines. This system, however, is suitable only for a five-note scale (*barang, gulu, dada, lima* and *nem* = 1, 2, 3, 5, 6): he expresses a preference for *slendro* to be used to play *Gending*, but does not rule out *pelog*, although it would inevitably require selection of a five-note *pelog* scale with no substitution of notes (such as switching 3 or 5 for 4):

Figure 4.4: Pitch representation in *Gending*



He describes the following advantages of this solution:

- Each note has its own autonomous symbol, identical in all octaves;
- a minimum of lines is required...;
- no accidentals are needed;

⁸¹ The letters in boxes refer to instruments – *bonang barang, bonang panerus, gambang* – and the square brackets mark their ranges.

- there is no ambiguity nor obscurity in pitch. The symbols don't give absolute height and therefore can be used in each concrete situation;
- convenient arrangement and legibility through the minimum of symbols used.

(de Leeuw, 1975: 1)

Whilst admiring of the fact that de Leeuw, one of the first non-Indonesians to write for gamelan, escaped the trap of fixation upon a particular *embat* or *laras* and found a way to represent this freedom in the score, as a player, I am not particularly convinced this system is easier to read than one with more horizontal lines. I would find G, D and N quite difficult to distinguish reading at speed, and would worry about missing L's leger line.⁸² Also its inability to cope with more than five notes makes it rather limited for repurposing into other compositions (which to be fair was not de Leeuw's intention). However, it is not as if, in 1975, there were many other examples for notating rhythmically complex gamelan music to draw upon. The decision to avoid staff notation may also, at that time, have been quite astute, ensuring that non-gamelan specialists observing his score would not mistake the gamelan notes as relating in any way to those in the 12-tone scale.

One other solution is to simply map actual gamelan pitches to staff notation as best one can, although the mapping will only work on the specific gamelan the composer has in mind, or those with a similar enough *embat*. Ensemble Gending specify this as their preferred method for composers submitting scores, and provide information on the approximate pitches of each of their instruments in staff notation, along with recordings of the actual pitches on their website.

Figure 4.5: Excerpts from Ensemble Gending's notation guide to *pelog*⁸³

⁸² This is echoed by Michel Ponsioen, a member of Ensemble Gending who expressed a preference for the 5-line staff notation method the group now specifies (email 22 July 2014).

⁸³ They request composers notate an octave below actual pitch. Full *slendro* and *pelog* mapping instructions in Appendix 1. Some composers writing in a single *laras* drop the accidentals.

In specifying their preferred style of notation, the ensemble – which is populated by professional percussionists, most of whom have no experience of *karawitan* – gives composers a firm push in the direction of writing through-composed works with no *garap*, using front-weighted bars⁸⁴ (and hence Western-style harmonic rhythm – see below) and generally treating the ensemble as a sound source which can be manipulated in the way Western orchestral ensembles can. Considered another way, it could also be said that any composer opting to use Western staff notation in any of the ways listed above is probably doing so because they wish to use the gamelan in a very different way to *karawitan*, that their compositional ideas are more strongly based in a Western conception of musical structure. Indeed, once the decision to use staff notation has been made, employing *karawitan*-based ideas such as *seleh* notes and *cengkok* becomes problematic, not least because the use of bars implies a front-weighted rhythmic harmony in which the strong, first beat of the bar tends to have implications for the harmonic meaning of the subsequent phrase (as is common in Western music). This is quite a profound difference from the concept of *seleh* notes, which rather provide a final confirmation of the melodic direction of the preceding phrase.⁸⁵

Whilst groups such as Ensemble Gending and Cragg Vale favour staff notation, for many gamelan players it is inconvenient, necessitating a different way of mapping written instructions onto the instruments. In some cases the players may not even read staff notation. For instance, Michael Nyman's *Time's Up* (1983), was submitted (last minute, hence the name) in staff notation for the English Gamelan Orchestra tour in 1983, but could not be read by the Indonesian guest musicians who took part, necessitating swift production of *kepatihan* transcriptions by Neil Sorrell. According to Alec Roth the Indonesian musicians in any case soon memorised their own parts: when he visited some of them in Indonesia over a year later, they sat down and played 'That crazy piece by Pak Nyoman,' as they called Nyman, from memory (interview transcript 2012: 7).

Hybrid notation is often employed by composers wishing to write in a non-*karawitan*-like way, yet communicate easily with players accustomed to *kepatihan*. For example, if

⁸⁴ As opposed to end-weighted *gatra* - see Chapter 1, section on *bentuk, seleh, padhang-ulihan*.

⁸⁵ Some Western-trained musicians do prefer to write out end-weighted music in the Western manner with the strong beat at the start of a bar/*gatra*: Jon Keliehor, for example, feels that it is simply a matter of convenience and familiarity, and if it's easier for people to read that way, then why not? (interview transcript 2011b:13; see also Harnish 2004: 132). However, if working with musicians who have more experience of *karawitan*, and if the composer wishes to deploy anything approaching *garap*, this can lead to problems, as it sets up certain expectations as to how the music is conceived of and organised: a common problem when working with inexperienced composers who have not yet fully internalised the concept of *seleh*, yet wish players to elaborate on something that looks superficially like a *balungan*.

the piece involves complex rhythmic ideas, the composer may notate rhythms using Western durational symbols whilst employing numbers to represent notes. This approach can be particularly helpful when combining gamelan with Western instruments, providing a score which can be understood at a glance by all players (as long as they understand durational symbols), such as in Daniel March's *Pieces of Five and Three*:

Figure 4.6: *Pieces of Five and Three*, Section 2

Another advantage to cypher notation is that it gets around the problem of gamelans with different *embat*; the players merely need to hit the required note, rather than bother themselves about how to translate the note written on a staff, possibly with a very different set of instruments in mind, onto their instrument.

There are fewer examples of prescriptive scores relying entirely on *kepatihan* notation, but one notable set of examples comes from Peter Moran, who in fact wrote a short treatise on how to adapt *kepatihan* to notate more rhythmically complex pieces. The main issue he tackles is that whilst *kepatihan* deals well with subdividing beats by multiples of two (as shown in figure 4.7), it struggles to convey more complex subdivisions, compound time signatures, odd-length *gatra* or bars, cross rhythms and tuplets.

Figure 4.7: One *gatra* of *kepatihan* showing one full beat, two half-beats, four quarter-beats and eight eighth-beats

5 j56 k5j5k66 15151661515166

Even notating the equivalent of dotted crotchets is awkward, as seen in this four-beat *gatra* subdivided into one-and-a-half beats, one-and-a-half beats and a beat, which although legible, fails to give an intuitive sense of the subdivisions of the beat.

Figure 4.8: normal *kepatihan* example

5 j . 5 . 5

Moran solves this problem by marking out non-standard groupings of subdivided beats with dotted lines instead of solid lines above the notes, specifying the number of subdivisions using rests, such that the above *gatra* would be notated:

Figure 4.9: Moran's adapted *kepatihan*

..... ..
5.. 5.. 5.

So for instance, one *gatra* from Moran's *Bonang Quartets*, subdivided into a five quarter-beat, a six quarter-beat and two regular beats, is notated as follows:⁸⁶

Figure 4.10: Excerpt from *Bonang Quartet No. 2*

The image shows musical notation for four instruments: Panerus Pélog, Panerus Slendró, Bonang Pélog, and Bonang Slendró. The notation uses dotted lines and tuplet brackets to indicate complex rhythmic ratios. The Panerus parts include dynamic markings like 'subito pp' and 'pp'.

(Moran 2009: 7)

Rhythmic ratios are notated by combining tuplet brackets with dotted lines, as in the following example, instructing players to play five notes in the space of six quarter-beats:

Figure 4.11: Notating a rhythmic ratio using dotted lines and tuplet brackets together

The diagram shows a rhythmic ratio of 5:6. A bracket above the numbers 3 2 3 5 6 indicates a group of five notes to be played in the space of six quarter-beats.

(Moran 2009: 10)

A final type of score worth discussing under the 'prescriptive' label is those which are not open-ended, yet not laid out in the logical manner, from start to finish, that a Western ensemble might expect, and do not have separate lines for each part, even though they are all specified. Such scores tend to be brought by a composer who is a member of the group

⁸⁶ To avoid excessive complexity in the score, only one superscript line is used to denote quarter beats instead of the two that strictly speaking would serve that role in traditional scores.

and will be present in rehearsals to explain how it is read, which is not always clear from the outset. On numerous occasions I have been handed (or indeed handed out) a cryptic A4 sheet of pencil-scrawled numbers, subheadings such as Section A, Section B, some margin notes about the overall form and arrows and breakout sections representing the equivalent of first, second and third time bars which would be completely impossible to interpret without the composer present. Although not strictly speaking prescriptive, as they do not provide comprehensive instructions on how to realise them from start to finish, such scores still specify each part, leaving no 'gaps' for the performers to fill in. To return to the map analogy, if the carefully constructed score for *Pieces of Five and Three* is an Ordinance Survey of notations, providing detailed guidance that anyone can follow with suitable background training, these are more like a map scrawled for a lost stranger asking directions to the all-night chemist across town: marking out important turnings and landmarks, but incomprehensible without a fair amount of verbal instruction and arm waving.

Scores such as these arise when the quickest and easiest way of communicating a musical idea (both for the composer and the musicians) is not to write out each part note-for-note, but to jot them down in a minimalist way and explain how they fit together. Even more than *balungan*-based scores, these notations rely upon the composer's presence during rehearsals; such pieces are unlikely to receive performances by other groups unless they are taught by someone who has already experienced playing them and knows how to interpret the score.

Non-prescriptive scores

Non-prescriptive scores are, for the purposes of this thesis, those which deliberately provide an incomplete set of instructions, leaving aspects of the work open to the performers, to chance procedure or other factors beyond the composer's control. They represent a partial image of a work; they are purposefully incomplete traces which do not claim to provide the ultimate representation of the composer's intentions, but instead signify an idea that is left unfinished, a starting point which begs further input. Works arising from non-prescriptive scores tend to be amorphous, changeable, dependent upon many factors over which the composer has chosen not to exert complete control, and (to a greater degree than with prescriptive works) dependent upon the players involved, the type of rehearsal process that was possible and the conditions of the performance.

The overview of non-prescriptive scores closely mirrors that of approaches to collaborative compositions in the previous chapter, as such scores by their very nature tend to invite or demand collaboration. There are works (such as Roth's *Full Fathom Five*) notated as a *balungan*, with the intention that it should be interpreted in a manner not dissimilar to *karawitan*, drawing on (and perhaps extending) players' pre-existing knowledge of idiosyncratic instrumental techniques. Other scores similarly outline a simple idea, such as a melodic line, to be developed further in rehearsals, quite possibly with input from the group, but not necessarily drawing on *karawitan* structures. Then there are the more open-ended scores, often inspired by contemporary *avant-garde* music, such as graphic scores, text pieces, aleatoric processes and so on, such as Wilkinson's *English Garden* or *Spindrift* or Parry's *Fuzzy Logic*. Since a range of such works and their scores have already been explored in the previous chapters, this section will look at some broader issues that arise when non-prescriptive scores are used.

Despite the fact that, as discussed above, there is no neat correlation between the degree of collaboration and the nature of the notation, scores (where they exist) undoubtedly provide a useful trace, signposting the nature of the creative process, as was seen with *Iron Pipes*, where analysing the differences between notation and recording indicated sections where the group members had had a greater degree of input. As I Wayan Sadra states in the quote at the start of this chapter, 'When using notation, the composer and the musicians must agree what the notation represents and how it will be used' (1991: 22). Notation is a tool by which composers can set the terms for their interaction with performers; it can define the boundary between what the composer wishes to specify and what he or she is happy to leave open to the determination of the performers.

Given that non-prescriptive scores are by definition incomplete, this begs the question 'From where does the rest of the music arise?' Un-notated elements might include verbal instructions from the composer, players' pre-existing knowledge (of *garap*, for instance), improvisation, extemporisation/elaboration on a theme, group composition, discussion and debate between composer and musicians, chance procedure, or deliberate responsiveness to the environment in which the piece is performed.

Whilst the mutability generated by these factors is likely to be a deliberate feature of such works, it can also be a limiting factor, presenting real challenges if hoping to perform the piece beyond its original context, by a different group, for instance, without the composer or an experienced player present.

One illustration of such difficulties has been encountered with Neil Sorrell's *Missa Gongso*. This ambitious large-scale mass for gamelan and choir has been performed several times by Gamelan Sekar Petak, has generated considerable interest within the UK gamelan community and beyond (a noteworthy situation, as it is uncommon for all but the first generation of gamelan compositions to be well known outside their country of origin), with requests for the score from New Zealand and the US. However, to date, only one other group – a community gamelan based at Lewis and Clarke College in the US – has actually pulled off a performance, and this was only achieved after the group's tutor, Mindy Johnston, spent several hours with Sekar Petak members (including me) going through the score and recording, discussing how the gamelan and choir parts fit together and how the *garap* (which in several places is potentially non-standard) might work. This process was necessary because whilst the choir parts are in staff notation, the gamelan players use an entirely different *kepatihan* score which, although neatly notated in Microsoft Word, is definitely more 'map of how to get to the chemist' than Ordinance Survey. Furthermore, the two notations are independent; there is no single score which lays out all parts from start to finish, just basic cues indicating the other ensemble's material in each.

The section following gamelan notation has been annotated in red to indicate additional information which we needed to explain to Johnston. Incidentally, this notation also provides an excellent example of how ill-suited *kepatihan* is to producing a multi-part score, with vertical alignment representing rhythmic coincidence between parts difficult to determine, thanks to the absence of bar lines (and the difficulty of getting things to line up in Word).

Figure 4.: Gamelan notation for the 'Gloria' from *Missa Gongso*

Fast Ir. I

Buka Kendhang—improvised—ciblon (or Sundanese/Jaipongan set):

Material in a red square bracket (added by myself) represents a single system.

The vertical lines are basic rhythms of drum strokes – the drummer should elaborate whilst keeping this pulse

count: 1 - & - 2 - & - 3 - & - 1 2 3 1 2 3

The 'count' is not counted out loud, it's just guidance for players

These accents belong to the notation directly below, sitting above the 6s

'sl' here and at the start of the system below refers to *slendro*, not the *slenthem* (unlike below where 'Dm/Sl' = *demung/slenthem*)

pl 64 32 34 67 62 34 64 36 43 2 - 3 -
 sl 65 32 35 6i 62 35 65 36 53 2 - 3 -
 gong
 kp sl - 1
 - 5

1 & 2 & 3 & 1 2 3 1 2 3 1 & 2 &

pl 65 3 2 3 4 5 6 5 3 2 3 4 5 6 5 3 2 3 4 5 6 5 3 2 3 4 5 6
 sl 6 5 6 5 3 5 6 2 3 2 1 2 3 5 (6) - 6 -
 Glori- a in excelsis Gloria in excelsis Gloria in excelsis Gloria in excelsis De - o
 gong
 kp 6
 [2]

The words are not sung by gamelan players, just a cue to the choir part; however they reflect the phrasing of the *pelog saron* part (top line) – note the 6 coincides with the start of 'Gloria'

Et in terra pax hominibus bonae voluntatis (gamelan tacet)

Laudamus te...
 pelog

The choir go through a variety of time signatures at the start of this section, and settle into a 4/4 half a beat out of synch with the *slenthem* (hang in there and it all works out)

Dm/Sl
 6 [5 3 2 3 2 3 5 6 1 5 3* 2 3 4 5 6]

Sr imbal
 6 3 3 3 3 3 3 6 6 5 5 2 2 5 5 3 6
 5 5 2 2 5 2 5 7 1 4 3 3 3 3 2 5

Bn
 6 2 3 5 6..... 2 3 5 6 5 3 5 6 2 3 5 6..... 2 3 5 6 5 3 5 6

The dotted lines indicate the continuation of the pattern (*imbal*)

X 3 complete. 4th time end at *

This refers to the last system only, not the entire page

This exercise is not intended to demonstrate shortfalls in the notation, which once you know how to read it is very simple and eminently well-suited to gamelan performance, capturing the instructions succinctly and, most importantly, on a single page. Rather, it begins to show how swiftly complexity arises when one tries to provide comprehensive instructions on how to play a piece originally conceived as being at least partly aurally taught, where the composer expected to be present to explain how it all works.

Nevertheless, situations often arise where just such an exercise is necessary. One personal anecdote is of an abortive attempt to enter my own piece, *Waterlily*, into a competition in Bali for international gamelan compositions. The difficulty in conveying the feel of the melody in the ‘fire’ section – both the twelve beats sub-divided into fives and sevens, and the way in which it is shared between *laras* – through *kepatihan* notation alone was daunting. Something that I could communicate in a matter of minutes by singing it would need careful accompanying notes, or (as I briefly contemplated) recordings of me explaining how it should sound and how it might be rehearsed. However, being mostly fixed and prescriptive, I could have simply resorted to writing it out in hybrid staff notation, unlike the *karawitan*-like ‘water’ section. For this, I would have had to ask John Jacobs to notate his triple-time *genderan* (which he was reticent to do as they formed part of his then-unpublished doctoral work), and find a way of notating, or otherwise communicating, how the two-against-three feel of the simultaneous duple- and triple-time *cengkok* was achieved. In the end, the effort involved in re-notating and annotating the entire piece, and possibly recording tutorials, such that it could be played without me there to rehearse it proved too much, and I abandoned the idea.

For John Jacobs, undertaking a composition doctorate centring around experiments in extending Javanese *garap*, finding a way to document his work was essential: as can be seen from Case Study F (*Fair Roses*), without such a process, his submission for that highly complex piece would have consisted of an eight-*gatra balungan* and a vocal line. A major component of Jacobs’ research involved developing three-beat and three-part⁸⁷ *genderan*. Given the number of possible *cengkok* (at the top level, Jacobs specifies ten flavours⁸⁸), the starting points from the previous *gatra* (usually 1, 2, 3 and 6 in *pathet manyura*), the various *irama* (*tanggung*, *dados* and *wilet*) and a desire to illustrate the range of variation possible in a single *cengkok*, explaining the *genderan* alone involved notating 439 example *cengkok*, of which 391 included accompanying video, demonstrating

⁸⁷ Harmonising each *seleh* by a *kempyung* and a *kempyung* above that.

⁸⁸ To *seleh* 1, 2, 3 and 6, plus *ayu kuning*, *debyang-debyung*, *duduk*, *gantungan*, *kacaryan* and *puthut gelut*.

the more complex damping techniques involved. This was presented as a website which, amongst other things, provided a manual for his extended *garap* techniques such that they can both be used to reproduce his own compositions remotely, or adopted and adapted to other compositions, should anyone wish to borrow them.⁸⁹

The point to draw from all this is that non-prescriptive scores can present many problems, especially when operating within a score-bound cultural system which values the written trace and demands the reproducibility it brings. Without the composer present to guide players through and negotiate the terms of what is *not* written, these problems often form an insurmountable barrier to performance by other groups, or place a substantial burden on composers to notate something they had initially decided was more desirable or simply easier to communicate by other means.

On the other hand, non-prescriptive scores provide an ideal basis for composer-led collaborative music making: by providing incomplete instructions, gaps, unfinished ideas, the composer creates a space for musicians to be at play with a composition, to engage with it creatively and bring their own unique expertise and tastes to its realisation. For many composers and musicians alike, this way of working is one of the most appealing things about playing gamelan – new music or old. It lies at the heart of the dilemma stated by I Wayan Sadra, discussing the limits and advantages of notation for *karawitan* and, by extension, for non-prescriptively scored new music: ‘On the one hand we are concerned with the lack of an extensive notation’ because of the lack of reproducibility, ‘but at the same time ... the absence of it enriches our tradition by allowing many possible interpretations’ (1991: 2).

Aural transmission and performance

As mentioned above, the absence of a score does not in itself reveal much about how a piece was created/transmitted: works performed without notation may have been memorised from notation, they may have been through-composed but taught aurally, they may be extemporisations upon a core structure, or be based around a more open improvisatory process. However, in a society where notation is the default stance, and where many musicians (especially those with Western classical training) are more comfortable reading than learning by ear, the absence of a score is likely to be the result of a carefully considered decision, usually made by the composer.

⁸⁹ <http://php.york.ac.uk/library/dlib/johnjacobsphd/>

One common reason given for the decision to teach a piece aurally relates to the ‘feel’ or energy in performance, arising from the fact that in order to memorise a work, the musicians will have had to absorb and internalise the underlying structures, melodies and rhythms (whether analytically or intuitively) to a degree that is unnecessary for simply reproducing notes from a score; and the same goes for memorising from notation. Andy Channing, for example, was inspired by how gamelan (especially Balinese) is taught in Indonesia and a desire to capture the resultant energy and fun of playing music that the musicians know inside-out:

I felt ... the gamelan pieces I’d learnt aurally were the pieces that I’d remembered, and the pieces that I read were the pieces that I carried on reading. So I really felt that if you learn a piece then you are using your ears and are part of this group and you’re all playing together, whereas if you start reading stuff you’re focusing, you’re cutting yourself off from everybody else. So this is kind of how I approached music.

(Interview transcript 2011: 11)

Importantly, for Channing it is also a way of ensuring that his pieces do not become completely fixed and static:

I decided that I wasn’t going to use any notation at all because, I’d decided, gamelan is an oral tradition: I don’t need any notation. So I would tell people what the parts were, and all the parts were deliberately straight-forward, so people could learn the parts, learn how they fit together.... So I’d teach the group, and then the piece would kind of change every time. I’ve always thought of them as being kind of organic pieces, so they weren’t fixed.... When I took [*Pig in the Kraton*] to AlphaBeta, I know that Dave Stewart wrote it down, and when somebody else wanted a written part ... he said, ‘It’s here’ and I said no, ‘No, no: I don’t want it picked up like that, I’d rather they learn it aurally, learn it like you’re playing a [jazz] standard and then you can kind of play it in different ways’. Whereas if it’s written down it’s fixed and it’s the same thing each time. And I didn’t want that, I deliberately wanted it to be flexible and organic.

(Interview transcript 2011: 10)

The flexibility of *Pig in the Kraton* (1995, Case Study G) has certainly been played out through the uncommonly large number of different iterations it has existed in over the

years, having been performed on Central Javanese, Balinese and *degung* gamelans, in *slendro* and in *pelog*, by children and adults in at least 12 different groups in England, Scotland, Wales, Ireland and France. In relation to the discussion (above) of typical problems encountered when performing works with an aural transmission component outside their original context: *Pig* represents a highly successful exception.

One reason for this is Channing's prolific gamelan teaching and performing profile: he has taught – and performed *Pig* – with AlphaBeta, various Southbank Gamelan groups and classes, City University gamelans (Javanese and Balinese), the LSO St Luke's community gamelan, and Gamelan Bintang Tiga, in France. Another reason is its innate catchiness and simple, repetitive structure, which makes it ideal for memorisation and popular with players and audiences alike. As well as its many iterations in groups taught by Channing, it has made appearances in a school group in Glasgow (an arrangement by Simon van der Walt) and in *Wayang Lokananta* (Case Study N), taught to the musicians by John Pawson.

The connection between aurally transmittable pieces and simplicity is a subtle one, and it is worth reiterating here that a desire to communicate musical ideas aurally does not by default limit the composer to using simple ideas. Rather, as with collaborative music, a composer wishing to avoid notation must balance simplicity/complexity and familiarity/newness against the pretty much inevitable constraint of limited rehearsal time. So, for instance, Jacobs' *Lancaran Bentwrong* could be taught aurally because of a mix of a fairly short, repetitive (if rhythmically and technically tricky) *balungan* melody, along with *garap* instructions that made challenging but manageable changes to *karawitan* norms, incorporating 3-beat *gatra* and the seeds of his later extended harmony experiments.

However, even with relatively simple pieces such as these, time can become a major constraint, especially if group membership fluctuates and it has to be taught anew to each new recruit. Jacobs faced problems along these lines with *Bentwrong*: although the flow of the *saron imbal* certainly benefited in performance from having been aurally learned, changing group membership across the three performances the work received meant that it consumed a lot of rehearsal time, and that musicians who had been involved from the start had to keep repeating the same material.

Similarly, in AlphaBeta, several of Channing's fellow members expressed frustration with this exact same situation, finding that although there may have been benefits to learning aurally, fluctuating group membership meant spending a great deal of time going over old ground, as Joe Field explains:

To be fair, there are players for whom the absence of notation (and a conductor) is a blessed release from their previous, formal musical experience. Andy speaks of those times when ‘the music is playing you’. We’ve all experienced that and it’s wonderful.... [But] there is such variety in the canon of new composition that I think it would be a logistical impossibility to do without notation. Almost everyone who wrote for AlphaBeta supplied notation, whether it was a full score, individual parts or something closer to a Javanese balungan.... Only Andy always insisted on teaching his pieces aurally and I found this frustrating at times. I always wrote down the part I was to play in one of his pieces, took it away and learned it in my own time. I think it’s fair to say that we used a disproportionate amount of rehearsal time teaching parts aurally to new band members who hadn’t played a piece before.

(By email, 22 September 2013)

This is echoed by Dave Stewart:

[W]hen we started we had this utopian idea that maybe we could learn everything by ear, Balinese style, and people were attracted to the approach, but it was very costly in terms of time and it was frustrating for some people to sit there while we were trying to memorise these kind of *kotekan*-type patterns that someone had written. And afterwards it was just like well why didn’t you just write it down?... With my pieces I didn’t want to try and sit there while people memorised it, I thought it was a waste of our time to do that. I thought ... if they want to go away and learn it, there’s the part, you know: take it home and learn it – do it in your own time. That was my view. And that became the sort of consensus view. You know, people had ideas they’d picked up from being immersed in gamelan culture which they wanted to see whether they could apply to a more Western approach, and that was laudable, but I think, well, we just simply had to draw the line at ... learning everything by heart ... for pragmatic reasons: there weren’t enough hours in the day to do it.

(Interview transcript 2012: 7)

As stated near the start of this chapter, the question of transmission can be an emotive subject. As Joe Field describes in the quote above, for many players (amongst whose

number I count myself) traditional gamelan music provides a welcome relief from prescriptive scores and conductors. It provides opportunity for creative input, independent decision-making, even improvisation of a kind, and a satisfying approach to ensemble (in consensus with fellow musicians, rather than slavish obedience to dots on a page). In other words, one of the fundamental appeals of playing gamelan music can lie in not having to deal with large amounts of notation, or being constrained by a restrictive compositional approach (especially one that may not always be justified by the complexity of the musical ideas). Explaining his lack of enthusiasm for prescriptive scores, Channing explains:

I don't like to play pieces that I find are just kind of too hard work.... I don't like to sit and look at 20 sheets of paper scratching my head and going how's this go? Does it matter if I play that note right? Is anybody going to notice?... I mean, I might as well be playing in a contemporary music group. (Interview transcript 2011: 20)

Yet as we have seen, aural transmission is only suitable for certain kinds of music, and has a cost in terms of rehearsal time that in some circumstances are simply too great. From the perspective of many composers and players, the convenience of notation as a reliable, efficient method of communicating ideas and facilitating rehearsals is highly valuable: a point of view with which I also sympathise.

At the end of the day, notation (or lack of it) should be about how best to communicate musical ideas. As Bandung-based composer Iwan Gunawan⁹⁰ puts it: 'notation [is] just notation. [It] is not music until played. People can [use] any notation' – or, I might add, none at all – 'as long as it is useful for music' (by email 25 September 2013).

Conclusions to Chapters 3 and 4: creative process, transmission and the bigger picture

In some senses, discussion in Chapters 3 and 4 on creative process and transmission have still, on an underlying level, dealt with the dynamic between *karawitan* codes and those from other musical traditions found within British gamelan composition. Whereas Chapter 2 dealt primarily with codes relating to musical structure, these chapters have explored the processual codes relating to the human dynamics of music-making; in other words, how people behave when learning, creating and performing music.

⁹⁰ Iwan Gunawan directs and composes for Kyai Fatahillah, a gamelan group based in Bandung. He has a diverse background in Sundanese, Javanese and Balinese gamelan, Western classical piano and composition, and usually scores his gamelan compositions in Western staff notation. It was in the context of our discussion on this subject that he gave the above quote.

Transmission and creative process, as we have seen, can generate strong opinions, sometimes even becoming quite emotive issues. This is because people tend to have preferred ways of behaving, of interacting in a group, of learning and creating, and may respond negatively to – or at least derive less enjoyment from – processes with which they are uncomfortable, unfamiliar or perceive themselves to be poor at.

These preferences are, to a certain extent, culturally influenced, in that different skill-sets are emphasised within different systems. Western classical training focuses upon fluent, accurate reading, with aural skills mostly relegated to a few half-hearted tests in grade exams, and improvisation barely covered (outside niche period performance circles).⁹¹ In Java, the emphasis when learning *karawitan* tends to be upon developing aural skills: memorising pieces, learning *garapan* by ear, mimicking more experienced members of the ensemble, anticipating the direction of the music from other instrumental parts, and developing a personal style of extemporisation within the idiom; minimal notation is used, and there is a general suspicion that relying upon it too heavily undermines creativity and variation.

However, these different skill sets are not just geographically or culturally determined. I am far from being the only UK-born practitioner attracted to gamelan because I found the emphasis upon aural skills, collaboration and improvisation/extemporisation suited me better and was more enjoyable than, say, playing in a Western orchestra. For Aris Daryono, whose early musical interests whilst in Indonesia included rock music and Stravinsky, a fully-prescriptive score represents freedom for him as a composer: ‘By writing the scores on paper, I ... have much freedom in expressing my concepts and ideas in detail’ (email 27 January 2013). In other words, peoples’ affinity for working methods is not a function of where they are born, yet the development of specific skills are emphasised to different degrees by dominant music systems.

As well as ways of learning, creative practices associated with Javanese gamelan music (new and old) have proven attractive to many composers. For Alec Roth, the collaborative compositional practices he encountered in Java were not just products of a geographically distant other, they represented valuable insight into practices familiar from Western art music’s antiquity, before the score and the ‘hero composer’ reached the levels of dominance associated with them today:

⁹¹ My own experience of learning piano aged 5 was to have my natural tendency to learn by ear deliberately suppressed in favour of developing reading skills.

Although it was a shift in space it also, in a way, gave you an insight in through a shift in time, because it was like going back to being a musician in Monteverdi's time or that sort of period, where there wasn't this rigid division of labour that we've had since the industrialisation of music – you know, commissioner, composer, conductor, section leader: it's one long line of this industrial sausage machine churning out a piece. Whereas back in Monteverdi's time, as in Java in the traditional gamelan music, all the composers were practicing musicians, all the musicians had to have creative skills in *garap*, and the arts were integrated into society, ... rather than seen as a sort of add-on.... And it made me think about ... how much we have thrown away through the process of standardisation and industrialisation ... and specialisation. It felt like ... a return to some of those values that we've lost. And that's what I've tried to do a little bit since then with my own music, back in my own musical culture.

(Interview transcript 2012: 4)

Roth's statement emphasises that these Java-inspired practices are not only relevant to *karawitan*-based composition. As discussed in Chapter 3, *karawitan* is often seen by practitioners as enabling, even encouraging, collaborative, group-centred practices (McGraw 2013) which are relevant to many other kinds of musical styles. As well as the greater likelihood of finding, within a gamelan group, musicians willing to attempt at least a degree of collaboration/improvisation, the amateur nature of most groups makes possible an entirely different way of working than that typically associated with contemporary art music. Weekly rehearsals, fewer performance pressures, and the fact that in most groups the players do not expect to be paid (indeed, in most community groups members pay to participate) provides composers the chance to work with the musicians during the development and rehearsal process, potentially enabling the creation of highly complex music which often belies the amateur status of the group, and can be a more enjoyable experience for all concerned, as Clive Wilkinson's point illustrates:

I thought ... getting pieces played by a good ensemble, professionals, would be the more interesting thing, but actually what I really enjoy is the process of working with musicians, often having to perform in my own piece, just working with people intensely within it, changing things

as you go along, and then eventually performing it two, three, four times, whatever. (Interview transcript 2011a: 11)⁹²

In terms of one of the research questions of this thesis – gamelan’s relevance within the wider sphere of British music-making – gamelan-based experiences with collaboration and aural transmission can be carried over to other types of music-making. Alec Roth, who had largely abandoned any intention to compose whilst an undergraduate in the 1970s through disillusionment with the rigidity of Western academic practices, came back to composing through gamelan, and now tries to incorporate collaborative approaches into works for other kinds of ensemble. For example, he describes working with the ConTempo String Quartet, where he encouraged them to improvise inspired by paintings by Paul Klee:

They thought I was completely mad.... None of them had ever improvised before, so we had to do a bit of work on that. And by the end of the session they were just having a whale of a time, they were just enjoying it so much.... And within the string quartet each of the players had a solo moment which was based on their improvisation, which I went away and developed. (Interview transcript 2012: 30-31)

Mantle Hood’s advocacy of bi-musicality, which spearheaded the introduction of gamelan ensembles into American universities (starting with UCLA in 1958), is usually associated with a desire to encourage a practical but essentially scholarly understanding of other musical cultures. However, according to Jody Diamond, Hood – who had an MA in composition from UCLA – ‘was composing for gamelan from the very early days of the programme’ (1992: 116). Whilst making gamelans readily available to international composers as a new source of sounds and musical ideas might not have been one of Hood’s original motivations, the effects of his drive to encourage students to immerse themselves in other musical cultures manifest themselves today in far broader circles than university ethnomusicology departments. What Hood certainly did anticipate was that there was more to be gained from this immersion than knowledge of different musical structures: to learn

⁹² Having extolled the virtues of non-professional groups in allowing a relaxed and prolonged development process, it is necessary to point out some significant limitations of that format. Chris Miller links the establishment of Canadian group the Evergreen Club to composers feeling frustrated with “‘sloppy and inadequate performances’” by less-committed ensembles (quoting Andrew Timar 2005: 102), whilst in the UK, Nye Parry (interview 2013), Barnaby Brown (interview 2013) and John Jacobs (p.c.) have all noted the (often frustrating) need to accommodate patchy attendance by writing something where players can slot in last-minute (Parry), scaling back their more ambitious ideas (Brown, Jacobs) or live with disappointing performances (Jacobs and also my experience with Waterlily) – not because of any lack of musical ability amongst group members, but simply from never being sure who will turn up each week.

gamelan is to experience different ways of interacting, of learning and communicating ideas, of experiencing ensemble, and of performing (1960). Along with different structures for organising sound, these insights into ways of organising people from beyond Western classicism have proven to be of great value to composers seeking alternative models for creating and communicating music, and have had an impact upon creative practice which reaches beyond the insular niche of gamelan composition.

Case Study F

John Jacobs: *Fair Roses*

Recording: R-F.1

Score: S-F.1

At the time of writing, John Jacobs (b. 1976) was a doctoral student at the University of York, researching the possibilities of composition through rehearsal process, primarily in the context of gamelan. His resulting composition folio involves works which explore the possibilities arising from the introduction of ‘a small tweak to a *karawitan* norm which then requires a cascade of related tweaks to *garap*’ (2012:1). The key to understanding these works lies as much in the thought process behind the pieces as in their tangible traces (scores, performances, recordings – in other words, the actual music) so much of the following analysis is given over to explaining how the ideas arose.

The original impetus to explore *karawitan*-based composition came as much from Jacobs’s background as a jazz musician as from his study of gamelan. As a composer he found himself questioning how larger-scale structures could be sustained within the context of improvised music, having found that more ambitious jazz works such as Duke Ellington’s Suites did not quite achieve this (interview transcript 2012a: 3). Javanese gamelan seemed to offer the tantalising possibility of offering a way to retain the sense of freedom and the shared ‘feel’ for the music amongst performers that can be achieved through aurally-learned forms, yet generate richly-orchestrated, complex music that could sustain large-scale structures of fifteen minutes or more.

Other significant influences on his composition approach came from time spent studying in Indonesia as a *darmasiswa* scholar. Thanks to a decision to take his trumpet along, Jacobs was invited to play in several new music groups, including Sono Seni Ensemble directed by the renowned composer I Wayan Sadra (1954 – 2011), which incorporated musicians from backgrounds such as rock, *kroncong*, gamelan and jazz and involved a rehearsal-based compositional process where the act of learning the music was a part of creating it. Another significant influence whilst in Solo was hearing works composed by [Mas Dedek], an experienced classical gamelan musician who wrote contemporary works based within *karawitan* structures but with a distinctively new sound:

So in his music there was a depth, I don’t know, a darkness, a velvetiness.... I don’t have any recordings of his music and I don’t

remember enough to ... revisit it in my mind and work out why it worked so well, but I certainly came away convinced that it was by and large because of his deep understanding of *karawitan*.... [There was] a complete appropriateness about the orchestration ... the instruments just sounded so good, in that way that they sound so good when you hear court music played by court musicians.

(Ibid. 13)

The richness of the orchestration arising from using pre-existing *karawitan* forms was certainly a part of the appeal: that ‘the *garap* rules and the instruments have evolved together’ (ibid. :14) in itself makes a good case for drawing on traditional structures. But there was also the matter of the feel the musicians had for the music: ‘the vibrancy, and the amazing ensemble cohesion’ (ibid. 13) that is achievable with orally learned music where each musician knows not only their own part but everyone else’s and exactly how they all fit together.

But to achieve such strong ensemble in the context of new music, Jacobs realised, either requires a huge amount of rehearsal time to enable the group-based creation of music that differs significantly from known idioms (as was the case with *Sono Seni* which rehearsed two or three times a week) or else the composer could only take ‘fairly small steps away from what’s already tried and tested and established, such that the piece would still draw on players’ pre-existing knowledge. Reassured by both the richness and the newness of Mas Dedek’s works, which took this latter approach, Jacobs proceeded to work with classical Javanese structures, but hoping that ‘within that there are things you can change which ... result in quite significantly different sounds, you know, something that is striking, something that when you listen to it you go “oh that’s an interesting take on it”’ (ibid.13).

In the case of *Fair Roses*, and most of Jacobs’s other doctoral compositions, the main tweak to *karawitan* norms is the harmonisation of *seleh* notes with a *kempyung*⁹³ above (as often occurs in ordinary *genderan*) plus another *kempyung* above that. So for example, a *seleh* low 6 would be harmonised with notes 3 and high 1 (or 7 in *pelog barang*).⁹⁴ The decision to harmonise *seleh* arose out of a number of questions Jacobs had in mind about the nature of *seleh* and how it relates to tonal structure and counterpoint in *karawitan*.

⁹³ A chord with two notes between the two that are played, e.g. 1 and 5, 2 and 6.

⁹⁴ In *pelog* 4 is not counted as an intervening note in a *kempyung*, being an ‘exchange’ tone for 3 or 5.

Describing the interest *karawitan* held for him as a composer, Jacobs relates the process of learning gamelan and

that gradual realisation that really no one is thinking about the music in a vertical sense ... there's not much value as a player, by and large, in thinking about what chord is made up by the set of notes that happen to be being played at a given moment. So that kind of gradual getting-to-grips-with the profound difference ... that's wrapped up in understanding what a *seleh* note is ... and its ramifications: well, that just continues to be intriguing. (2012a: 7)

Part of this understanding involved considering the importance (or otherwise) of notes played at *seleh* points, which are mostly octaves but might also, in the more complex instruments such as *gender* or *rebab*, be a *kempyung*. In *slendro* tuning, most *kempyung* are close to, but not exactly, perfect fifths, the intervallic size depending on the pair of notes played and the *embat* of the gamelan. In *pelog*, *kempyung* are even more varied and less likely to sound fifth-like. Regardless of the intervallic relationship, any *kempyung* might act as a cadential interval at *seleh* points as long as it makes sense within the boundaries of the *pathet*. In reality, the notes that might be heard on the last beat of a *gatra* are not limited to just the *seleh* plus the occasional *kempyung*: for example, the *suling*, *rebab* or vocal lines might delay their arrival on the *seleh* note until after the next *gatra* has already begun. It is entirely possible that any five notes of the pentatonic will be sounding at the moment of arrival at the *seleh*, and yet there is no doubt that this is a cadential point, due to the converging melodic contours of the various parts, as much as other cues such as colotomic markers such as *kenong* or gong.

So whilst concurrently sounding notes at a *seleh* might be described as a chord, it is one which arises out of a horizontally conceived melodic process, with the various lines of instruments weaving towards a cadence in their own idiomatic way. To risk comparison to Western music, this is somewhat analogous to contrapuntal fourteenth century motets where interweaving melodies might result in what to modern ears sounds like some excitingly contemporary chords, but these occur by happenstance as a by-product of horizontally conceived melodies: the pitches sounding together at any given instant in time are mostly not a result of vertically-conceived intentionality but arise almost incidentally as a result of a horizontally-oriented, contour-led compositional process.

The possibility that this sense of cadence in *karawitan* is not dependent on the presence of either *gembyang* or *kempyung* that sound a bit like a perfect fifth was intriguing to Jacobs, who found it

a pleasing thing - I'd rather that those *kempyungs* work not just because they speak strongly as fifths, so strongly that you can accept it as part of an octave unison, but that the pitch is felt as being justified by the line. And ... as soon as you know that that's an acceptable part of the language then you can ... wonder ok, so if the contours of the individual parts make it clear that they head towards that point in time, can we get away with having more notes at that point in time and still perceive it as a point of resolution, without the meaning being related to the specific set of intervals on that chord ... without suddenly superimposing a Western-style idea of chord structures?

(ibid. 17)

The decision to add a *kempyung* and a *kempyung* above that to each *seleh* provided a good way to explore the implications of this,

because of the fact that none of your *seleh* chords are going to be the same as each other because of the *embat* [so] translations from *slendro* to *pelog* become deeply intriguing. If the *seleh* notes are accepted when you're listening to this stuff as points of resolution, it can't be because of an accidentally superimposed Western harmonic structure.

(ibid. 18)

Initially, the implications of harmonised *seleh* were initially worked out at the *gender*, where Jacobs experimented with adding a third line of counterpoint to the two usually played on that instrument, with the left and right hand sharing the middle part between them. To facilitate this Jacobs commissioned a bespoke *gender* from Java with two extra notes (high 5 and 6) at the top of its range, and began the process of composing three-part *genderan* which could be used in any piece – in essence, not simply writing a piece but devising *cengkok* (modular units) which could be applied to any piece using extended harmony.⁹⁵

⁹⁵ An introductory guide, along with notation and video examples can be found here: <http://php.york.ac.uk/library/dlib/johnjacobsphd/external-media/home/3-garap-guides/3-1-gender-garap.html>. Accessed 1 September 2014.

Further decisions cascading from the harmonisation of *seleh* included determining which other instruments should *garap* to which of the three notes, and whether this *garap* should simply be a transposition of the type of melodic phrase typical of the root note, or something different. For example, having decided that the *rebab* should play to the upper *kempyung* (effectively a *gembyang* plus a note above the *seleh*) a question remained as to how it should *garap* to that note. If the root *balungan* was, for example, *slendro pathet sanga*, should the rebab play *sanga*-like phrases transposed up one note? The problem with that approach is that most *sanga* phrases transposed up one note are basically *pathet manyura* phrases, so the result would sound to anyone experienced in *karawitan* as if the *rebab* were playing in a different *pathet* to the rest of the gamelan, ‘whereas,’ Jacobs explains, ‘my desire is perhaps a harmonically richer extension of something *sanga*-like, rather than polymodalism or “poly-*pathet*-ism”’ (personal comment, 18 November 2012). In *Fair Roses*, this issue is partially avoided by instructing the *rebab* to generate phrases which relate to the vocal melody, which also cadences on the upper *kempyung*; other works in the folio adopted other methods.

Another problem was the *balungan* line: splitting a double-*kempyung*-harmonised *balungan* part between *slenthem*, *demung*, *saron* and *peking* resulted in identically contoured lines in parallel, undesirably reminiscent of medieval organum:

Figure F.1: *balungan garap* for first *gatra* in *irama tanggung* (near the start of the recording)

Peking	j5j	j2j	jj5j	j3j
	j5	j2	j5	j3
Saron 1	!	5	!	6
Saron 2	5	2	5	3
Demung	!	5	!	6
Slenthem	3	1	3	2

Permitting only a brief period of ‘organum’ in *tanggung*, at the start, Jacobs disguises the parallel nature of these lines as soon as the *irama* slows to *dados* within the first few *gatra* of the piece, by scattering the notes in the manner of an arpeggiated chord, and scattering the even more widely when the *irama* hits *wilet* (see below). This has the pleasing effect of somehow dissolving the *balungan* line into the texture of the music, creating something more akin to the gentle sound of a *gadhon* ensemble.

Figure F.2 – scattering of notes in *irama wilet* (from around 2m45s in recording)

Peking	j3j j j jj jj3
Saron 1	l.k6k.jj j j.
Saron 2	k.k k3j jj j.
Demung	k.k l.j6j j.
Slentem	j.j j j j jj2

Another change to traditional *garap* was conceived as a matter of necessity but turned out to have some nice aesthetic effects on the final work. Due to players in Sekar Petak’s Monday group being somewhat thin on the ground when the piece was first introduced during the summer holidays, there were not enough people to cover *kenong* and *kethuk* parts. To compensate, Jacobs asked the *balungan* players to imply these parts by damping notes where the *kethuk* would fall and striking them in a *kethuk*-like rhythm, and by delaying the *kenong* notes by a *peking*-note length. The effect proved pleasing enough that the idea was permanently incorporated into the *garapan*. This can be most clearly heard in the *irama lancar* section of the work where the *kethuk* notes are struck twice whilst damped⁹⁶ (indicated by a ‘d’ under the note) or, if it the *kethuk* note falls a rest, the wooden frame of the instrument is struck instead (indicated by / \):

Figure F.3: *balungan* line in *irama lancar* (from 8m47s)

Notation:

3 =1 3 p2 . j=.5 j32 n1 3 =2 3 p1 3 =5
6 n5

Actual *garap* for *irama lancar*

3 kθ1jθ1.3 2 . j/\ 5 j32 j.1 3 kθθ2θj2. 3 1 3
kθ5θj5. 6 j.5

The vocal line, which appears in the *irama wilet* section of the piece, is sung as a solo by a high tenor and cadences on the upper *kempyung*. The melodic line is somewhat reminiscent of *sulingan*. The lyrics take semantic inspiration from certain Javanese texts called *wangsalan* (such as *Parabe sang*, used in *Ladrang Wilujeng* and several other *gendhing*) which offer moral instruction, obscured within pun-related verbal play. The closest analogy Jacobs found in English for these word games was cryptic crossword clues, and he proceeded to write lyrics that combined the two ideas. Similarly to *wangsalan*, the first two lines contain puns that present clues as to the subject under discussion and the last two are moral instructions:

⁹⁶ In a traditional piece the *kethuk* would only play one stroke in *irama lancar*, but here two are used to distinguish the *kethuk* stroke from others in the line.

Floribund marks of an old, old wound,
Pure colour, the strike's sonority,
Handle *Fair Roses* gently
Lest injurious pricks be dealt

Fastness where carried, ecstasy first felt
And one arrive solitarily,
Neglect *Fair Roses* warily,
No, tarry and beauty sound.

For the sake of readers who wish to puzzle the clues out for themselves, the explanation has been relegated to the footnote below.⁹⁷

A surprising aspect of *Fair Roses* is that the entire piece, which lasts a little over ten minutes in performance, is based on a single, eight-*gatra gongan*. Such a tiny amount of musical material is not entirely unprecedented in larger-scale *gendhing*: for instance, the classical *Ladrang Pangkur* recycles the melody of its eight-*gatra tanggung/dados* section, by expanding it out to sixteen-*gatra* in the *irama wilet* section more-or-less by playing it half speed.⁹⁸ The reason *Fair Roses* works as a relatively long piece with so little melodic material lies in the richness and variation in its realisation. The actual melody written down in the *balungan* is almost incidental: the real composition is in the *garap*. The relative unimportance of the 31 notes that constitute the *balungan* was exemplified in the rehearsal process, where the group began learning the piece *before it was composed*, testing out *garap* ideas using four *gatra* of *Ladrang Pangkur*. Across the span of a rehearsal process, from September 2009 to the first performance in May 2010, the actual *balungan* and vocal lines were not written down until around March/ April 2010, but were then learned swiftly

⁹⁷ To solve this puzzle you need to know the meaning of Sekar Petak – White Flower – and the reason for the name, which is a reference to the heraldic symbol for the House of York, the White Rose (there is no word for rose in High Javanese). “Floribund” refers the reader to the Indonesian word for flower, *sekar*, which sounds like “scar,” hence the “old wound”. “Pure colour” = white; “sonority” warns us of another pun, in this case something that sounds like a synonym for “strike” = attack, which rhymes with *petak*, whilst the “strike’s sonority” provides a less cryptic clue for the sound of the gamelan. Having established that we are talking about Gamelan Sekar Petak, the moral instruction is to handle the instruments carefully and with respect. The second verse refers to a “fastness,” or fort. Again perhaps difficult for non-locals to guess, York began life as a Roman fort called Eboracum. The remainder of the first two lines spell this out syllable by syllable: “carried” = bore, “ecstasy” = e – which comes “first”; “one” + “solitarily” = a; “arrive” = come. The remaining two lines therefore suggest lingering in Eboracum (York) to play the gamelan.

⁹⁸ See analysis in Martopangrawit, *Catatan-Catatan*, vol. 1, 94-5. There is some historical evidence to suggest that in fact the *wilet* section came first, so strictly speaking the *tanggung/dados* section is a reduction of this (1984).

by the group, who simply applied the extended *garap* rules which they had been practising for the last six months.

Jacobs's compositions are not based on exerting complete control over every detail, requiring the composer to spend weeks or months crafting every last note to produce the desired effect. Instead these works involve a kind of 'paradigm nudge' (my term), shifting the ground rules of *karawitan* by small enough steps that the edifice retains its integrity, remaining close enough to the tradition for experienced musicians to be able to adapt their pre-existing knowledge, creating something that sounds new and fresh.

Small though these steps may be, pushing the boundaries of *garap* rules which have developed over hundreds of years is an action which a composer understandably might not wish to undertake without considerable precogitation. Indeed, a great deal of the compositional process – the creation of an extensive vocabulary of extended-harmony *gender cengkok* - took place many months before the piece was conceived. The success of *Fair Roses*, in that the sense of cadence remains intact and the changes to *garap* introduce a pleasing richness that pushes the boundaries of *karawitan* without moving beyond it, is born of this very careful and prolonged thought process. Beyond this, it arises from many years spent pondering the relationship between musicians and the music they play, and how to generate a strong sense of ensemble and feel for the music within the context of large-scale and complex classical structures. In other words, the eight *gatra* of *Fair Roses* rests on top of a pyramid of many years of engagement with *karawitan*, collaborative music-making and compositional practice.

Case Study G

Andy Channing: *Pig in the Kraton*

Recording: R-G.1

Pig in the Kraton (rock band version 1991, gamelan version 1995, multiple revisions) was created by Andy Channing, a long-established face on the British gamelan scene. A self-taught drummer with an interest in experimental rock and improvisation and a degree in mathematics rather than music, Channing is a resolutely non-academic gamelan expert whose interests and teaching methods are very strongly practical, and whose compositions, by his own description, tend towards the 'pop' end of the spectrum (interview transcript 2011: 2).

He first heard Balinese and Javanese gamelan in the early 1980s through a friend's girlfriend's father's LP collection and 'just fell in love with it', initially expressing this fascination in his own performance by extending his drum kit 'with bits of beer can and bits of metal and things' and working gamelan-inspired rhythms and textures into improvisations with his band. As soon as he heard about the Southbank Centre's acquisition of a gamelan, Channing signed up to classes (interview transcript 2011: 1).

In 1989 he went to Java for three years on the Darmasiswa programme, where he spent his time at STSI Solo studying 'Javanese, Balinese, Sundanese, Banyumas [music]: absolutely everything I could get my hands on' (ibid. 2011: 2-3). On his return to the UK he began teaching workshops just as the British gamelan scene was expanding rapidly and councils, universities and schools up and down the country began buying gamelans sets. His longstanding interest in Balinese *gong kebyar* and *angklung* and Sundanese *degung*, have made him one of the country's broadest-ranging experts in gamelan music.

As a composer, he falls very much in the camp of those who prefer minimally- or un-notated music which can be taught aurally: none of his own works have scores – at least, not that the players get to see – and he expresses a strong preference for music that does not involve the composer 'turning up with twenty sheets of music and saying "This is what we're playing"' (interview transcript 2011: 11) Having seen the way composers worked collaboratively and experimentally in Java, and also no doubt influenced by his own experimental rock background, he explains:

I felt the music, the gamelan pieces that I'd learnt aurally were the pieces that I'd remembered, and the pieces that I read were the pieces that I carried on

reading. So I really felt that if you learn a piece [aurally] then you are using your ears and a part of this group and you're all playing together, whereas if you start reading stuff, you're focusing, you're cutting yourself off from everybody else. So this is kind of how I approached music.

(Interview transcript 2011: 19)

Channing describes *Pig in the Kraton* as basically 'a two-chord gamelan thrash' (email August 2012) 'which tells the tall, twisted tale of a pig's existential crisis and metaphysical misadventure in a Javanese palace (kraton).'⁹⁹

Fellow AlphaBeta member Dave Stewart refers to it as Britain's 'No. 1 gamelan hit' (interview transcript 2012: 15): it is one of the best known, most widely played British gamelan compositions. Its genesis occurred in 1989, during Channing's darmasiswa-funded study period in Java:

Adrian [Lee] came to visit while I was out there, and he and his girlfriend came back from the Mangkunegaran [Kraton] one day and said that they'd seen this pig hanging there, a headless pig ... and we just had this kind of – it's a bit like in ... that film, *Bill and Ted's*, we just had this kind of air guitar kind of "PIG IN THE KRATON, HASN'T GOT A HAT ON!" kind of like that. But that's where it came from, that idea.

(Interview transcript 2011: 4)

The piece is also strongly influenced by Balinese rhythms. He explains that at STSI we'd just started learning ... a Balinese drumming pattern that was kind of the impetus for *Pig* – I was just playing a pattern derived from that on a Javanese gamelan and it came from there.

(Interview transcript 2011:3)

Despite the Balinese influence and its genesis in Java, *Pig* had its first incarnation with Channing's avant-rock band The Momes in 1991,¹⁰⁰ but was rearranged for Javanese *slendro* gamelan when AlphaBeta Gamelan formed in 1995:

Recording R-G.1: *Pig in the Kraton*, AlphaBeta *slendro* version, from CD

⁹⁹ http://www.youtube.com/watch?v=EiHQtWAqLM8&list=UU1iJYSnuO2PzjT_et-F8_Ug&index=8&feature=plcp. Accessed 29 January 2014.

¹⁰⁰ Channing specified February 1991 in an email to me (6 August 2012). On the School of Oriental and African Studies website, the year is given as 1990 (<http://www.soas.ac.uk/music/cds/gamelan/track-6-pig-in-the-kraton.html>. Accessed 25 July 2012).

The piece is very simple and repetitive, starting with *gender* line based on the *saron* riff to come, because ‘although “it is a hardcore gamelan piece” (as I always introduce it), it has a soft-centre!’ (Channing, by email 6 August 2012). The main two-note *saron* riff runs as follows:

[2 2 j22 j.2 j.2 j.2 3 3] x3
 2 2 j22 j.2 j.2 j.2 2 3

After the first verse, a *bonang kotekan* makes an appearance, played by two players sitting on opposite sides of the instrument. This effectively harmonises the *balungan* by a *kempyung* above (centring on 6 whilst the *balungan* plays 2) for the first three iterations, then emphasising the harmonic shift in the fourth line by centring on 5. The use of a 3 note *imbal* through much of each *gatra* (6 3 5 6 3 5) sets up a pleasing cross-rhythm:

6 j63 j56 j35 j63 j56 j35 j6! 6 j63 j56 j35 j63 j56 j35
 j6!
 6 j63 j56 j35 j63 j56 j35 j32 5 j52 j35 j23 j52 j35 j35
 j6!

The breakout section or middle eight is sparsely scored and punctuated by *saron* stabs (from 1:47 on the recording). Dave Stewart claims responsibility for suggesting this section in rehearsals:

When Andy brought in this song *Pig in the Kraton* ... it was just a sort of riff, with a sort of *kotekan*-y bit, and I said – in the same way I would have said to a, you know, one of the guys in one of my rock bands in the past – I said ‘Why don’t you put in a stopping bit, Andy, that goes ‘bonk’. And he said oh yeah cool and then he went off and scribbled that down, worked the rhythm out of the accents of the stopping bit.

(Stewart, interview transcript 2012: 5)

There are three essential, idiosyncratic features of *Pig*: one is the ‘pig out’ section featuring a wild solo on a Chinese shawm that a friend of Channing's bought in Morocco:

The shawm player ... would magically appear from the audience, about half-way through a performance, wearing a pig mask, with the shawm played through the mask. Later, it became the convention for a mystery dancer to appear, wearing the pig mask, usually at the same time as the shawm starts up. The identity of the dancer would often be a mystery to

the players! Dancers have included Puja,¹⁰¹ various students, a giant Czech *Baris*¹⁰² dancer & my daughter (who was 4 when she first asked to dance it in France!)

(Email August 2012)

A second key feature is that vocals must be sung through a loud-hailer, producing the rough, distorted sound heard on the recording. The final one is sunglasses: Wearing sunglasses is an integral part of performing the piece and always gets a laugh from the audience.... I always record the vocals wearing shades, to get in “character” (Channing, by email, July 2012).

While the sunglasses, loudhailer and shawm are fixed features, others such as gamelan type, *laras* and arrangement are free and open to adaptation. After the AlphaBeta version, *Pig* was reinvented in *pelog* for Balinese gamelan group Kembang Kirang¹⁰³: ‘The [AlphaBeta] version is for Javanese gamelan, because that's all we had. However, the piece has always channelled the energy of Balinese gamelan, in the form of a pop song’ (Channing, by email July 2012).

The group took the piece on tour to the Bali Arts Festival, where it was met with massive popular acclaim: ‘It went down a storm ... they absolutely loved it, all the dancers suddenly wanted *Pig* as a ringtone on their phones!’ (interview transcript 2011: 8). Channing managed to persuade famous Balinese clown, I Ketut Suanda to perform the dance; his rather lewd rendition went down a storm with the audience in the video, and started a long tradition of including dance in performances.¹⁰⁴

R-G.2: *Pig in the Kraton*, Balinese gamelan version, at the Bali Arts Festival

<http://tinyurl.com/c94eqsk>

A more recent adaption of *Pig* came in *Wayang Lokananta* (2012), an all-night shadow puppet play celebrating the 30th anniversary of York's Gamelan Sekar Petak (Case Study N). The piece was played in the last section of the wayang, around 20 minutes before the end (around 2:40 am) to accompany a scene where a courtly discourse is disrupted by a wild boar rampaging through the palace grounds. Dhalang Matthew Cohen explains ‘I was

¹⁰¹ Ni Made Pujawati, a London-based Balinese dancer.

¹⁰² Balinese war dance.

¹⁰³ Now better known as Lila Cita, based at City University.

¹⁰⁴ In subsequent UK performances, Channing’s daughter, has performed a decidedly tamer, pre-watershed version of the dance. Unfortunately, due to copyright restrictions, the video cannot be shown here.

looking for a strong upbeat ending - after a lot of discourse on history it was time for a moment of comedy and pure theatricality' (email July 2012).

In terms of an upbeat ending it was certainly successful, reminiscent of an outdoor rave: just as dawn is creeping up on the horizon and the dancers reach for their sunglasses, the DJ starts spinning Gabba (extremely loud and insanely fast techno) to batter away any threat of impending normality approaching with the sunlight. At the *wayang*, an increasingly sleepy audience, lulled into a state of quiet contemplation (or, in many cases, actual sleep) by a songlike recitation of a condensed history of the spread of gamelan from the gods to humans, were suddenly jerked into full consciousness by the 'two-chord gamelan thrash,' accompanied by blazing white lights and the realisation that all performers were suddenly wearing sunglasses.¹⁰⁵

The ongoing popularity of *Pig in the Kraton* lies in exactly the elements which make it useful for aural transmission: it is profoundly catchy, with clear melodic and rhythmic features that stick easily in the mind, and it is constructed from simple, repetitive instrumental layers, which can be piled in at different densities to change the texture dramatically without requiring players to memorise too much. Indeed, the fact that it is always taught aurally cements this success: all performances of it demonstrate great energy which would be next to impossible to achieve were players relying upon notation instead of their own sense of how the music goes. Also, once a group has put the investment into learning it, it is more likely to become part of their regular.

Its popularity lies with a sense of fun that is nevertheless backed up with musical integrity. It is iconic, with the loudhailer and sunglasses, providing a kind of pageantry that British audiences – who may have limited knowledge of gamelan music – can connect in a visceral way. It is accessible without being patronising, it 'channels' the energy Balinese *kebyar* without resorting to disappointing pastiche, it marries gamelan to punk rock without a whiff of orientalist appropriation. Whilst it may not be the most refined or complex of the works described in this thesis, makes a bold statement of a true '*gaya London*', a London style of gamelan.

¹⁰⁵ [A video clip will hopefully be available post-viva]

Case Study H

Ginevra House: *Waterlily*

Recording: R-H.1, **Score:** S-H.1

Excerpt x: *Waterlily* performed at the Sir Jack Lyons Concert Hall, May 2012

By and large, in this thesis, works are included as case studies because they are particularly well-known or particularly good (usually both), as well as illustrating the issues discussed in the main chapters. My own composition, *Waterlily*, is neither well-known, nor can I vouch for it being any good, as it is very much a novice piece: my first for gamelan. However, I include it here in order to reflect upon the experience of writing and rehearsing it and how this experience relates to the major themes of this thesis.

The piece came into existence as a response to the death of my friend and piano tuner, Clive Whitehead, who was swept out to sea on holiday in Turkey in 2011. Clive lived on a houseboat moored at Fulford Ings on the River Ouse, which flows through York and was on one of my regular running routes. Whenever I needed some mental space, to expend excess energy and escape my busy thoughts, I would go for a run, and very often encountered Clive, pottering around his mooring. If neither of us were in a rush, we would sit and have a cup of tea and watch the river flow past. These moments of peace stood in stark contrast to the intensity of my life at that time. Having decided that the best response to Clive's untimely death was to create something, I set out to write a piece that captured that quiet place our friendship had represented to me.

The starting point was what I suppose might be termed a haiku of sorts: the lines are not of a particular syllabic length, but they convey a single, tightly-focused thought that, after some contemplation, drops out fully formed, to be inscribed irreparably on paper. The thought was:

When we met, my life was full of fire.
Yours was cool, green water,
Stillness in motion.

The piece falls into two main sections, nicknamed 'Fire' and 'Water', with a bridge linking the two, in the form A-bridge-B-bridge-A-bridge-B. Section A (the 'fire' section) is Western in terms of harmonic rhythm, based around what could be thought of as front-

weighted 12/8 bars, although no time-signature is given in the score. It draws in influences from gamelan pieces Sekar Petak was playing during the period I got to know Clive, such as John Jacobs's *Bentrong*, and some fantasias on Messaien's *Turangalîla Symphonie* (created in response to a commission to provide the first half of a concert in which this monumental work was to be performed by the University orchestra). *Turangalîla* fans may recognise elements of Messaien's '*développement de l'amour*' theme in the *balungan* melody of section A, and crashing descending chords which feature throughout the symphony in the 'Disruption'.

The main melody of Section A is played by *balungan* instruments (*sarons* of various sizes, not *slenthem*), and subdivides the 12-beat 'bar' into sevens and fives. This is underpinned by a *slenthem* line which subdivides into threes: it is these cross-rhythms that reference *Bentrong*, which has a melody with nine-beat bars divided into fours and fives over threes in the *slenthem*.¹⁰⁶ Cutting across this is an intermittent *kotekan*-like layer on the *bonang* which plays the equivalent of three 4/4 'bars' to every four in 12/8.

¹⁰⁶ For scores, recordings and notes on *Bentrong*, see John Jacobs's doctoral website: [TEMP: <http://music.york.ac.uk/~jej502/home/2-pieces/2-14-lancaran-bentrong>].

Figure H.1: *Waterlily* – Section A (‘Fire’)

peking tutti

Buka: pelog 7 6 5 7 6 5 . 7 6 5 4 3 2 1

slendro . i 6 5 3 2 1 6

	$s_6 + 2 / p_3 + 5$ (see separate sheet)										$s_1 + 2 / p_4 + 3$													
bonang																								
kenong	6 s2										p7 P3													
balun. p.	7	.	6	.	5	3	.	.	.	.	3	5	.	7	.	6	.	4	2	.	.	.	2	.
balun. s.	6	.	.	1	.	.	2	.	.	.	6	.	.	2	.	.	1	.	3	.	.	.	.	.
slen. p.	6	.	5	.	.	3	.	.	5	.	6	.	5	.	.	4	.	.	2	.	.	.	.	.
slen. s.	6	.	2	.	.	5	.	.	2	.	6	.	2	.	.	1	.	.	6	.	.	.	.	.

	(cont.)										$s_1 + 2 / p_5 + 3$												
bonang																							
kenong	p3 s2										p5 s2												
balun. p.	3	.	1	6	.	.	5	.	6	.	3	1	6	.	5	3	5	.	.	.	.	.	.
balun. s.	5	.	2	.	1	.	6	.	1	2	5	.	2	1	.	2	.	3	.	.	.	.	.
slen. p.	1	.	4	.	.	3	.	.	4	.	1	.	4	.	3	.	5	.	.	.	.	.	.
slenth. s.	5	.	2	.	.	1	.	.	2	.	5	.	2	.	1	.	2	.	.	.	.	.	.

	$s_6 + 2 \rightarrow s_5 + 2 / p_7 + 6$										$s_1 + 2 / p_5 + 6$													
bonang																								
kenong	6 s2										p7 P3													
balun. p.	7	.	6	.	5	3	3	5	.	7	.	6*	.	4	2	.	.	.	2	.
balun. s.	6	.	.	1	.	.	2	.	.	.	6	.	.	2	.	.	1	.	3
slen. p.	6	.	5	.	.	6	.	.	7	.	6	.	7	.	.	6	.	5	
slen. s.	6	.	1	.	.	2	.	.	5	.	2	.	5	.	.	2	.	1	

	(cont.)										$s_6 + 3 / p_2 + 5$												
bonang																							
kenong	s5 s2										s5 s1												
balun. p.	3	.	1	6	.	.	5	.	6	.	3	1	6	**	.	5	3	5	.	.	.	.	.
balun. s.	5	.	2	.	1	.	6	.	1	2	5	.	2	1	.	2	.	3	.	.	.	.	.
slen. p.	4	.	5	.	.	6	.	.	5	#	2	.	3	.	.	6	.	5	.	.	.	.	.
slenth. s.	6	.	1	.	.	2	.	.	1	.	6	.	5	.	.	2	.	3	.	.	.	.	.

Disruption: Can begin at *, at the pelog peking player’s discretion (let the cycle run a few times before disrupting). Other balungan (not slenthem) join in at **

*Pelog peking: 1 2 1 2 3 1 2 3 4 1 2 3 4 5 1 2 3 4 5 6 7 6 5 7 6 5 . 7 6 5 4 3 2 1

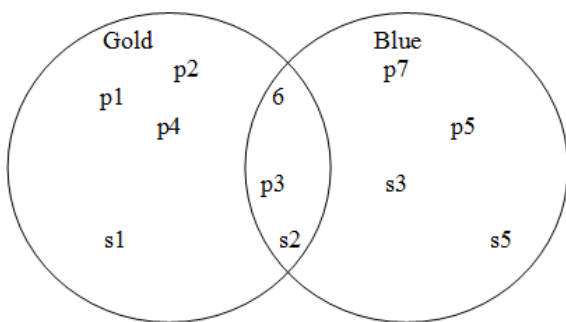
**Slendro + pelog balungan tutti: . i 6 5 3 2 1 6

Gender panerus enters playing triple-time cengkok in tanggung, slowing to dados by 3rd gatra of bridge

The melody line is the highlighted notes shared between *slendro* and *pelog*; players have harmonising notes when they are not playing the melody. These *saron* lines (‘balun.’ in the

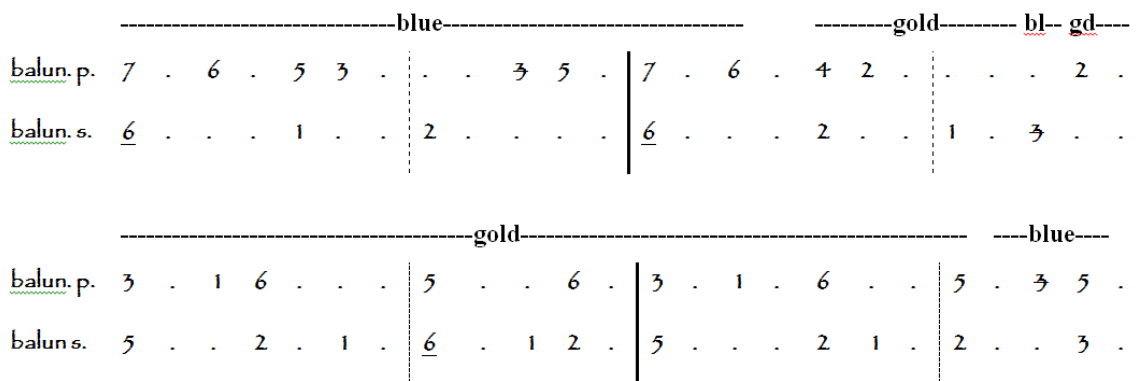
score) were the first thing to be composed. Although the melodic starting point was a snippet of *Turangalila*, the setting explores the harmonic possibilities of a combined *slendro* and *pelog* scale: something I had had in mind as an interesting project since I first played gamelan in 1997. Based on this initial melody line and its harmonisation (which was picked out intuitively), I sketched out two mixed-*laras* modes which rationalised the sense of harmonic modulation that was emergent from what I had thus far written. In a slightly synesthetic manner, I found myself thinking of these as a ‘blue’ and a ‘gold’ mode:

Figure H.2: modal structure of *Waterlily*¹⁰⁷



I then mapped these modes onto the melodic line:

Figure H.3: ‘blue’ and ‘gold’ areas in *Waterlily*’s melody



Harmonising notes in the *slenthem* and *bonang* were, up to a point, picked according to this mode structure, either to create consonance (for example, in the first half of A, *bonang* notes fit the blue and gold schema) or to create harmonic tension by superimposing different modes (as in the second half of A where the *bonang* contradict the schema,

¹⁰⁷ Although on Sekar Petak and most *tumbuk 6* gamelan, p4 and s5 are almost the same pitch (there is a microtonal difference - see Appendix 1) I have put them in different places in the Venn diagram, rather than the central area, as that is how I tended to use them and conceive of them. I would not care to hazard an opinion as to whether I was responding to the actual pitch differences or psychological associations.

playing p5 in the gold section). However, this was not a rigid structure: at the end of the day I was guided by what sounded right.

The saron melody is interrupted at various intervals by a ‘Disruption’ pattern which begins on *pelog peking*, joined by other players for the final descending phrase (a short version of this pattern serves as the *buka*). After each disruption, the *balungan* drop out for a cycle, allowing the texture to be changed throughout the section, thus making the most of limited musical material through different combinations of *balungan*, *slenthem* and *bonang*.¹⁰⁸ After the third interruption, all but the *slenthem* stops; they then play one full cycle of A, slowing down slightly to the end of the cycle as the *gender panerus*¹⁰⁹ comes in. At the end of A, the *pelog slenthem* player moves around to the upper end of the *slendro slenthem* and a *gong ageng* marks the transition from Western-style to *karawitan*-like structures.

The bridge is essentially a *slendro*-only version of the last two *slenthem* lines of A. The *gender panerus*, having picked up the tempo in *tanggung* at the end of A with the typical *nampani buka*¹¹⁰ stock-phrase used in *gendhing*, plays triple-time *genderan*, leading the slow-down to *dados* in the bridge. The *gender* comes in with a similar phrase in a slow duple *tanggung* towards the end of the bridge and all players move onto Section B (‘water’).

These *gender* parts were the starting point for Section B: my initial idea was simply to have two *gender* playing something with a two-against-three feel, to give a sense of rippling water, simultaneously quite static and full of motion. I discussed the idea with John Jacobs, who was to play other *gender*, saying that I was considering writing completely original *gender* parts, but I was not sure if I could be bothered, that it might be easier just to use existing *cengkok*. His response was that he was not sure he ‘could be bothered’ to learn completely new parts, and that if I was going to do so, I ought to have a good musical reason for doing so, not just attempt to write *cengkok*-like material for the sake of doing something original. Although I had not been learning *gender* for very long, I was rather smitten with the beauty of the few *tanggung* and *dados cengkok* I knew and was fairly sure I would be incapable of writing anything as lovely, and that if I did, it would

¹⁰⁸ A suggested full form for the piece is found in the notation (S-I.1).

¹⁰⁹ For the original performance in York, this part was played on John Jacobs’s extended *gender*. For the video of the *gender* parts, a *gender panerus* was used, as this reflects the likely set-up should any other ensemble wish to play the piece, although with a limited lower range, the lower-pitched *cengkok* must be contracted somewhat.

¹¹⁰ Literally, ‘picking up the *buka*.’ (Jonathan Roberts tells me this is A.L. Suwardi’s term for this phrase – by email October 2013).

limit the possibilities to the notes I wrote down, sacrificing the variability that comes from relying upon players' *cengkok* repertoire. Due to this, as well as a pragmatic approach to rehearsal time, I opted for the *cengkok* approach.

We began experimenting with *Ladrang Wilujeng*, as I knew the *genderan* well. Jacobs had already been experimenting, for his own compositions, with three-beat *cengkok* with duple cross-rhythms that could be easily adapted to my idea three-against-two *genderan*, so he played the triple-time part. We tried playing both at the same pitch, and with the triple-time part transposed up two notes and three notes (a *kempyung*). The unison was too cluttered, whilst I found the *kempyung* transposition too dry and a bit Chinoisie-esque with its parallel fifths. The two-note transposition worked very beautifully, so I decided the upper *gender* would *garap* to two notes above the *balungan* line: for *seleh* 6, the upper part *garaps* to 2, but using a transposed *tumurun* 6, not a *kkp* 2.

The three-line lyric to the song came as swiftly and easily as the text upon which the piece is based (which is never sung and only appears as a programme note); however, attempts to write a second verse were fruitless, so the same three lines are used in each occurrence of the song. The melody also seemed to arrive pretty much of its own accord: a simple falling contour, conceived originally as having ornamentation reminiscent of Carnatic *gamakas* (melismatic vocal figurations). In the first recording, the line was sung by an undergraduate student from South India who had learned some Carnatic vocal music, though as it turned out, her experience of *gamakas* was limited. For the second incarnation, the part was sung by Jon Hughes in his distinctive blend of Javanese and British styles, with *sulingan*-like ornamentation (better suited to what was by now a decidedly Javanese-structured section) and a European open-throated tone.¹¹¹ A *balungan* line was abstracted from the vocal melody and split between the two *slenthem* players, with *seleh* notes harmonised two notes above (but sometimes played down an octave). I resigned myself to *pathet manyura* for this section because, although I felt the gentle tones of Sekar Petak's *sanga* were better suited to the mood I wished to create (it is a *pathet* I particularly associate with water), the temptation of having an octave range available on the *slenthem* (low 6 to 6) for gong notes was too appealing.

Finally, an *ompak* was added to expand the 'Water' section out, based partly on the contours of the *ngelik* (for example, the last two *gatra* of each are the same) and partly to

¹¹¹ Unfortunately there is no recording of this version.

incorporate some of my favourite *cengkok* combinations (quite heavily influenced by *Ladrang Wilujeng*, which has such an appealingly lyrical sequence of *gender cengkok*).

Figure H.4: *Waterlily* – Section B (‘Water’)

Bridge - P e log slen them player switches to share slendro slen them (upper part)

{ slen. s **6** 5 6 i 6 i 6 5 3 5 6 5## 3 5 6 5 **6**
 slen. s **6** 1 2 3 2 1 2 1 6 1 2 1 3 1 2 1 **6**

Section B: ‘Water’

ompak (numbers in bold are the ‘balungan’ line but need not be played in any special way)

{ slen. s 5 3 5̄ 5 3 5 .5 6 i 5 i 6
 slen. s 1 6 1 2 6 1 2 3 . 2 1 6

{ slen. s . . 6 6 3 5 3 5
 slen. s 3 3 . . . 1 6 2

{ slen. s . 6 i 6 6 i 6 5 6 5 i **6**
 slen. s 1 2 5 3 2 5 3 2 3 2 1 **6**

nglik 6 6i2 2 i 6 365 5
 In be-tween the burn-ing sky
 { slen. s . **6 6** . i 6 3 5 **6** i 6 **6̂**
 slen. s . . 2 2 3 2 1 2 . 5 3 **5̂**

{ 6 6i 5 65i6 325
 and the cool - green ri -
 slen. s 3 5 6 5 . 6 i **6̂**
 slen. s .2 1 3 . 2 3 5 **3̂**

{ 3 6 5 2 32 16 213216516 6
 - ver Floats the wa - ter - li - - ly
 slen. s . 6 6 . 6 5 3 . . 5 i **6**
 slen. s . . 3 3 . 2 6 2 3 2 1 **6** 1st time to bridge
 2nd time end

gender barung player enters playing duple time cengkok in slow tangung

The *genderan* was created with Jacobs's assistance: the selection of *cengkok* for the *ngelik* was his, as I had never *garaped* an unfamiliar piece before. I am particular grateful to him for his solution to the *seleh* 5s in an otherwise *manyura*-like piece: imposing a double-length *kacaryan* (*wilet* for the upper gender, *dados* for the lower). Having already allowed the *ompak* to draw upon favourite *cengkok* combinations from *Wilujeng*, I was able to *garap* most of it myself, although I am indebted to Jacobs for his *debyang-debyung* suggestion in the last line, saving us from tiresome repetitions of *kkp2* and *kkp3*.

Figure H.5: *balungan* and *garapan* for *Waterlily* Section B¹¹²

ompak

kkp2	kkp3	tumurun 6
5 3 1 2	3 5 2 3	. 2 1 y

-----puthut gelut-----

3 3 . .	3 5 3 2
---------	---------

-----debyang-debyung -----

debyang-debyung	tum 6/ duduk to ngelik
5 6 5 3	6 5 3 2
	3 2 1 gy

ngelik

gantung 6	-----kacaryan----->
. 6 6 .	! 6 ! @
	6 5 3 5

kacaryan(cont.)-----

3 5 6 5	2 3 5 3
---------	---------

gantung 3	kkp2	tumurun 6
. . 3 3	6 5 3 2	3 2 1 gy

For rehearsals, the notation presented to players was much as has been reproduced in this case study. Further instructions as to the form were conveyed aurally to the group. However, inspired by my aborted attempt to enter the piece into a competition, the notation given in the accompanying cd includes copious notes as to how to realise and rehearse the piece.

Chapter 5

Combinations

All works considered in this thesis are, as pointed out in Chapter 2, fusion of a kind: none represent a composer's attempt to write a typical, classical *gendhing*, whilst even the most avant-garde or atonal works are played on a gamelan, with all the visual and cultural associations this engenders. But whilst Chapter 2 focused primarily on the balance between

¹¹² A video recording of the *genderan* alone can be found at <http://vimeo.com/75016483>. Accessed 25 January 2013.

karawitan and other musics' concepts and organising principles, this chapter explores combinations at a more physical level: the combination of gamelan with non-gamelan instruments and interactions with electronic sound sources, as well as Western-style vocal writing (e.g. choral music), and homebuilt or specially commissioned gamelans which incorporate non-gamelan features such as equal or just intonation.

Gamelan and non-gamelan instruments - tuning

There are a significant number of works which combine gamelan with instruments from other musical systems, and a plethora of motivations for doing so. The composer may wish to utilise, even unify, multiple artistic influences, creating self-consciously hybrid works in which combined instruments act as a signifier of their associated musical systems (for example, the accompaniment of a choral mass with *karawitan*-like gamelan writing in *Missa Gongso*). There may be a particular instrumentalist whose expertise the composer wishes to draw upon, or has a commission to write for (such as Richard Causton's *Concerto for Percussion and Gamelan* for Evelyn Glennie). Often instrumental-based reasons such as timbral explorations or curiosity about combined pitch sets are the driver (as with March's microtonal pitch set for *Pieces of Five and Three*). In some cases, the underlying compositional drive is simply the question of how one might go about combining gamelan with such-and-such an instrument (Clive Wilkinson's ...*a long way of seeing...* is at least in part the result of such musings).

Whilst there are a number of factors to consider when writing for gamelan and western instruments – concerns of timbre and dynamic balance, different conceptualisations of musical structure and rhythm, the generation of new contextual meanings when combining instruments from different cultures – one of the most immediate pragmatic considerations tends to be tuning.

Neil Sorrell proposes three choices for composers combining gamelan with differently-tuned instruments: adapting the tuning of western forces to the gamelan, 'finding a kind of middle ground (or no-man's-land) where both western and Javanese tunings can somehow meet; leaving the tunings as they are and enjoying the difference' (2007: 32).¹¹³ He also gives an honourable mention to the option of using western instruments to imitate the gamelan (as per Colin McPhee), and to commissioning or

¹¹³ For Sorrell, the acceptability of this last approach was confirmed by its use in Java: it was inspired by hearing a multi-*laras*, multi-*embat* five-gamelan extravaganza called *Rhythms of Harmony* collaboratively composed by Darsono, Sukamso, Wahyudi Sutrisno and Rahayu Supanggah at STSI Solo (2007:38).

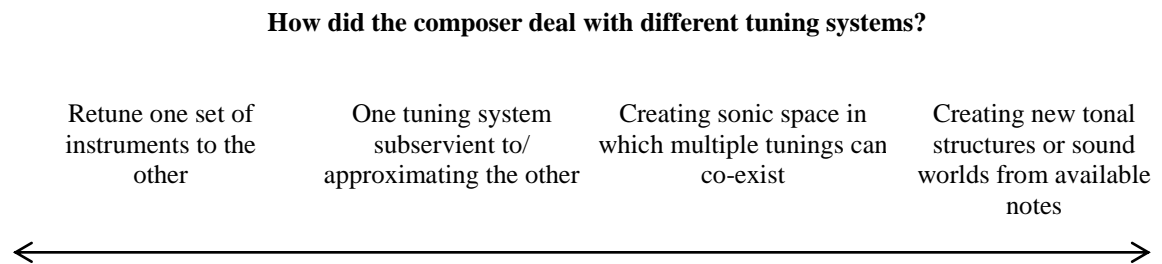
creating a gamelan tuned to western pitches (such as equal temperament or just intonation). Whilst the former approach is outside the scope of this thesis, exotically-tuned gamelans, such as Cragg Vale, and the Dutch ensemble Multifoon are at least given a brief mention.

Sorrell's three options make a good starting point, but each need a little redefining for the purposes of this chapter. The first is clear enough: works in which the composer's stated desire is for non-gamelan instruments to match their tuning to the gamelan, and vice-versa (i.e. building a gamelan tuned to non-Indonesian tunings); so generally, tuning one set of instruments to fit the other. At the other extreme are works in which different tuning systems are a defining feature, for instance those involving new scales constructed from *slendro*, *pelog* and equal temperament, or morphing from one scale to another.

The definition of the middle ground is a little more elusive; finding common ground where two tuning systems can meet is not necessarily a distinct activity from 'enjoying the difference'. For the purposes of this chapter, the middle ground is characterised as an area of tolerance, compromise and approximation, occupied by works in which different tunings may coexist, yet the difference is not so much 'enjoyed' as smoothed over, tactically ignored or rendered irrelevant. This may involve using one set of instruments to imply the native tonality of the other without actually matching fundamental pitches, trusting the listener to interpret one tuning system as representing another, or else finding common ground within which different tonalities can co-exist, retaining their individuality but without conflict. It also plays host to works in which absolute pitch is less significant, for example, highly atonal pieces with no hierarchical relationship between notes, or those which focus upon timbral/spectral sculpting rather than pitch-based composition.

As in other chapters, these three approaches – matching the tunings, creating a 'middle-ground' and building new tonalities from all available notes – represent a spectrum rather than discrete categorisations, with borderline cases such pieces where the composer's intention was to match pitches but in practice this was not pragmatic. It is also debatable whether creating an atonal soundworld from *slendro*, *pelog* and equal temperament is a middle-ground option which disguises the different tunings or exploitation of all available notes to create something new: the answer to this may depend on the composer's reasoning more than the resultant music.

Figure 5.1: Spectrum of how tuning systems are mixed



Matching the pitches of gamelan and non-gamelan instruments

Many compositions require non-gamelan instruments to alter their ‘native’ tuning to play in *slendro* and/or *pelog*. This can, up to a point, be achieved through working with instruments with indeterminate pitches, such as unfretted strings (e.g. violin, cello), variable pitch brass (trombone), open-holed wind such as *shakuhachi* or bagpipes (which can be half-covered or taped), instruments which have individually tuneable notes, such as piano, or instruments where the pitch can be bent slightly through embouchure (such as trumpet, French horn, clarinet and flute).

Tuning non-gamelan instruments to gamelan – or vice versa – is perhaps the most obvious but not *always* the most successful approach to the issue of pitch: from the pieces explored in this study, my feeling is that there are some success stories and some failures. Although some ‘failures’ result from poor pitch-matching – a badly tuned piano, a violinist insufficiently familiar with *slendro* and *pelog* – on a more profound level, they can result from the assumption that all that needs doing to get instruments from completely different musical systems sounding ‘right’ together is to match the fundamental frequencies. This assumption is worth questioning. The accurate alignment of pitches is not of itself enough to overcome often profoundly different philosophies behind alien tuning systems and their manifestation in the physical properties – such as overtones, timbre or loudness – of the instruments. Nor does it deal with the idiomatic musical structures which have developed around each set of instruments (or the way the instruments have developed around idiomatic structures): retuned instruments will still do best what they do best, and a sensitive approach to composition that deals with more than the matter of tuning is needed to bring them together.

To explain, consider the philosophical underpinnings of the main tuning systems under discussion: Western and Javanese. The Western tonal system claims theoretical roots in the

harmonic series, in which a vibrating string or column of air vibrates simultaneously in frequencies twice, thrice, four times etc. its fundamental frequency. This produces a series of ‘harmonic’ intervals which relate to the fundamental note by ratios of integers: an octave above the fundamental (a ratio of 2:1), a perfect fifth (3:2) above that, a perfect fourth (4:3) above that, then a major third (5:4) and a minor third (6:5). After that the correlation with the Western diatonic scale becomes more complicated: 7:6 and 8:7 fall between a minor third and a whole tone, whilst 9:8 and 10:9 form a large and a small whole tone (Duffin 2007: 21).

The mathematical neatness of such ‘perfect’ intervals arising from nature supported the development of an idealised intervallic structure based on ratios of whole numbers, known as just intonation. Due to the impossibility of actually building a twelve-note scale with such pure intervals (thanks to troublesome glitches such as the Pythagorean comma which means that twelve perfect 3:2 fifths make slightly over seven octaves) just scales produce a near-perfect scale in one or two keys, but pay the price of very inharmonic intervals in others. A number of best-fit fixes, such as meantone and equal temperament, spread the problems more evenly between notes, such that all intervals in all keys sound tolerable¹¹⁴ but none are perfect; for example the major third ends up much larger than its just 5:4 ideal. Despite these varieties, what all Western temperaments have in common is that they are underpinned by the concept of a precise intervallic structure which pertains to a mathematically beautiful (if pragmatically unattainable) ideal.

Javanese tuning, meanwhile, incorporates a narrative of personal, individualistic inner sense, or *embat gawan*. Perlman observes that not only gamelan but

[P]eople also have *embat*; indeed, to become a singer or *rebab* player one must have one’s own *embat*, which one adjusts to fit the tuning of whichever gamelan one happens to be playing with. (This adjustment need not be perfect; some musicians even claim that it can never be perfect.) (1994: 535)

A good singer alters the intervallic relationships when he or she changes *pathet* which, obviously, the fixed-pitch instruments of the gamelan cannot do; thus the gamelan tuner must seek a best-fit compromise which sounds reasonable in all *pathet* but in practice is likely to favour some over others (Perlman 1994: 536). In this respect, gamelan tuning, like tempered scales, represents a compromise, but in the case of gamelans, a plethora of

¹¹⁴ Though many advocates of just intonation dispute this vehemently; see, for example Duffin’s *How Equal Temperament Ruined Harmony (and Why You Should Care)*.

solutions, each different from the last, is seen as preferable. Alec Roth recalls a conversation with fellow students at ASKI Solo on the tuning of Western ensembles:

I was explaining about A440 being conventional, standard tuning pitch ... and so my friends said ‘So you mean to say that when an orchestra plays in London they use the same A as an orchestra playing in Birmingham?’ I said yes, that’s the standard ... pitch, all pianos are tuned to that. ‘Oh,’ he said. And then I explained about the scale, because as you know every gamelan is different, every slendro scale is different, slightly, but that’s what gives it its flavour. So I was explaining and he said ‘What, you mean to say if you played a C major scale on a piano in London and a C major scale on a piano in Manchester it’s the same intervals, it’s the same scale?’ I said ‘Yes, we call it equal temperament, it’s a standard tuning.’ Now there was this long pause while he was thinking about this, and then he turned to me and said ‘Isn’t that a bit boring?’ (Interview transcript 2011: 12)

These philosophical gulfs are embodied in the physical design of instruments, which suit the system they serve but can present potential problems when shoehorned into a different tuning system.

The piano, for example, having many strings, some of considerable length, produces rich overtones conforming to the harmonic series; that is, they are related to the fundamental pitch by ratios of integers:

Figure 5.2: Overtone series produced by striking piano note A1

Overtone	Frequency (Hz)	Ratio	Nearest equivalent in equal temperament
Fundamental	55	1:1	A1
1	110	1:2	A2
2	165	1:3	E3 (164.81Hz)
3	220	1:4	A3
4	275	1:5	C4# (277.18Hz)
5	330	1:6	E4 (329.63Hz)
6	385	1:7	F4# (369.99Hz)
7	440	1:8	A5

When a note is struck – especially if others are undamped – strings whose fundamental frequencies match or are close to the harmonics of the struck note also vibrate in sympathy; so when striking A1, it is to be expected that A2, E3, A3, etc. will vibrate as well.

A gamelan, being mainly constructed of metal bars of non-uniform cross-section and knobbed gongs, has prominent inharmonic overtones (related to the fundamental by non-integer ratios) and these are different for every instrument.¹¹⁵ Not only that, agreement on the same note between different instruments is vague at best, usually within a Hertz or two, and octaves are often stretched (to a far greater extent than they are on a piano):

Figure 5.3: Gamelan Sekar Petak overtone series on various instruments a) in frequency b) as ratios¹¹⁶

a)

	Funda- mental/ Hz	Overtones/ Hz							
Slendro Gender LL6	114	295	343	423	552	685	923	1067	1326
SI/P kempul 6	116	232	276	324	464				
Slendro Gender L6	231	287	460	691	1105				
Slendro Gender 6	462	615	693	923	1385	1976			
Saron low 6	463	924	1322	2624					
SI/P kenong 6	464	649	925	1623	1657	1716	1992	2206	2394
Saron 6	926	1638	1849	2776	4774				
Peking L6	928	1855	2545						

b)

	Frequency as ratio to fundamental									
Slendro Gender LL6	1:	2.59	3.01	3.71	4.84	6.01	8.10	9.36	11.63	
SI/P kempul 6	1:	2.00	2.38	2.79	4.00					
Slendro Gender L6	1:	1.24	1.99	2.99	4.78					
Slendro Gender 6	1:	1.33	1.50	2.00	3.00	4.28				
Saron low 6	1:	2.00	2.86	5.67						
SI/P kenong 6	1:	1.40	1.99	3.50	3.57	3.70	4.29	4.75	5.16	
Saron 6	1:	1.77	2.00	3.00	5.16					
Peking L6	1:	1.37	2.00							

¹¹⁵ Even a bar of uniform cross-section does not produce a perfect harmonic series when struck: typically the first overtone will be approximately 1.5 times higher than the fundamental, so a C3 bar would have a harmonic sounding close to F4# (Flynt 2009: 2-3).

¹¹⁶ These figures were obtained by analysing recordings of individual notes by plotting their spectra using a Hanning window, in Audacity software. Overtones louder than -78dB were recorded.

Whilst it can be seen that some instruments, such as *kempul*, do have some rational overtones (1:2 and 1:4) – which accounts for this gong’s very mellow, clean sound – all have irrational overtones, sometimes ratios close to but not quite whole numbers, and plenty with no simple relationship to the root note. According to various sources,¹¹⁷ overtones in most gamelan instruments are not specifically tuned, and not considered a desirable or important feature.¹¹⁸

I suggest the inharmonicity of the overtones does support certain typical features of gamelans, such as the lack of agreement on exact fundamental pitches of notes: the gamut of differing overtones on each instrument produces a sound which is already so rich and complex that slightly different fundamentals are not heard as out-of-tune in the same way as might an intonationally-challenged orchestral string section. On Balinese gamelans, small differences are deliberately tuned into pairs of certain instruments, creating an interference pattern (*ombak*) which helps the sound carry long distances outdoors. On Javanese gamelans, shared pitches are not deliberately tuned to different frequencies, but given the fact that gamelan do tend to drift out of tune over time, this tolerance is certainly convenient, as well as forming part of the characteristic sound of the ensemble.

As a result, an act such as tuning a piano to a Javanese gamelan is far from straightforward. Most Western temperaments provide a compromise in which the overtones of each note match up reasonably well on important intervals such as octaves and fifths: there is little in the way of audible beating, hence they are heard as ‘in tune’. Once a piano is tuned to *slendro* and/or *pelog*, the interrelationships between the overtones becomes decoupled, resulting in unpredictable resonances reminiscent of a honky-tonk piano.¹¹⁹ If the piano is tuned to the stretched gamelan octaves, passages with parallel octaves will sound distinctly out-of-tune, the strong harmonic overtone profile ensuring the clashes are not only pronounced at the fundamental pitches but reproduced all the way up the overtone series. However, if the octaves are not stretched, the piano will be audibly out with the gamelan beyond a small central range. Similar problems arise from the fact that *kempyung*

¹¹⁷ For example, Midyanto and John Pawson, to gamelan@listserv.dartmouth.edu, October 2013.

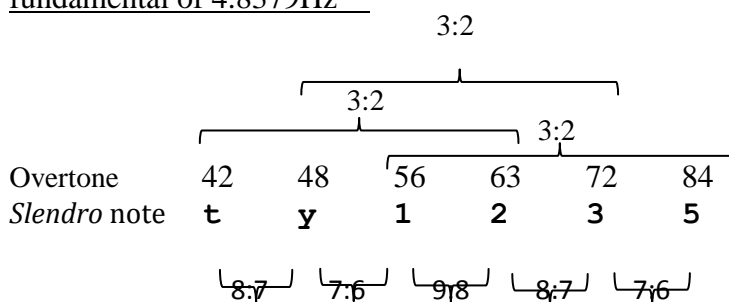
¹¹⁸ The exception to this is the *gong ageng* in which the harmonics are specifically tuned to generate the *ompak* (wave), an interference pattern between closely tuned overtones which produces a characteristic throbbing sound which helps sustain the note.

¹¹⁹ Of course, this is precisely the argument that many Just intonation proponents put forth against equal temperament, suggesting that equal tempered seconds and thirds are ugly compromises whose prominence has ruined Western musicians’ ability to hear ‘true’ intervals (e.g. Duffin 2007). Whether this is a valid argument, or represents an unwillingness to accept that tuning is not in fact an inevitable, natural result of mathematical laws but is culturally determined is an argument dealt with superbly by Perlman (1994).

in *slendro* comprise various non-perfect fifth-like intervals, at least if the composer uses fifths with Western diatonic/harmonic implications, such as in Lou Harrison's *Concerto for Piano and Javanese Gamelan* (Case Study I).

One way to overcome such problems is to write for a gamelan tuned to the Western scale, or Harrison's favourite compromise: a just intonation version of *slendro* and *pelog*. Indeed, many of the problems in realising Harrison's piano concerto on a typical Javanese gamelan seem to relate to the fact that it was originally composed for a just interval *slendro/pelog* gamelan, Si Betty, which does not have stretched octaves and incorporates several 3:2 (perfect fifth) intervals in its *slendro*:

Figure 5.4: Intervallic relationships in Si Betty's *slendro*, based on overtones to a fundamental of 4.8379Hz¹²⁰



Though the very sweet (but arguably rather bland) sound of this 'American' gamelan may not be ideal for playing *karawitan*, it seems to work well for combining with Western instruments. However, problems arise when performed on a typical Javanese gamelan, such as Sekar Petak, with stretched octaves, uneven *kempyung*, and other notes which fail to produce anything like the major or minor thirds Harrison envisaged (see Case Study I). In this case, retuning is not itself enough to overcome the idiomatic nature of instruments from different traditions. Although the work is stated as being for 'Javanese' gamelan, its strongly diatonic writing makes it untranslatable into, for instance, a Radio Republik Indonesia-style *embat*; it is, in fact, very much a concerto for American gamelan.

Other works composed for exotically-tuned gamelans are considered playable only on that gamelan. For instance, Cragg Vale Gamelan – a home-built set tuned to an equal temperament pentatonic scale of F, G, Bb, C and D – played only new works, most of them Mick Wilson (who built it) and Dave Nelson (who later directed the group), and no traditional gamelan music at all. America is home to many unusually-tuned gamelans, both

¹²⁰ From www.gamelan.org/sibetty/overtone-series-sibetty-tuning-measured.pdf. Accessed 14 October 2013.

homebuilt sets and special commissions from Java.¹²¹ In the Netherlands, composers Sinta Wullur commissioned Multifoon, a bronze, Javanese-built chromatic gamelan, which she has used both in her own compositions¹²² and commissioned other composers to write for.

Response to non-Javanese tuned gamelans is mixed. Whilst for some it opens up possibilities of harmonic structures and consonance with Western instruments that more typically-tuned gamelans make troublesome at best, for others, the particular charm of gamelan lies in the Javanese approach to tuning; some even venture that if it is not in *slendro* or *pelog* and cannot be used to play in *karawitan*, it is not really a gamelan. The problem of overtones again rears its head: just or equal tempered gamelans still have inharmonic overtones, as Symon Clarke found when he was commissioned to write for Multifoon:

[T]he weird thing about it was that although you would hit a saron or any of the instruments and you'd get a Western fundamental ... but all the overtones would be very peculiar, and it was very hard for the violinist and the clarinettist to actually pitch their instruments with this. And once you'd built up a texture, as you would do with gamelan instruments, the fundamentals began to get very blurred. And it was clearly not Javanese tuning, it was Western tuning, but it had such a strange shimmer about it.... But in the end, for me creatively, that was a dead end, because actually ... both pieces I wrote for them could have been rewritten for Western percussion instruments, and there was nothing intrinsically gamelanish about them really. And that was a surprise to me, because I thought the saron sounded like a saron, even though it was in western tuning, it was its usual beautiful sound, [but] the fact that it wasn't in Javanese tuning as well made it sound like a sort of bastardised vibraphone, a vibraphone with weight. And you lost half of the allure and interest of gamelan, which is its tuning. (Interview transcript 2011: 8)

¹²¹ These include Dennis Murphy's Venerable Voice of Thoom (Murphy 1974), Lou Harrison and Bill Colvigs' sets Si Betty and Si Darius, Barbara Benary's Gamelan Son of Lion, Daniel Schmidt's Berkley Gamelan and Gamelan Diamond Bridge, Gamelan Pacifica (which began life in an instrument-building workshop led by Schmidt - http://www.gamelanpacific.org/gamelan/narrative_history.html) and the Harvey Mudd American Gamelan, commissioned from Suhirdjan in Yogya and tuned to just intonation *slendro* and *pelog* (<http://www2.hmc.edu/~alves/gamelan.html>).

¹²² Fragments of Wullur's Ramayana opera accompanied by Multifoon can be heard here: <http://www.youtube.com/watch?v=ZBvFaxtw7IE>. Accessed 14 December 2013.

Other than retuning the gamelan, there are a number of ways subsequent composers have avoided the pitfalls highlighted by Harrison's early experiments. One direct response to the difficulties in playing Harrison concerti on a real Javanese gamelan was Neil Sorrell's concerto for prepared piano. The primary tool used here is noise: both percussive piano sounds (created by inserting screws between strings) and atypical gamelan techniques, (such as hitting the rims and shoulders of *pencon*) are used to separate out piano and gamelan; when the piano has a lyrical passage, the gamelan 'clunks' away and vice-versa. In the only passage where both gamelan and piano play recognisable pitches, the piano writing is based upon simultaneous *slendro* and *pelog* runs, one *laras* in each hand, creating a bi-modality which is neither beholden to diatonic tonalism nor *karawitan* but is nevertheless familiar as the pitch sets we have been hearing from the gamelan throughout the concerto (see Case Study I).

Interestingly, Sorrell does not specify that the piano should be retuned to the gamelan, claiming the concerto was composed in such a way as to make this unnecessary (email, 5 November 2013); however, in both performances it has received the pianist (Nicky Losseff) decided it was worth retuning the piano (email, 4 November 2013), hence it is included in this part of the discussion – it could equally belong to the 'middle ground'.¹²³

Drawing out unusual timbres from both gamelan and piano to mask the fundamental differences in sonority is one way to create the kind of neutral territory that Sorrell discusses in 'Issues of Pastiche' (2007). Without some consideration of the question of sound quality, even the most painstakingly retuned Western instruments may occupy such a different sound world as to make the pitch matching irrelevant.

I was struck by this on first hearing Aris Daryono's *Rasa 2* at a composer's forum in London in 2013. Clarinet, flute, oboe and cello play in a mix of 12-tone chromatic, *slendro* and *pelog*, adjusting their tuning as far as possible to gamelan pitches when indicated in the score. From the audience, I was unaware that the Western instruments were adjusting to the gamelan at all, firstly because the writing was so atonal that the usual harmony-based aural cues to whether something is 'in tune' were simply not present, secondly because the tone quality of the woodwind instruments was so different from that of the gamelan (represented only by *gender*) that they seemed to occupy different planets; my ear simply refused to relate one set of notes to the other. The question of tuning was raised in the discussion afterwards, and American composer Phillip Corner suggested (quite insistently)

¹²³ Mostly out of curiosity as to whether Sorrell's intentions are borne out in practice, I hope to prove this by performing the piece myself at some point with the piano in its normal tuning.

that the piece would be unharmed by having the Western instruments play only in the Western scale. The woodwind players staged a robust defence, explaining that there is no equivalent in the Western scale for the *slendro* and *pelog* pitches, stating that to change it in this way would make it a different piece. At the time I was dubious, agreeing at least in principle with Corner that what was clearly a challenging feat for the musicians (flautist Detta Danford had earlier described tuning in with the gamelan as the hardest aspect of the piece) probably made little difference from the audience's perspective. However, the musicians' description of a tangible sense of resolution when they hit the right pitch made me more inclined to accept the importance of these adjusted tunings:

What I find interesting playing this piece ... it changes your perspective of where 'home' is.... In western music – I mean some western music – we have a sense of home, and this really changes, because home is unity with the gamelan, and I find that it gives a lot of expressive possibilities when you have this tension against the gamelan and then you resolve with it. (Alex Roberts [clarinettist], discussion transcript, 2013: 6-7)

Physical difficulty in playing *slendro* and *pelog* on Western instruments is an important consideration: some notes on wind instruments may be unreachable, some intervals on strings difficult to judge, and on any instrument the tone quality of certain notes may suffer when playing pitches other than those for which it was designed.¹²⁴ Even for the most expert player with a very good ear, tuning to the gamelan may present quite a challenge if insufficiently familiar with the *laras*. Robert Champion's *Overy Dunes* (2007, recording R-5.1), a duet for cello and gamelan, illustrates this to some extent. Although the cellist is clearly a talented musician with an excellent ear, he was 'not particularly versed in gamelan' which, combined with the familiar bind of 'just having a couple of sessions of rehearsal, really, to work with him' (Champion, interview transcript 2013: 9), may have made it difficult to truly internalise the *pelog* in which he was asked to play. Also, deprived of the cover provided by the imprecise pitches and rich inharmonic overtones of a full gamelan, the very mellow, clear, and sustained *gender* tone means that any slight mismatch in the tunings of the two instruments is very exposed, particularly in long, sustained cello

¹²⁴ The best example I ever came across of this phenomenon was a bizarre and lumpen rendition of *Danny Boy* on shakuhachi, using half-holes to reach the Western pitches, with the occasional open-holed note ringing out, whilst structurally important points in the phrase were muffled and unstable.

notes (as can be heard at 1m14s when the cellist ever-so-slightly adjusts his tuning to fit the *gender*).

In contrast, when writing *Fullstop* (1990, recording R5.2) for violin and gamelan, Clive Wilkinson was able to collaborate during the development of the piece with violinist Liz Haddon, who sometimes played *rebab* in the same gamelan, Sekar Petak, and was thus very familiar with its tuning. This confidence in *embat* and the collaborative development process contribute a lot to the comfortable and secure match of pitches between soloist and gamelan evident in the recording. However, it is also helped by compositional features, such as an atonal, gestural approach to writing, and the use of a full gamelan – which is more tolerant of varying intonation than a single *gender* – resulting in a sonic space far more forgiving of tiny discrepancies in tuning than *Overy Dunes*.

There are cases where the inability to perfectly tune each note to the gamelan is not a significant problem, as long as the composition is sympathetic to approximate tuning. In *Iron Pipes* (Case Study E), although it was not possible to tune each individual bagpipe note perfectly without carving a new chanter (Brown, interview transcript 2013:2) in the end, the bagpipes at least seem to fall within the tolerance permitted by the vagueness of pitch internally within the gamelan, much as the *suling* does in *karawitan*.¹²⁵

A similar tolerance is also at play with *Gamelunk* (recording R-5.3), a perennial favourite in the Naga Mas canon by J. Simon van der Walt; in this case it is not just the inexactitude of the gamelan, but the permissible vagueness of blues notes which allows the work its harmonic stability, much like an earthquake-proof skyscraper derives its strength from the ability to sway with vibrations. A jazz head composition for gamelan and flugelhorn, *Gamelunk* uses ‘the pelog gamelan to fake various jazzy chords and riffs, based on the rough proximity to normal concert pitches’ (van der Walt, ‘Gamelunk’: online). The gamelan part comprises a *bonang* riff with a two-chord groove established by *kempul*, *slenthem* and *demung* (‘faking’ F7#9 and Bb7) over which a simple *saron* ‘head’ melody or flugelhorn solo floats.

The use of gamelan to imply jazz harmonies is aided by the fact that most of Naga Mas’s *pelog* pitches are quite close to Western scale equivalents; for instance, p3 and p6 are very close to a perfect fourth apart, making a perfectly acceptable F, Bb bass line. The

¹²⁵ Hardja Susilo notes ‘The *suling* player today operates mostly on the second harmonics above the fundamentals. By themselves they sound way off; but together with the rest of the gamelan those strange pitches add “pepper” to the ensemble’ (to gamlena@listserv.dartmouth.edu, 30 October 2013).

p2 is one of the more ambiguous notes from this perspective, falling between E and Eb,¹²⁶ but this in fact makes it an ideal blues note in both the Bb7 (where it makes a low sharp-4), and in the F7 (where it functions as a slightly high flat-7). As well as falling upon notes which are idiomatically bent anyway in typical jazz, this overall vagueness also helps the flugelhorn to sound ‘in tune’ even on notes it cannot ‘lip up’ to perfectly, such as p7.

The middle-ground

If, as these later examples show, it is not always necessary to perfectly match pitches, it does rather encourage the question ‘is it worth matching pitches at all?’ This was precisely the question asked by Javanese musician and erstwhile University of York student Joko Purwanto after a particularly excruciating performance of Lou Harrison’s piano concerto with Sekar Petak in 1988, in which the piano was retuned by a tuner who had never encountered a gamelan before (Wilkinson, interview transcript 2011b: 23).¹²⁷ The question inspired Neil Sorrell and Clive Wilkinson (who was involved in the performance) to experiment with combining Western forces with gamelan in such a way that no retuning is required.

Sorrell wrote *Missa Gongso* (Case Study B) to explore the possible geographies of a ‘middle ground (or no man’s land)’ in which disparate tunings can coexist (2007: 32). The choir are specifically instructed not to attempt to adjust their tuning to the gamelan pitches beyond taking their Bb from sp6, although in practice, some accommodation does take place.

Each movement offers a different approach to the terrain. As described in the Case Study, the ‘Kyrie’ plays with the tonal expectations of the listener, veering from modal diatonicism in the imperfect (I to V) cadence of the opening statement (conveniently missing any major or minor thirds), to Javanese-style, *seleh*-based *gendhing* in the gamelan passage, then a marriage of the two. The solemn, ritualistic ‘Qui Tollis’ (recording R-B1, from [time]) escapes tuning clashes through a mix of very simple, sparse gamelan and choir writing, along with a degree of unconscious accommodation between the choir’s intonation and the gamelan. The monophonic choir part mainly follows a *slendro*-like

¹²⁶ Relative to Bb = 6, rather than absolute A440 equal temperament.

¹²⁷ An example in this approach to the Harrison concerto is provided by a 2012 student recital of the piece in Singapore in which the piano is not retuned to the gamelan. To my ears, this recording sounds no worse than the Sekar Petak versions, though as some of the comments below the video indicate, opinion on the matter is divided: one person writes ‘Either tune it as the composer wanted or don’t perform it. This is painful.’ <http://www.youtube.com/watch?v=HcMf3D5D4D8>. Accessed 4 November 2013.

Western scale (Bb, Db, Eb, F, Ab) whilst the gamelan's only clear notes are s1, s2 and s6 on *kemanak* and *kenong*. Thanks to the cue provided by the relentless !6!6 ostinato from the *kemanak*, where the choir sing the equivalent pitches (Db and Bb) they tend to narrow the interval as per *slendro*, singing the Db flat. However Fs are generally hit a perfect fifth above Bb/6 unhindered, thanks to the absence of s3 (which would be sharper than an F) in the gamelan part. Having established such simple consonance, Sorrell suddenly expands the tonal world out into more complex harmonies based upon *miring* (extra-modal notes used to impart a mournful feel in modern Javanese *karawitan* compositions), like the sun briefly bursting out from behind clouds, lifting the texture without ultimately challenging the prevailing static structure of the gamelan part, before swiftly falling back to plainchant-like austerity. A different type of middle ground is offered in the delicate 'Sanctus' (recording R-B.1, from [time]). A three-part, female-voice chorale soars above a shimmering gamelan tremolo, initially a simple tonic pedal on A, which gradually adds in other pitches based upon fleeting discords and modulations in the choir part, allowing these to linger, echoes of disquiet, long after the choir resolves back to more innocent triads, unhindered in their tuning by the subtle, mixed-*laras* gamelan texture.

Whilst Sorrell's middle-ground is host to a kind of musical parley, a space in which to seek common terms for the careful negotiation of harmony, or at least peaceful coexistence, Wilkinson's *...a long way of seeing...* uses the 'no-man's land' as a staging-ground for war. The opening passage embraces violent discord, with relentless hammering in equal temperament at opposite ends of the piano accompanied by a battery of *slendro*, *pelog* and random pitches from upturned *pencon*, producing a soundscape so extreme that the actual nature of any tuning systems in use is rendered inaudible. As described in Case Study I, the piece also employs more subtle devices to undermine the relevance of tuning, including the use of wide tessituras, dense cluster-chords, chance procedure-based selection of material and extended techniques for playing instruments. The result is a series of tableaux in which different tonalities – 'normal' gamelan, piano and overtone-rich clangs from upturned *kenong* – are thrown together in various combinations, from which new sound worlds – some surprisingly delicate, others merely noisy – emerge.

The use of extreme tessitura is a trick which crops up elsewhere in works for mixed instruments. For instance, Robert Campion's *Miniature* (2008) (recording R-5.4) for bass flute, *rebab* and two *gender panerus*, was composed partly to explore how the juxtaposition of extremes can disguise differences in tuning. Campion explains that:

[T]he idea is that all the sounds are completely different, not only in terms of the register, the timbre of it – you've got the ‘burr’ of the bass flute and then you've got the ‘ting’ of the gendens and the rebab a bit more raspy [in the recording] than would have been nice, but sort of ‘eeeeee’ sound over the top, so the timbres are different, the registers, ... they're just two sound worlds that go alongside each other.... It's like ... you needn't worry about the tuning, because ... they're so different from each other anyway. (Interview transcript 2012: 8)

This observation chimes with my experience of Aris Daryono's *Rasa 2*, which although not employing wide tessituras nevertheless contains such contrasting timbres that I find it difficult to hear relative pitches.

Campion also favours rippling movement in the flute part of *Miniature*, in *My Mother's House* (below), and in the *gender* part of *Overy Dunes* to escape obvious clashes in the tuning:

There was a conscious thought about motion ... obscuring one's interest in whether something is in tune with something else.
[W]hen you've got ... little things running around, for me it sort of feels like it obscures it, and you don't worry too much – our ear isn't drawn to it too much. (Interview transcript 2012: 9)

Campion's gestural, rather atonal approach to writing facilitates the combination of very different instruments: there is no attempt to consciously bend one set to the typical writing or familiar tonal structures of the other; all are treated as equal sound sources at play in a neutral tonal space entirely of his own construction. Yet the strength of this composition lies in that within this space, each plays in a manner which is technically, if not musically, idiomatic to the instrument,¹²⁸ aided by Campion's many years' experience of gamelan, including soft instruments, for which he enjoys pushing technical boundaries in new directions.

Bjork's acoustic version of *One Day* for gamelan, Indian *tabla* and tuba, created for an MTV unplugged performance, in collaboration with the Southbank Gamelan, touches upon another middle ground approach. Considered from one perspective, it is similar to *Gamelunk* in that the gamelan parts are simply based upon the modal chords used in the original song, as John Pawson, who created the gamelan arrangement, relates:

¹²⁸ A distinction for which I am grateful to Charles Matthews who distinguishes between 'phrasal' and 'instrumental' idiom in his doctoral thesis (2013: 15).

Basically the two of us sat down together and [Bjork] had a pocket keyboard about 8 inches by 3 inches, and she played me a chord and I said yep, we've got that, and she played another chord and I said yep and we've got that, and that was pretty much it! (Interview transcript 2012: 5)

However, on listening to the recording,¹²⁹ the gamelan is doing something more complex than mere approximations of Western harmonies; it is used to create a wash of shimmering, shifting textures of tremolandi and little running scales on *bonang* and *gambang* inspired by – but tantalisingly more complex and ambiguous in harmonic meaning than – the synthesized backing to the original version of the song.¹³⁰ Within this texture, so many pitches sound simultaneously, harmony in the vertical sense is subverted and timbre takes over as the main reference point. Where clearer series of chord changes come in (at 1m42s in the YouTube video) this texture thins out and the effect is somehow less compelling – it is simply a gamelan impersonating a keyboard: fun (as the original reference becomes recognisable) but somewhat contrived. Overall, however, the oddness of the pitches, approximating but not matching Western pitches, along with the lively metallic timbres of the instruments make the 'unplugged' gamelan version of this song far more compelling (to me) than the synthesised backing to the original.

Creating new tonalities

Moving towards works which make a feature of different tunings, Symon Clarke's *Three Exits*, a trio for flute and four *gender* (Case Study K) lies upon the borders, using the ability of the human ear to associate close pitches (such as s3, p3 and F) with one another, whilst making a feature of the microtonal differences. In the programme note, Clarke points out that:

By combining [gamelan] 'scales' with the 'western' chromatic scale, the conventions for handling musical material from both traditions are disrupted and new ways of identifying and developing material have to be found. I was keen to limit the use of 'sound effects' that can be drawn from the intermingling of scales in favour of creating genuine musical development, built on combining the different tunings.

(Contemporary Gaduhon Concert programme, 2012)

¹²⁹ Available on YouTube: <http://www.youtube.com/watch?v=sltBmjWsPUQ>. Accessed 29 December 2013.

¹³⁰ Original song: <http://www.youtube.com/watch?v=J-nDLfFmEq8>. Accessed 29 December 2013.

Two *gender barung/panerus* players cover the range of *slendro* and *pelog* notes, whilst the flute has use of pitches C, Db, D, Eb, E, F, Ab, A and Bb. Keen-eyed observers may note that these flute pitches are close equivalents to *slendro* and *pelog* in a fairly typical *tumbuk* 6 gamelan (such as the Cambridge set for which it was originally composed):

Slendro 1 2 3 5 6 \approx Db, Eb, F, Ab, Bb

Pelog 1 2 3 5 6 7 \approx D, E, F, A, Bb, C¹³¹

The closeness of Western and Javanese pitches provides, on the one hand, audible microtonal differences to play with, but on the other, a sense of a stable, limited modal pitch set upon which recognisable harmonic structures can be built. To put this another way, although the total number of pitches is considerable (at least 18 to an octave), *Three Exits* is better thought of as using a nine-tone pitch set with deliberate microtonal variations on most notes. Clarke explains:

Basically, the flute occupies territory that is its own version of the *slendro/pelog* scales. This sound world can be heard quite well as a slightly out-of-tune version of the gamelan instruments, but recognisable as a combination of the pitches used by the gamelan in any given passage. The reverse is also true – the gamelan can be heard as a bastardised version of the flute. (Email to author, 2 December 2013)

Whilst *Three Exits*, and Daniel March's *Pieces of Five and Three*, construct new tonalities from all the available pitches, other pieces make a feature of transmutation between the various scales.

Ngèsti (1986) for clarinet and gamelan by Anthony Clare (who plays the solo in recording R-5.5) is in essence a metamorphic piece in which a shift from equal temperament to the *pelog* of the accompanying gamelan represents a spiritual quest.

Ngèsti means to unify all the powers of the individual and direct them toward a single end ... a kind of intense mental quest, a search for understanding which is supported by an irresistible will and a fusion into one simple whole of the different forces within an individual...

The processes by which the clarinet effects a gradual transmutation of its pitch class material from Western equal temperament to the Javanese *Pelòg* scale during the course of the work are used as metaphors for those elements of the concept of 'ngèsti' which imply

¹³¹ There is no *pelog* 4 on a *gender*.

the ‘coming together’ or synthesis of initially disparate elements.

(Clare, programme note, 1986:2)

Although not made in the UK, Indonesian-born Dutch composer Sinta Wullur’s *Ten Bulls* (2005; recordings R-5.6 a-j) for mezzo-soprano, Javanese gamelan and Western percussion, also deserves a mention. Composed for a commission from Slagwerkgroep Den Haag (The Hague Percussion Group), it similarly uses transmutation between pitch sets as a metaphor for a spiritual quest. It is based upon the series of Zen poems and images, *Ten Bulls*, which tells the tale of a man in search of an ox (representing enlightenment). From an unenlightened opening movement in a jittery, chromatic equal temperament, traces of gamelan appear with traces (footprints and glimpses) of the bull. As the man catches and tames the bull, gamelan instruments dominate and the singer increasingly sings in *slendro* and *pelog*. But at the point of enlightenment (‘reaching the source’ in the ninth poem), all tunings are used without discrimination: differences and distinctions no longer have any meaning. The man’s return to the marketplace to spread enlightenment by mingling with human kind is marked by a *bubaran*-like ‘outro’ in *pelog*.

To summarise, there are almost as many ways of approaching tuning as there are composers. Some make it a matter of central concern, seeking to unify all instruments used into a single scale, or building a new tonality from all possible tones available to them, whilst others choose to overlook pitch completely, writing music in which it is irrelevant. Many seek to build bridges between the tuning systems, finding ways they can coexist.

There are many barriers to matching the pitch of non-gamelan instruments to gamelan: it may be physically impossible to reach *slendro* and *pelog* notes, and if reached, altered notes may, depending on the instrument, sound weak or unstable. Non-gamelan players may have difficulty internalising Javanese tunings: carefully adjusting this note up a little and that note down a little is not the same as developing an intuitive sense of the scale. Even where pitch matching is perfect, it may still not have the desired effect: the spectral profile of instruments may cause them to sound out-of-tune (as with the piano), or the expectation of listeners to hear Western instruments play in equal temperament may undermine the hard work done by musicians to hit gamelan pitches, making them sound out of tune in any case. Using a gamelan tuned to Western (or at least just intonation *slendro/pelog*) scales is one way to overcome these problems, but for many composers, it rather defeats the purpose (if it is even practical).

This is not to say that it is never worth tuning other instruments to the gamelan: certain kinds of pieces do require at least some accommodation between the different pitch sets. However, if the composer truly wishes to integrate gamelan and non-gamelan instruments (which a desire to get them in tune implies he or she does), there is more to be done than pitch-matching, a problem Alec Roth frames in terms of ‘hardware’ and ‘software’:

[Y]ou have Western composers writing pieces for gamelan who have just taken the hardware..., the instruments... It’s like trying to run a Windows programme on an Apple Mac machine: you can’t do it because the operating system is just completely different. And unless you take that into account, you’re going to be in trouble, I think. (Interview transcript 2012: 16)

Avoiding systems that highlight discrepancies or that are intolerant of variation in *embat* (such as Western diatonicism) is recommended; tonal languages tolerant of approximation (such as certain kinds of jazz or modalism) can help overcome technical difficulties in matching every pitch perfectly. Atonalism can disguise tuning anomalies by doing away with obvious harmonic reference points, although sometimes it masks intervallic relationships so effectively there may be little point in retuning non-gamelan instruments at all. Using a whole gamelan, rather than one or two instruments, allows the composer to exploit the 1-2Hz variation in pitch on each note, allowing a much looser definition of ‘in tune’. Pitch aside, a sensitive approach to composition which permits the different timbres and idioms to coexist must be sought if the composer wishes to create a unified sound.

Many composers avoid the need to retune by writing in a way that allows multiple tuning systems to coexist. They may depend on the listener’s ear to hear different versions of the same pitch as related, for instance, asking the audience to hear gamelan chords as relating to Western harmonies or, conversely, the contour of a line played on Western instruments as movement towards a *seleh*. The juxtaposition of wildly different timbres can distract the listener from tuning discrepancies, as can unpitched or chaotically pitched noise and rapid flurries of notes, whilst a textural approach to composition can undermine the importance of absolute pitches. In a similar way to how very hot and very cold temperatures mask the more subtle flavours of food, very high and very low tessituras make it difficult to pick out individual pitches, but do mingle well with the gamelan sounds – both the sonorities of gongs and the inharmonic attack partials of the loud instruments. Cluster chords, or chords voiced in a manner evocative of inharmonic bell overtones also seem to ‘speak to’ the rich spectral features of the gamelan.

For some composers, the combination of instruments offers bountiful opportunities afforded by the addition of 12 chromatic notes to the ten or so pitches of the gamelan octave. Discovering new modes and harmonic potential within such expanded scales, or exploring the microtonal discrepancies can be highly rewarding. The various scales can also be used in their 'native' forms, contrasted with each other (as signifiers of different systems/cultures) or metamorphosing into one another, proxies for change, movement, the accommodation or abandonment of one perspective for another.

However the issue of tuning – or tonality or rhythm or timbre or loudness – is dealt with, whether the composer seeks unity between instrumental forces or prefers to highlight the contrasts, these instrumental combinations make an inescapable visual and aural statement of hybridity. Yet it cannot be assumed that such a statement is the composer's intention. In works by Sorrell and Harrison, finding points of connection between musical systems and their representative instruments is indeed a key concern. Others, such as Wilkinson and Campion, approach such combinations as a technical challenge to be solved. Some, such as March and Clarke, wish to deploy all tools at their disposal to create something entirely new.

Switching the perspective around, the combination of gamelan with instruments more familiar to European music can be seen as a process of taking possession of gamelan culture, of stating its relevance to contemporary music making in Britain today.

Gamelan and electronics

The combination of gamelan and electronics has precedents dating from long before the British gamelan scene got underway. Bob Gluck (2006) claims that the first such Indonesian work for electronics was a 1963 gamelan and tape piece by Slamet Abdur Sjukur for a French ballet, *Latikgrak*, created in Paris where Sjukur studied with Messiaen and Shaeffer; Indonesian composers such as Sapto Raharjo, Otto Sidharta Tony Prabowo, I Wayan Gde Yudane and Iwan Gunawan are known for incorporating electroacoustic elements into gamelan pieces, although this remains a niche activity.¹³² See also Miller 2014: 230-5.

The use of electronics in gamelan composition is widespread in the UK and seems to be on the increase, no doubt aided by easier access to powerful equipment (here an AppleMac laptop is an affordable luxury even for students, whilst university music

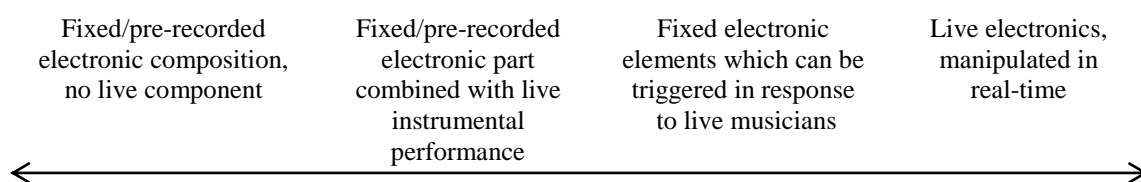
¹³² At least in art music: the pop genre of *campur sari*, which uses gamelan instruments in combination with synthesizers, is widespread in Java – see Rahayu Supanggah 2003.

departments boast state-of-the-art studios), as well as general interest in and financial support for multimedia performance art. To give a snapshot, all four students in the UK currently undertaking doctorates involving composition for gamelan (Jon Hughes, John Jacobs, Charles Matthews and Charlotte Pugh) have included some electronic component in at least one work.

One way of exploring such compositions is through their degree of interactive-ness: from entirely pre-recorded installations with no live component, to works in which manipulable interfaces allow the operator a role equal to that of instrumental musicians, able to lead and respond to the music in real-time.

Figure 5.5: Spectrum of interaction between electronic and live components

What was the nature of interaction between electronic and live components?



As an interesting aside, this spectrum also roughly reflects the development of technology through time, from a period where the only feasible and safe (i.e. computer-crash free) option was to press ‘play’ on a pre-recorded tape/CD and let it run, to having the ability to trigger shorter fixed computer files as part of a performance, to the current ubiquity of powerful laptops (AppleMacs being favoured by most composers) and software, such as Ableton Live, which can apply effects to audio in real-time. (The spectrum does *not*, however, reflect the chronology of pieces discussed.)

The following discussion does not attempt to comprehensively describe the full range of interactions between gamelan and electronics. Gamelan instruments have proven a rich sound source for many electroacoustic composers who have little knowledge of the ensemble and make no reference to gamelan-related idioms; their works are not explored here. However, pure electroacoustic works involving no live instruments, but where the composer draws upon musical, structural, semantic or historical associations of gamelan alongside recorded sounds are included. On the borderline are works such as *Irama* by Felipe Otondo,¹³³ which show some knowledge of the concepts underpinning Javanese gamelan, although Otondo himself did not play. Drawing very loosely on the Javanese concept from which it takes its name, this purely electroacoustic piece

explores notions of pulse and microrhythmic developments using as timbral framework a set of recordings of a Javanese gamelan orchestra....

The work is inspired [by] various temporal and timbral relationships between subdividing parts of gamelan music and structured as an aural journey through a rich palette of timbres that contribute to the unique overall sound quality of the gamelan. (Otondo, Compositions by Felipe Otondo: online)

¹³³ A sample can be heard at <http://www.sargasso.com/?product=felipe-otondo-tutuguri>. Accessed 23 December 2013.

More firmly within the realm of gamelan composition is a 2012 installation¹³⁴ created by Jon Hughes and John Jacobs to run in the foyer during *Lokananta*, an all-night *wayang kulit* commissioned to celebrate Sekar Petak's 30th Anniversary, relating the legend of the first gamelan created by the gods and its dissemination to humans on earth (see Case Study N). Using an ambisonic speaker array to create three physical sound-spaces, the installation mapped a tripartite history of Gamelan Sekar Petak to the *pathet* structure and narrative themes of the *wayang*, one to each physical area (left, right and centre). The magical creation of the first godly instruments was linked to recordings of Sekar Petak's forging in Solo; the development of gamelan music was mirrored by performances of classical music from its first *percobaan* (trying out) in Java; and gamelan's spread to the West was represented through contemporary works composed and performed in York. The tripartite system was mirrored in musical structures: the piece, which ran as a ten minute loop, was loosely structured in the form of a four-*kenong gongan*, with sounds coalescing in time, space and density upon pitched *seleh*, marked by *kenong*, *kempul* and, ultimately, *gong ageng*.

Figure 5.6: Multiple levels of tripartite discourse in *Lokananta* foyer installation

	Left	right	centre
Section of piece	1st kenongan	2nd kenongan	3rd kenongan
<i>Pathet/ section of wayang</i>	<i>nem</i>	<i>sanga</i>	<i>manyura</i>
Sekar Petak history	pre-history	past	present
Sound source	forging	<i>percobaan</i>	contemporary compositions
Wayang theme	creation by gods	spread to humans (Java)	spread to west

The idea to create an installation was an artistic response to concepts of timelessness in the nature of *wayang*, which can be perceived not just as a continuous narrative, but a unified spectacle into which the audience can drop in and out, move around, watch from the screen side or the *dhalang*'s, knowing that the *lakon* (narrative) has an inevitability, an unchanging conclusion that is not dependent on their observing every moment.

¹³⁴ It is referred to in Charles Matthews' thesis (2013) as *Framework*, which was the name of the audio file, rather than an actual title.

The spatial elements in the installation ... take the *wayang* out of the passage of time, so you're perceiving all sections of a story simultaneously... you have the whole history dangled there as an object, ... each part of the story represented outside the normal temporal flow. So there is some extra-musical element, playing with and thinking about the structure of music as compared with the structure of a sculpture, and how that relates to the *wayang*. (Jacobs, interview transcript 2012: 1)

Moving on to works involving fixed electronic parts and live musicians, Daniel March's *Bronze by Gold* (1999, recording R-C.1) for gamelan and tape 'took as its starting point Ligeti's piano etude *Galamb Borong*. [Ligeti] describes this as being pseudo-gamelan, fake gamelan, so I thought it would be quite fun to write a piece that was sort of fake Ligeti' (March, interview transcript 2011: 7). The pre-recorded element is a midi-generated virtuosic piano part in *slendro* and *pelog*. Although as a performer I found the piece great fun to play, there were challenges to overcome in timing gamelan parts to coincide with the tape, especially where there was no clear metre. In terms of the sense of ensemble, it was somewhat frustrating, as the skill required was to remember exactly what happened in the tape part and come in correctly, rather than rely upon visual cues or a shared sense of pulse.

Malcolm Milner encountered similar difficulties recording *Ice Cream Van from Mars* for the AlphaBeta Gamelan CD. Live performances of the work involved a tape part consisting of a free-rhythm fake theremin, which did not create any particular difficulties. However, for the recording Milner wanted to replace the *ciblon* part, which was in any case imitating a disco-style beat, with 'real' disco sounds from a drum machine. This, combined with the typical constraints of high quality studio production, meant that players had to each play their part individually to a click-track, an unfamiliar (and in some quarters unwanted) skill for many members of the group, only a small number of whom ended up participating in the recording.

Charlotte Pugh's multimedia work *I Fear No Spirits* (2013) made use of pre-recorded tape loops from rehearsals of *Sendhon Tlutur*, fragmented and woven into dense structures, which formed bridges between segments of traditional *karawitan* and new compositions by Pugh. With no clear rhythm emerging from these textures, they were easy for the live performers to integrate with, providing approximate cues rather than fixed structures to fit in with. The performance, which was a reflection on a period of mental breakdown and

recovery, included video art based upon documentation of train journeys Pugh undertook during this period, representing both physical movement and her state of mind during that period. The work also featured London-based Balinese dancer, Ni Made Pujawati, who sang a Balinese song from the dance drama *Arja*, describing a spiritual and physical journey, and the refined and sacred Javanese court dance, the *Bedhaya Pangkur*.

Having conducted some audience research during this concert, the feedback was that the work had been extremely well-received, both by those with an interest in ‘traditional’ gamelan (perhaps because it intermingled *karawitan* music and dance with new composition) and by those who knew very little of Javanese music, but found the technology helped provide a way in to the material, placing it in a context that made it seem less alien and incomprehensible. One experienced former gamelan player (Liz Haddon) noted that the imaginative use of space, with speakers scattered around the venue (the Sir Jack Lyons Concert Hall) and projections of visuals above the gamelan and onto the walls above the audience, provided a sense of space that was a welcome escape from the usual ‘solid block’ of sound from the centre of the stage that characterises most gamelan performances (p.c. May 2013).

Spatialisation is also a feature of Nye Parry’s *Fuzzy Logic* (2005) for gamelan, string quartet, two trombones and ambisonics, commissioned by the London Symphony Orchestra for the inaugural concert of the LSO St Luke’s Community Gamelan (Case Study L). Parry’s approach is more towards the interactive end of the spectrum, in that the ambisonic sounds (from recordings of St Luke’s gamelan arrayed around a SoundField microphone) are split up into shorter files, triggered in response to actions taken by the live musicians. These sounds are projected from speakers surrounding the audience, and even the live musicians play with space, with two ‘surprise’ trombones entering near the end, playing from a balcony.

The entire aesthetic of the piece, not just the electronic sounds, bears the mark of Parry’s electroacoustic influences (as well as those of Xenakis and Ligeti). Rather than based in melody, rhythm or harmony, the instrumental parts form a series of textures or clouds (semi-improvised in the gamelan, fully scored for the Western musicians), overlaid, juxtaposed, integrated or contrasted in a manner much as sounds might be combined on a computer to create an electroacoustic work; indeed, this was the way Parry worked with the material, experimenting with different combinations in rehearsal until he found effects he liked (interview transcript 2013: 2). Although rhythms and melodies do emerge from

these textures in places, the composer's interest is clearly in exploiting spectral features and contrasting the timbres of different types of ensemble.

The increasing power and reliability of software (and hardware) capable of processing audio in real-time has encouraged more artists in recent years to use live electronics on stage. Malcolm Milner, for example, uses Ableton Live for solo performances under the moniker Eternity Bleeps, in which he plays, samples, loops and manipulates gamelan instruments to weave intricate sonic textures.¹³⁵

Charles Matthews' doctoral research (see Case Study x) provides the most interactive approach to gamelan and electronics encountered within this thesis. Deliberately blurring the boundary between live and electronically-created sounds, Matthews' desire was on the one hand to create autonomous computer parts, controlled by software capable of extrapolating *garap* from *balungan* notation and changing in density with *irama*, whilst on the other retaining 'a sense of human interaction, experimentation and playfulness' (2013¹³⁶) through direct control of electronic textures by an operator (Matthews) responding to and manipulating sound in real-time.

His Augmented Gamelan, an ensemble of four instrumentalists (*pesindhén*, two *gender* and *slenthem*) augmented by computer-generated sounds, experiments with this indeterminacy between acoustic and electronic, between humanly-generated and software-controlled material. The computer-generated material includes *bonang pencon* played by means of transducers (small speakers) strapped to them: when rhythmic impulses or filtered white noise are played through these, the instruments vibrate in sympathy, apparently playing themselves without being struck by a mallet.¹³⁷ The patterns played through the transducers are controlled both through software and through intervention by the operator who can, for instance, change the tempo by means of a fader, allowing the machine sounds to follow changes in *irama* led by the musicians. Another interactive technique is the use of 'electronic *cengkok*': sine waves tuned to *slendro* and *pelog* and controlled manually by means of a mixing desk, one fader to each pitch. These sine waves pick out and anticipate important notes in the instrumental/vocal parts, like sympathetic

¹³⁵ A full recording of the first live Eternity Bleeps performance in the Queen Elizabeth Hall (QEH) foyer for the 2013 Gamelanathon festival, along with samples from other electronically-created gamelan albums can be found at <http://wallofspoon.com/releases>.

¹³⁶ This is taken from the pre-viva version of Matthews' thesis, which has subsequently undergone substantial revision. Page numbers are therefore not included.

¹³⁷ The idea for this arose from a fascination with sympathetic resonance, such as the ghostly ringing sound produced when someone sings amidst a gamelan in an enclosed room (Matthews, 2013). Other works, such as *Bonang Studies* use sine waves tuned to the natural resonances of the instruments rather than percussive sounds or white noise, causing the instruments to ring.

resonances displaced in time, anticipating rather than echoing notes from the singer and *gender* (2013: 176).

.....

A number of recurring themes arise from works involving gamelan and electronics. One is spatialisation: *Fuzzy Logic*, *I Fear No Evil* and the *Lokananta* installation are all at play with this, arranging sound in physical space as well as time. Whilst there are some instrumental pieces in which some players are separated from the main group (such as the original version of Clive Wilkinson's *English Garden* which placed the violinist in the concert hall's percussion cupboard) this can lead to serious challenges in retaining a sense of ensemble, not helped by the common disdain within most British gamelan circles for conductors, which would be the obvious solution. If players are relying on aural cues to stay together, they must remain close, resulting in the characteristic dense block of gamelan sound Liz Haddon alludes to above. Electroacoustic diffusion can provide a useful alternative.

Expanding out from consideration of where sound sources are placed relative to the audience, there is the question of where both music and audience are situated: the venue. Pieces involving electronics seem to more easily escape the artificial constraints of the concert hall which, as has been pointed out in Chapter 1, is hardly the ideal setting for gamelan performance in the first place. This jail-break (a loaded but perhaps not unjustified term) is aided by a general expectation to encounter multimedia performance in clubs, festivals, foyers, galleries and other unusual venues, and for some (myself included) a sense of mild discomfort or frustration when it is presented in more rigid settings.

For instance, I found the Plaid/Supanggah/Southbank collaboration very difficult to watch in the atomised and rigid layout of the Sage Gateshead's Hall Two, where audience members are separated into small groups of seating on different levels, a long way from the stage and fixed into their assigned seats. The experience was apparently little better for the players, who withheld their encore thinking there was not much applause, thanks more to the acoustics and layout of the venue, which made most of the audience invisible and inaudible from stage, than any lack of enthusiasm from the crowd (Pawson 2012: 16).¹³⁸

A radically different experience was an Augmented Gamelan gig in a tiny, empty swimming pool at The Albert, a community experimental arts centre, as part of the No

¹³⁸ An interactive image of the view from the stage of Hall Two is available at <http://www.sagegateshead.com/venue-hire/conferences-and-events/spaces/hall-two/>. Accessed 28 December 2013.

Dark Places Festival. After a long set-up and sound check, the music began with very few observers, but gradually as festival-goers became aware something was happening, more people drifted into the space, taking up positions at the edge of the pool, gazing down at the performers, changing position, making room for new-comers, but observing the performance in respectful (and I think it is fair to say entranced) silence.

Figure 5.7: Augmented Gamelan performing at The Albert, London, 1 June 2013



Thanks to the informal, flexible settings often associated with multimedia performance, the most technology-oriented iteration of gamelan composition has the potential to return the ensemble to its roots, at least as far as performance context is concerned, with venues that have more in common with the audience dynamics of a *pendhapa* than a concert hall.

.....

As suggested above, combinations of gamelan and non-gamelan instruments present, whether the composer intends it or not, a marker of hybridity, of the meeting of disparate musical cultures, even of claiming the gamelan as part of the composer's own musical

inheritance. Unlike acoustic instruments, technology is largely unbound from geographic/cultural associations – it is as much a part of contemporary life in Asia as in Europe or North America; nevertheless, trailing wires, mixing desks, laptops and video projections alongside gamelan instruments signify a different kind of hybridity: a temporal hybridity, tradition meeting modernity. Combining gamelan with electronics also stakes a claim upon it, but one of epoch rather than of geographically-defined cultures.

Of course, the assumption that ‘gamelan = tradition’ is as questionable as the assertion that ‘technology = modernity’: contemporary acoustic uses of the gamelan – such as bowed *gender* and ‘water gongs’ – are every bit as ‘modern’ as a reel-to-reel tape machine is ‘retro’. Though the composer may be thinking in terms of the sound they wish to achieve, the juxtaposition of hand-wrought bronze and carved wood visibly draped with the accoutrements of technology, or the sonorities of a gong looped and manipulated, invite such associations. As the audience member quoted above suggested, for a contemporary audience with little knowledge of gamelan, the technology can provide a handle, make it seem more accessible. To return to the argument made at the end of Chapter 2, the bold statement such juxtapositions make against ‘authentic’ or ‘traditional’ presentations of the gamelan helps to de-exoticise the ensemble, forcing the audience to contemplate the gamelan in the context of here and now.

Pete Steele, describing technological gamelan geekery in the US, goes further still, suggesting that ensembles *Galak Tika* and *Gamelanatron* claim gamelan for the future, projecting a Paradise Lost-like dream of Bali into an imagined sci-fi utopia of ‘neo-tribal techno cultures’ (2013: 92). Whether projecting an idealised past into a fantasised future, or simply seeking ways to expand upon the sonic range of acoustic instruments, combinations of gamelan and electronics make a clear statement that the ensemble is not an untouchable relic of a distant, ‘traditional’ culture, but a part of a thriving, creative, interactive artistic scene.

Conclusions

The motivations for combining gamelan with non-gamelan instruments and, to a certain extent, with electronics are often quite similar to those given for the kind of structural code synthesis discussed in Chapter 2: a desire to avoid pastiche by including non-Javanese elements, providing local audiences a visual and audible ‘foothold’ through something more familiar (or, in the case of electronics, contemporary) or making a deliberate statement of cross-culturalism. However, the process involved mixing the hardware (as

Roth puts it) involves some specific challenges which are different from those involved in mingling the ‘software’.

Code-mixing musical structures using only gamelan instruments is primarily an intellectual exercise in playing with abstract points of connection or contrast, whereas mixing instruments tends to involve a more pragmatic approach which (ideally) takes account of their different physical properties, overtones, loudness and technical constraints. Structural code-mixing plays with conceptual points of connection or difference, sometimes involving subtleties of style which may be beyond the grasp of audiences unfamiliar with gamelan;¹³⁹ musical instruments and electronics are visually and aurally immediate: both their appearance and sound stands as a clear marker of hybridity, whether it be cultural or temporal.

However, these discussions of hybridity imply a distinction between forms of musical that some composers interviewed in this study might question. In the transcultural flow of musical ideas and skills which has come to characterise the twenty-first century, and in a cosmopolitan musical environment where affinity (Slobin 1993) can drive musical activities as much as location, some composers question the validity of describing as ‘hybrid’ the results of drawing upon the various strands of musical knowledge they have worked hard to acquire. American avant-garde composer Philip Corner challenges the kind neat distinction between bounded ‘cultures’ implied by discussions of bi-culturality, stating that ‘any American who is involved in classical music, and also grew up listening to jazz and several types of popular music is at least tri-musical. And contemporary music can be seen as a separate culture – whatever it is, wherever it is going’ (1986: 23).

The following chapter explores conversations around hybridity, authenticity and cultural identity in the context of new music for gamelan in the UK.

¹³⁹ Audience research revealed that even gamelan ‘fans’ who regularly attend concerts struggled to distinguish between *karawitan* and non-*karawitan* elements unless there was singing in English or Javanese involved, and even then sometimes confused Javanese *gendhing* for new composition simply because the *gerongan* was sung in a distinctly British accent.

Case Study I

A Tale of Three Pianos

Recordings and scores:

Lou Harrison, *Concerto for Piano and Javanese Gamelan* – recording R-I.1, score S-I.1 (1st mvt)

Clive Wilkinson, ... *a long way of seeing*.... – recording R-I.2, score S-I.2 (piano only)

Neil Sorrell, *Concerto for Prepared Piano* recording R-I.4a-c, score S-I4 (excerpt from 1st mvt)

The piano is as iconic a representative of Western music as the gamelan is of Javanese and Balinese, and unsurprisingly that there are a number of compositions which combine the two. As discussed in Chapter 5, compositions for piano and gamelan particular challenges, as the strong harmonic overtone series of the piano presents a very different tonal world to the inharmonic overtones of the gamelan, to the extent that it can be nigh on impossible to successfully tune a piano to a typical Javanese gamelan. This case study explores three different approaches to this problem.

Lou Harrison's *Concerto for Piano with Javanese Gamelan* (1986-7) in its original iteration uses a piano tuned to a gamelan which itself is tuned to a just intonation version of *slendro* and *pelog*: a meet-in-the-middle approach which causes difficulties when performing it with a 'real' Javanese gamelan. Clive Wilkinson's *A long way of seeing*... throws different tuning and tonal systems in together with untuned sounds and chance procedure-based selection of material to create a sometimes-violent, sometimes-lyrical soundscape in which relevance of pitch sets is questionable. And Neil Sorrell's *Concerto for Prepared Piano and Gamelan* finds balance between the two, using 'prepared' sounds from both piano and gamelan yet also building a coherent tonal structure in which the different sound worlds can converse.

Lou Harrison's *Concerto for Piano and Javanese Gamelan*

Although not a British composition, this work is analysed here as its performances on York's Sekar Petak generated the direct inspiration for the other two works by Sorrell and Wilkinson. The concerto was recorded Gamelan Si Betty, built by Harrison and Bill Colvig in 1979, and currently housed in Harvard University.¹⁴⁰ Like many 'American Gamelan' – home built sets of instruments inspired by, but not always doggedly imitating Javanese/

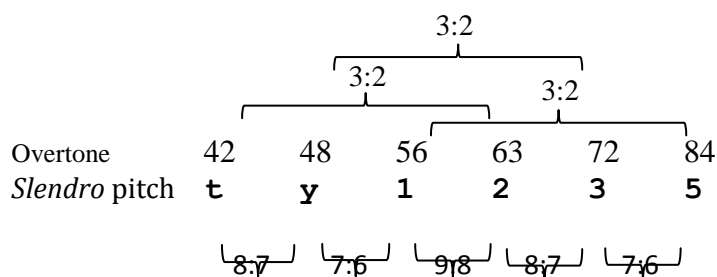
¹⁴⁰ See <http://www.gamelan.org/sibetty/>. Accessed 27 October 2013.

Balinese gamelans – it uses overtones from the harmonic series as the theoretical basis of its *slendro* and *pelog*, and does not have stretched octaves. Harrison’s account of how the *pelog* was selected shows his concern with legitimising such decisions through the approval of Javanese colleagues:

I was in my office one day,... Bill had run me up four or five octaves of the overtone series correctly made in aluminum bars. I was playing that because by this time I thought there may be a *pelog* hidden in the upper overtones somewhere, you know, and I found a couple sequences. I was playing one and Pak Cokro knocked on my door and he said, “What are you doing?” I told him that I was hunting for a *pelog* up there. He said, play the last one, and so I did. And he said, it’s good, it’s a good *pelog*.... it was overtones 12, 13, 14, 17, 18, 19, and 21, in sequence.... And it turns out it’s very close to a historical gamelan in Java. (Quoted in Hadley 1993:31)

Si Betty’s *slendro* utilises even higher partials: harmonics 42, 48, 56, 63 and 72.¹⁴¹ Although such high partials are inaudible/non-existent even on a low, fortissimo piano note, the interrelationships between them are key: divided by common denominators, various pairs of notes represent smaller integer ratios, making a series of just intervals, including 3:2 (perfect fifth) *kempyung*:

Figure I.1: Intervallic relationships in Si Betty’s *slendro*, based on overtones to a 4.8379Hz fundamental



There is a question hanging over this whole endeavour as to why anyone would wish to create a just interval gamelan, given that the partials of a struck metal bar are inharmonic.

¹⁴¹ The full tuning chart with actual frequencies can be found at www.gamelan.org/sibetty/overtone-series-sibetty-tuning-measured.pdf. Accessed 14 October 2013.

Not only this, but the discourse of just intonation, with its absolute, precisely-tuned intervals based on the irrefutable mathematical laws of ‘nature’ is profoundly at odds with Javanese concepts based upon a personal, inner musical sense, where there is no expectation that instruments and singers will agree exactly on pitch (as discussed in Chapter 5; see also Perlman, 1994).

Although Harrison had a good understanding of the flexibility and personal nature of Javanese tunings in theory, his ‘hearing’ of Javanese scales seems to have remained indelibly rooted in his Western diatonic background: in ‘Thoughts on Slippery Slendro’ he speaks of *pelog* as ‘a roughly “minor” mode’ and *slendro* as ‘majorish’ (1985: 111). Indeed, although Harrison found the fact that some *gendhing* can be transposed between *pathet* and even *laras*, to be ‘a liberating and fascinating doctrine’, he found it one which ‘in its turn, brings up terrifying problems for a composer hoping that his own interval expression might be observed’ (ibid.: 13). He concluded, quite rightly, that ‘composers who wish to control the interval sense of a piece must either compose directly for a gamelan with which they are familiar, build or commission their ideal gamelan, or append specific instructions if the piece may be transposed or altered’ (ibid.: 15).

The difficulties of transposing certain pieces between gamelans with different *embat* has already been explored in several places in this thesis, but mainly in the context of the advantages of writing in a *karawitan*-inspired way, such that the resultant music is viable on any gamelan. The curious thing for me about Harrison’s observation is that his gamelan pieces *do* draw very strongly upon the *karawitan* model, yet he (and thus his compositions) remained so deeply attached to specific intervallic relationships. This goes a long way towards explaining why although he was open to his pieces being performed on other gamelan, many of them – especially those which incorporate Western instruments – create problems when anyone tries to do so.

These problems may not have been initially apparent to Harrison, who wrote mainly for his just interval gamelans. For example, in the Si Betty version (recording R-I.1), the piano and the gamelan do sound in tune with each other; although, as Clive Wilkinson points out, the unfamiliar tuning of piano still makes it sound odd during the long solo opening, before the gamelan comes in and provides context (interview transcript 2011b: 21). In the following excerpt from the *slendro* first movement, the pitch-matching between gamelan and piano sounds successful; the only notes which sound particularly awkward (to me) are the non-*slendro* notes played by the piano, such as the supertonic (written as

C#).¹⁴² Extra-modal notes such as this are played on keys tuned to *pelog* for the second movement (in this case, p7). It could be argued that the problem here is not the mismatch of tunings, so much as the compositional decision to co-opt such notes to fulfil diatonic roles, placing them in positions of harmonic significance, such as the sustained C# minim acting as a supertonic two bars before the *ritmico* section.

Figure I.2: Si Betty performing *Concerto for Piano and Javanese Gamelan*, 1st movement, end of piano cadenza going into tutti (~1m 26s on recording R-I.1)

The image shows a handwritten musical score for piano and gamelan. The score is written on multiple staves. A circled note in the piano part is highlighted with a box and an arrow pointing to a text box that reads "C# played on keys tuned to p7". The score includes various musical notations such as notes, rests, and dynamic markings like "loco" and "Ritmico, establish Gamelan speed". There are also handwritten annotations like "C# 16↑" and "GAMM.".

When played on a typical Javanese gamelan, such as Sekar Petak, the problems multiply. In recording I.1 [0016e], the piano tuning was based upon a single gamelan octave, rather than matching its stretched octaves: a sensible decision given the predominance of parallel octaves in the composition, which would have made the piano sound horrendously out of tune with itself if stretched. However, the compromise is that instead piano and gamelan are out of tune with each other outside a narrow mid-tessitura range. There is also a problem with intervallic relationships: Sekar Petak's s1 is flatter and s3 sharper in

¹⁴² Si Betty is *tumbuk 6*, with 6=B natural

comparison to the surrounding pitches than Si Betty's, making the minor third (s6/B to s1/D in Harrison's score)¹⁴³ almost like a major second, and the fifth (s6/B to s3/F#) audibly 'sharp', which disrupts the essentially diatonic minor nature of the melody.

The difference between Sekar Petak's variably-sized *kempyung* and the neat 3:2 fifths of Harrison/Colvig's gamelan also makes for troublesome moments, for example in the Postlude to Movement I in which such intervals feature heavily:

Figure I.2: *Concerto for Piano and Javanese Gamelan*, Postlude to 1st movement (Sekar Petak version, 7m07s into recording R-I.2 [0016e]; Si Betty version, 8m12s into recording R-I.1 [0035f])



Bill Alves, discussing a performance of this passage on Harvey Mudd College American Gamelan – also just-intoned and with unstretched octaves but with fewer 3:2 ratio *kempyung* in *slendro* – found that ‘We had to avoid those open fifths, as they sounded pretty dreadful on the piano in our tuning’, instead changing several to octaves (email, 27 October 2013).¹⁴⁴

Another important difference between the two gamelans is that Si Betty's *balungan* are made of thin plates of aluminium with resonators below to emphasise the fundamental, and usually played with soft mallets, rather like a collection of different-sized *slenthem*:

¹⁴³ The score was transposed down a semitone to 6=Bb.

¹⁴⁴ A recording of this performance can be heard from 40 min. in at <http://www.youtube.com/watch?v=uVEG-5Kfbm4>. Accessed 27 October 2013.

Figure I.3: Gamelan Si Betty¹⁴⁵



As a typical bronze gamelan with thick *saron* keys and wooden/horn mallets, Sekar Petak's timbre includes many more short-lived but loud inharmonic partials than Harrison and Colvig's instruments.

Thanks to all these factors, it is far easier to integrate a piano with Si Betty than Sekar Petak; indeed, the very different nature of the intervals in Sekar Petak means that the piano manages to make the gamelan sound out-of-tune. The tonal implications of the writing are so based in a diatonic sense of majors and minors that the real *slendro* pitches can only sound 'wrong', such as the s1 failing to fulfil its function as the minor third so essential to Harrison's minor harmonic conception.

In a more forgiving assessment than mine, Sorrell suggests that 'Far from causing aesthetic dysfunction ... it could be claimed that the obvious difference accords with the ethos of a non-standardised tuning from one gamelan to another' (2007:34). The question of whether any piece for gamelan works on any gamelan, regardless of *embat* is one upon which opinions are divided. My personal feeling is that it depends on the approach to writing: if it is too strongly based around major/minor diatonic harmony, for instance, the result is likely to be unpleasant, or at least very far from the composer's intentions if played in an *embat* that is a long way from the Western scale. The composer's stated preference must surely also be a factor: for Dave Stewart, his pieces were irretrievably 'lost' once the South Bank Gamelan was retuned.

¹⁴⁵ Image from <http://www.music.fas.harvard.edu/gamelan08.gif>. Accessed 28 October 2013.

In the case of the Piano Concerto, Harrison's compositional style is heavily rooted in this kind of diatonic thinking. In this work we hear musical confirmation of what Harrison wrote in 'Thoughts on Slippery Slendro': that he heard *laras* more in relation to majors and minors and the kinds of harmonies and cadences which arise from that system than in terms of Javanese *pathet* and *seleh*-based resolutions. Whilst well aware that contour was more important than intervallic relationships in Javanese music (1985: 114), in his own compositions, Harrison remained committed to the concept of specific intervals carrying specific harmonic meaning.

As Hastanto (1985) and Sorrell (2007) have noted in regard to other works by Harrison, it could be argued that the issue is not so much with the composition as the name. By specifying that it is for 'Javanese' gamelan, the title sets up false expectations that it will work equally well on any gamelan in any *embat*, which appears not to be the case, and becomes less true the further the pitches of that gamelan are from a Western equivalent. Yet to state it is for 'American gamelan' or 'Just intonation' gamelan is also too restrictive, as there are many differently-tuned American gamelans, and Si Betty's just intonation is, after all, based upon *slendro* and *pelog*, not Western scales. And whilst Harrison may have found the uncertainty of alternative *slendro* versions 'terrifying' (1985:13), he never sought to stifle them or prevent people from experimenting with different gamelans and as, Sorrell points out, he was 'not overly prescriptive about the solutions' (2007: 34).

Despite all these problems, Harrison's piano concerto – as with many of his other works – represent a bold start upon the question of how to combine gamelan with Western instruments, or the music of Java with that of Europe/America, and both its beauty and its flaws have inspired other composers to build upon this early example.

Clive Wilkinson's ...a long way of seeing...

The title of this work for gamelan and piano was inspired by a comment in a broadcast interview with artist David Hockney, who grew up in Bradford (near York, where Wilkinson learned gamelan), but lived for some years in San Francisco:

[H]e used this expression about driving, that the thing about America was that you had this "long way of seeing" and I just wrote it down, I thought it was a really poetic way of having thought of something.... In America it's true you just see vast distances that you don't get in England.... So he

talks about that up around Bridlington and the [Yorkshire] Wolds ... the landscape gives you bigger skies and rolling hills give you a huge distance.... [P]erhaps it just seemed appropriate he was in San Francisco and that ... maybe he was actually even driving around Oakland, the area where Lou Harrison lived, so it probably connected to me some way in that. (Interview transcript 2011b: 21)

The Harrison connection was relevant because the piece was written partly in response to the challenge set by performing his piano concerto with Sekar Petak. Wilkinson found the retuned piano troubling even in the Si Betty recording (R-I.1), especially the opening cadenza before the gamelan comes in:

[T]he octaves sound funny ... they come in and you think, “What pitch is that?” Because the first thing you hear, I think, is a piano cadenza ... and it sounds really weird. Once the gamelan comes in it’s all right.... I don’t know why. Perhaps one’s ear adjusts to it better and deals with the discrepancies.’

(transcript 2011b: 21)

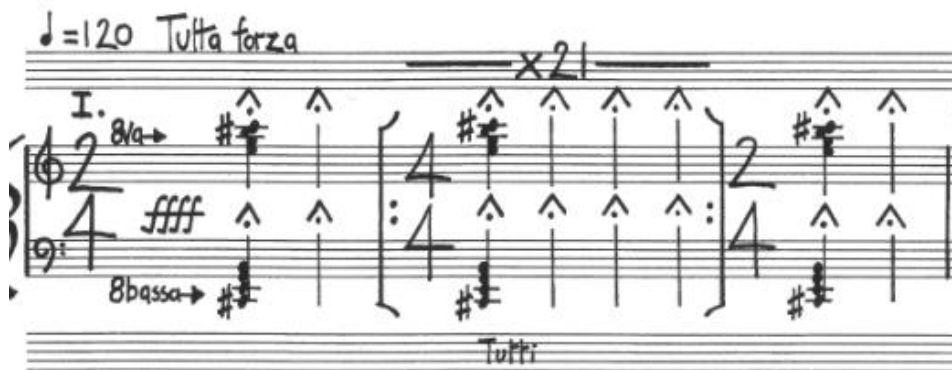
Wilkinson had the opportunity to ponder these issues through his involvement with the UK premier of the piano concerto at the Huddersfield Contemporary Music Festival in 1988. Of all the performances of this piece by Sekar Petak, this was, by most accounts, the most hideously out-of-tune of all, not least because the piano tuner had never encountered a gamelan before, and had limited time before the performance to work. After the performance, Javanese musician Joko Purwanto, who was studying for a Masters degree in York at the time, asked, “Well why bother to retune the piano?” ... I thought it just seemed an interesting idea to try out’ (Wilkinson, interview transcript 2011b: 23).¹⁴⁶

So for ...*a long way*, Wilkinson left the piano in equal temperament, writing ‘more in terms of timbre than actual pitch relationships’ (Wilkinson, programme note 2012: 5-6). The piece employs a number of devices to make the difference in tunings irrelevant, including the use of extreme tessitura, extreme dynamics, dense cluster-chords, chance procedure-based selection of material and extended techniques for playing instruments. For instance, the opening has the piano hammering relentlessly at the same *ffff* chord utilising both extremes of its range for 23 bars. This completely undermines any sense of tonality

¹⁴⁶ Although an interesting idea, not all would agree that this solves the problems if applied directly to Harrison’s work: Bill Alves posted this student final recital (May 2012, Laselle College of the Arts, Singapore) using an equal tempered piano, to the Indonesian Performing Arts list (16 October 2013) as a bad example: <http://www.youtube.com/watch?v=HcMf3D5D4D8>. Accessed 30 October 2013.

even before the gamelan is added: although both hands play the same notes (C#, E, G and B), the left- and right-hand chords are in such different soundworlds – a growl and a scream – that this consonance is virtually impossible to hear:

Figure I.4: Clive Wilkinson ...a long way of seeing... piano part, bars 1 – 23 (recording R-I.3 - WARNING: opening is very loud!)



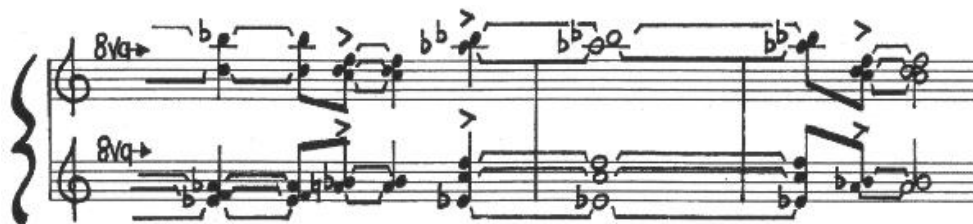
The piano is accompanied by *sarons* in mixed *laras* playing pages of material in indeterminate order (performers can suggest playing orders to each other, shuffle their pages, or simply settle upon an order they particularly like) producing random counterpoints, meaningless vertical harmonies and unpredictable textures. Where the notation, which is the same for *slendro* and *pelog*, specifies a note a player does not have (for example, 4 or 7 for a *slendro* player), the player simply leaves a rest, adding rhythmic variation to a texture which would otherwise consist of relentless ‘crotchets’ throughout. In addition to the tonal confusion prompted by mixed-*laras balungan* and equal-tempered piano, *kenong* are inverted and struck on the rim (as bells rather than gongs) producing pitches unrelated to their tuned fundamentals. To this already-intense sonic palette is added a very quiet but pervasive *pppp* trill on the closely-pitched sl.2 and p.1 *suwukan* which further undermines or blurs any sense of tuning.

In contrast to the full-frontal sonic assault of the first (and last) 23 bars, in more lyrical sections Wilkinson makes use of very high tessitura piano chords, on the basis that

changing the register of them, probably making them higher, would make them work better because ... my aural perception is that if the notes are higher they often sound more in tune than when they’re lower because they can respond to all sorts of fundamentals.

(Interview transcript 2011b: 23)

Figure I.5: *...A long way of seeing*, piano part, bars 30 - 33



This instinct seems to play out well. In section II (R-I.3, 0m43s), these delicate, modally coherent chords soar above an upside-down *kenong* passage which lacks any tuneful contour (having roughly the same circumferences, all the inverted *kenong* produce similar fundamentals). But thanks to unpredictable nature of instruments used this way and the variety of individual techniques and mallet sizes (some are smaller *bonang* mallets) amongst the five players, the real sonic interest in this line is found in the shifting overtone spectra, with which the piano chords do, in fact, seem to converse. Although not modelled upon the harmonics of the *kenong* (they are borrowed from Wilkinson's earlier work, *Tea with Samuel Beckett* [1993]) these chords can, with a little imagination, be perceived as an abstraction of the upper harmonics of the *kenong* rendered into best-fit equal temperament equivalents.

The piece progresses through a series of discrete, tableau-like blocks, each offering a different combination of instruments playing their material at a variety of speeds (sometimes double, sometimes half the original), as if testing out the different textures and tonalities in various combinations before relapsing to the extremities of the opening to draw the piece to a conclusion.

Apart from being its inspiration, *...a long way of seeing...* could not have less to do with the tonal romanticism of Harrison's piano concerto. The violent non-tonality of the opening offers up Wilkinson's solution to the strangely-tuned diatonicism of Harrison's preliminary cadenza: throw every pitch-set and noise available at the score until there's no risk of any emergent tonality being undermined by compositional references to unfamiliar and ill-suited tuning systems. The result had members of Durham Gamelan group, who heard it at a joint performance with Sekar Petak in 2012, assign it a new genre: 'Gamelan Garage' (Wilkinson, programme note 2012: 6).

Neil Sorrell's Concerto for Prepared Piano and Gamelan (2001)

Sorrell's concerto for prepared piano occupies something of a middle ground between Harrison's and Wilkinson's approaches. Like Wilkinson, Sorrell makes use of 'prepared' or extended technique sounds of indeterminate/uncontrollable pitch on both gamelan and piano. Yet like the Harrison, this is undoubtedly a concerto in the Western tradition, with the piano very much a soloist, whereas Wilkinson uses it more equably with the gamelan instruments. It has a lengthy first movement, a slow, thoughtful second movement and exuberant finale, and although less melody-driven overall than the Harrison, it has moments of intense lyricism, and greater development of material than the static tableau of *...a long way*. But like Wilkinson's piece, the prepared piano concerto is also a study of how to write for piano and 'real' Javanese gamelan, inspired by Harrison:

It was above all the experience of working on the two concertos¹⁴⁷ by Lou Harrison that led me to a fuller appreciation of intonation which militates against idealised precise and fixed systems. Here the gulf between East and West (in this sense between subtle variability and doctrinaire standardisation) is perhaps at its most dramatic, but it should be viewed as a beautiful chasm. Standardisation is the enemy of gamelan music, be it in the tuning or performance practice. Since the mid-nineteenth century western music has settled on standardised intonation and equal temperament has become the norm. Yet we should remember that there is a strong element of delusion in this, as the norm really only applies to instruments of fixed pitch; other instruments, as well as the voice, continue to vary intonation for expressive purposes (as well as unintentionally). So although we have mathematical guidelines and strongly held ideas of what constitutes 'in-tuneness' and 'out-of-tuneness,' in practice our culture follows others in its allowance – even positive encouragement – of expressive discrepancies. (Sorrell 2007: 36)

In keeping with this philosophy, and in typically laid-back manner, the composer does not specify whether the piano should be tuned to the gamelan:

If it's left up to me, you know what I'm like: go for the easiest option and I really don't mind the clash between gamelan and equal temperament....

¹⁴⁷ The other being the *Concerto for violin, cello and Javanese gamelan* which also presented substantial tuning problems for the string players.

Best of all, I like it when the performer has the say. (Email November 2013)

In both performances of the piece thus far – Cheltenham Festival (2001) and University of York (2002) – soloist Nicky Losseff chose to retune the piano. There is currently no equal temperament version, though I hope be performing such a version myself in June 2014, more out of curiosity than any belief that it is wrong to retune the piano to the gamelan. If the composer’s intentions in writing the piece were successful, such a version should also be effective, the emergence of a coherent tonality unhindered by variance in pitch sets.

Perhaps because this work was composed with Sekar Petak’s *embat* mind, the combination of piano and gamelan sounds far more stable (and requires retuning fewer notes, since less of the keyboard is used, and many notes are ‘prepared’). Reasons for this stability can also be found in the compositional approach. Whilst Harrison’s use of fifths suffer from the uneven *kempyung* and his major or minor thirds fail to find a counterpart in Sekar Petak’s *embat*, making the gamelan sound out of tune, in Sorrell’s work, the unfamiliar tonality of the retuned piano seems to add an intriguing *frission* to the rare melodic passages:

Figure I.6: Concerto for Prepared Piano and Gamelan, 2nd mvt, bar 17 - 27 (recording R-I.4b, 1m13s)

The image displays three systems of musical notation for a piano part. The top system shows a melodic line with a long note and a rhythmic accompaniment. The middle system, starting at bar 19, shows a piano part with a melodic line and a rhythmic accompaniment. The bottom system, starting at bar 24, shows a piano part with a melodic line and a rhythmic accompaniment.

Even though this passage uses perfect fifths, rendered into noticeably imperfect ‘*kempyung*’ by retuning, the weirdness of these intervals seem to add a pleasingly alien

astringency to what is already a rather mournful, angular and tonally ambiguous passage, forcing the piano to be heard in a new way, as a novel gamelan instrument. Unlike Harrison’s reliance on the interplay between major and minor, harmonic interest in this passage is achieved by shifting from one mode to another a tone or a half-tone away, such as the slip from a D-based passage to an Eb-based one in bar 23 (which feels not unlike a slide from *pelog* into *slendro*).

The main peacekeeping trick Sorrell uses to avoid conflict between tonalities of the piano (retuned or otherwise) and the gamelan is simple separation, ensuring that in the few passages ‘when the piano is doing normal stuff, the gamelan material is sufficiently far from it’ (Sorrell, by email, 5 November 2013). For instance, the above passage (fig. I.6) is accompanied only by *kempul* struck upon their ‘shoulder’, exciting inharmonic partials rather than the fundamental. Similarly, the more tuneful gamelan passages are accompanied by piano notes ‘prepared’ by screwing bolts of indeterminate size (again, left to the performer’s discretion) between the strings.

The only brief passage where the piano and gamelan do play ‘natural’ notes together is in the third movement, sandwiched between a piano-only version of the same material, and a gamelan-plus-prepared-piano section. The piano part makes use of a best-fit equivalent *slendro* (1 = Db, 2 = Eb, 3 = F, 5 = Ab, 6 = Bb) and *pelog* (1 = D, 2 = E, 3 = F, 4 = Ab, 5 = A, 6 = Bb, 7 = C), starting with the right-hand in *pelog* and the left-hand playing a *slendro* line very similar to that played at half speed by the *balungan*, but then switching *laras* from hand to hand:

Figure I.7: Concerto for Prepared Piano and Gamelan, 3rd movement, bars 44-52, R-I.4c)

The image displays a musical score for piano and gamelan. The top system consists of two staves: the upper staff is for the piano (Pno.) and the lower staff is for the gamelan. The piano part is written in a single melodic line with various accidentals and dynamics. The gamelan part is written in a single melodic line, mirroring the piano's melodic contour. The bottom system shows a grand staff for the piano, with the right hand in the treble clef and the left hand in the bass clef. The piano part is written in a single melodic line with various accidentals and dynamics. The gamelan part is written in a single melodic line, mirroring the piano's melodic contour.

It is difficult to guess how this would sound were the piano in equal temperament, though I suspect that, as with *Missa Gongso*, the ear would accommodate the difference, accepting the piano notes within the tolerance of pitch permitted by the gamelan (for reasons discussed in Chapter 6).

Where Harrison's concerto remains tied to a Western-classical diatonic harmony based upon majors and minors, requiring him to seek notes from beyond the *laras* to fill necessary roles such as supertonic (such as the troubling supertonic/ p.7 in fig. I.2), Sorrell's writing, is far more sympathetic to the tonalities of a bronze Javanese gamelan. Where playing 'natural' notes, the piano writing is either modally conceived (such as the simultaneous, bi-modal *slendro/pelog*-based piano part in fig. I.7), or composed in a manner sympathetic to the timbre of the gamelan, such as the bell-like ambiguity of the cluster chords in the second movement which, although not in the high tessitura employed by Wilkinson (fig. I.5), nevertheless 'speak to' the rich and complex overtones of bronze metallophones:

Figure I.8: *Concerto for Prepared Piano*, 2nd movement, bars 38-43 (2m48 in recording R-I.4b)

These three works for piano and gamelan each represent profoundly different decisions about the importance of pitch. At one extreme, Harrison's commitment to the significance of specific intervallic relationships produces a piece which works best upon instruments which were created to fit his aesthetic (a just intonation gamelan) but struggles to cope with the variability which underpins gamelan *embat* 'in the wild'. Wilkinson's sledgehammer response is an experiment in caring not in the least about actual pitch sets: rather putting them at war with one another and allowing a sound world to emerge which, although not under the complete control of the composer, is nevertheless coherent and even permits moments of lyricism and beauty. Sorrell, meanwhile, strives to achieve the

marriage of both worlds, through developing a compositional style which can accommodate all three tuning systems, and in which (in theory, for now) Javanese *laras* and Western temperament can be combined into something new, not beholden to the rules of either system.

Case Study J

Robert Campion: *My Mother's House*

Recording: R-J.1, **Score:** S-J.1

Robert Campion studied music at the University of Durham after a late start as a musician, only getting seriously involved in musical activity around the age of 17, taking up the piano again after having previously abandoned it when much younger. Not long after starting the course at Durham, a friend suggested they go to a gamelan rehearsal:

I was just immediately taken by the sound of it and the sort of different-ness of it, and not quite being able to get my head around it, how it works, and just listening to it. And the fact that it didn't quite make sense, that nothing was quite in the right place, it felt like ... I found that was fascinating. And the group itself was a really lovely group of people, and I was not really a very sociable person – you know, I was quite a shy person then ... so that was also, felt a bit of a family, you know, gamelan family. A group of nice people that I could get on with. So that was definitely a part of it as well.

(Interview transcript 2012: 2)

In 1987 Campion went to Java to pursue his gamelan studies, and was 'converted completely to gamelan' (interview transcript 2012: 3). After a period spent as a social worker, he returned to music when his son was born, combining childrearing with composing – for Western instruments only at that point. Despite some high profile performances, such as one with the BBC Symphony Orchestra, he became disillusioned with the difficulties of getting works played, being 'probably not a very good entrepreneur for my own music' (interview transcript 2012: 5) and decided instead to write for gamelan, producing pieces he would be involved with either as performer or conductor.

Gamelan currently forms almost the entirety of Campion's musical activity, in terms of performing, teaching and composition. He is currently director of the Cambridge Gamelan group and member of the South Bank Gamelan Players.

His works for gamelan belong firmly in the Western late twentieth/early twenty-first century idiom, bearing more obvious connections to Darmstadt than *karawitan*. However, his extensive experience as a performer and knowledge of the technique and timbral qualities of gamelan instruments – especially the more complex *panerusan* instruments –

shines through in his writing, which displays a competence and confidence in writing for these instruments that works by less experienced performers often lack. In fact, a mix of technical knowledge and experimentalism is a specific feature of certain works, such as *Four Studies for Gender Barung* which are intended to develop and extend playing technique for this instrument beyond that required for traditional music; one of the studies is so difficult, Campion has yet to master it himself.

As discussed in Chapter 6, several of Campion's works combine gamelan and Western instruments, each taking a different approach to resolving differences in tuning systems and sonorities. As discussed in Chapter 6, in *Overy Dunes* (2007) for *gender* and cello, the cellist is asked to match the *gender* pitches, whilst in *Miniature*, tunings are left as they are but the extreme differences in tessitura and timbre between bass flute, *gender panerus* and *rebab* are exploited to disguise the differences. *My Mother's House* (1998) (recording R-J.1, full score S-J.1) lies somewhere between these approaches, combining gamelan, flute and two vocalists singing a mix of *slendro*, *pelog* and Western pitches.

Scored for flute, two female singers and *slendro* gamelan, *My Mother's House* is a jittery, fluttering, unsettled piece, reflecting the text, a poem by Androula Savvas Pistolas. The words express ambiguous, feelings towards a parent who always appears as somehow distant, unreachable, transient and fleeting:

I have to walk through spiders' webs
when I visit my mother's house ...

I never know which room she is in,
but I always know she is there ...

... her words fall
down to me,
but dissolve on my tongue
before I have even tasted them ...

Once I heard her laughing in the garden
and caught a glinting glimpse of her,
dragging her mud-caked soul across the grass,
from which old secrets flew up to the moon-shy sky,

in startled whispers.

An instrumental introduction establishes a flighty edginess with a recurrent motif, played on the flute and sometimes bonang panerus, of rapidly repeated notes with quick flicks out to other pitches:

Figure J.1: *My Mother's House*, bar 2, flute and bonang panerus parts

The image shows two musical staves. The top staff is for the Flute, with the instruction "Senza Misura (S.M.)" above it. It features a series of notes with stems pointing upwards, some with accents. The dynamic marking "p sempre" is below the staff. The bottom staff is for the Bonang panerus, showing rhythmic patterns with numbers 3, 3, 3, 3, 5, 6, 5, 1, 3, 3 below the staff. Dynamic markings "p" and "mp" are present.

Another jittery motif of stuttered double notes is introduced in section E:

Figure J.2: *My Mother's House*, bar 14, demung part¹⁴⁸

The image shows a musical staff for the demung part. It features double notes with stems pointing upwards. The dynamic marking "p" is at the beginning, and "mp" is later. The text "using mallet heads" is written above the staff.

Figure J.3: *My Mother's House*, bar 19, flute part

The image shows a musical staff for the flute part. It features a series of notes with stems pointing upwards, some with accents. The dynamic marking "f" is at the beginning. The text "accents denote slap-tonguing" is written below the staff.

These motifs are underlaid with rhythmically notated tremolandi of either semiquavers or triplets, and punctuated by damped and undamped chords on the gamelan, the ringing sonorities of the gamelan providing a counterbalance to the dry, rapid, staccato flute gestures. The atonality and rapid movement of the flute writing masks any 'clash' or oddity about the mixing of 12-tone and slendro tunings: the sonic world is one of gesture, not harmony. Campion explains that this rippling movement is partly a strategy to disguise differences in tuning:

[T]here was a conscious thought about motion ... obscuring one's interest in whether something is in tune with something else. There's a lot of semiquaver movement in the flute,... little things running around: for me it sort of feels like it obscures [the different tuning systems] and you don't worry too much – our ear isn't drawn to it too much.

¹⁴⁸ The strike-through indicates notes are damped whilst played.

(Interview transcript 2012: 9)

The singers are asked to sing in *slendro*, *pelog* and Western pitches, and are provided with a rough guide to how the gamelan pitches relate to Western:

Figure J.4

Approximate correlation between Western and gamelan tunings:

Handwritten musical notation comparing Pelog and Slendro tunings. The Pelog staff shows notes 1, 2, 3, 4, 5, 6, 7, 1 with accidentals (b, #, b, b). The Slendro staff shows notes 1, 2, 3, 5, 6, 1 with accidentals (b, b, b, b, b).

(score p2)

No information is given as to how to adjust these pitches up or down to a gamelan, the expectation being that the singers will learn the *embat* of the gamelan they perform with. Passages where *slendro* and *pelog* are sung simultaneously (one by each singer) are quite challenging: fairly limited cues from the *slendro*-only gamelan provide starting notes for one singer with little in the way of help pitching subsequent intervals, and the *pelog* singer must do without any cues at all:

Figure J.5: *My Mother's House*, after rehearsal mark P (2m25s on recording R-J.1)

Musical score for 'My Mother's House'. The top staff is labeled 'sung in pelog' and the bottom 'sung in slendro'. Both staves have numerical notation (2, 3, 5) and lyrics. Arrows indicate pitch adjustments.

When asked about his thoughts on tuning and how the score was interpreted in the rehearsal process, Campion explained:

Hmm, it's a bit of a fudge really! It does require one singer to sing in *pelog* and I wanted this to be a *pelog* tuning rather than it's rough equivalents in western tuning using quarter tones or whatever. But in

practice as you say since no pelog instruments were being played this was hard for the singer. For Mary King who sang she was pretty good at internalising the tuning of the pelog scale of the Southbank Gamelan and then singing it from nowhere, as it were, or at least a rough equivalent. The other singer was Emma Dowden, a gamelan player, who sang the slendro bits. (Campion, email 5 September 2012)

Listening to the recording from 2m24s, the *slendro/pelog* nature of the first phrase ('I never know which room she is in') is not easily distinguishable from a Western chromatic scale. The second phrase ('I listen out...') provides a stronger sense of the two simultaneous *laras*, each singer interrupting the other in a deliberately uncomfortable polymodalism, whether or not the pitches are true to the Southbank gamelan.

Towards the end of the piece, after the poem has run its course, the atmosphere shifts to gentler, more contemplative *gender* passage which, on first hearing, struck me as very similar in writing to a *pathetan* (a rhythmically free instrumental passage, sometimes played as a postlude to a big *gendhing* or suite). When questioned on the connection, Campion was surprised, but instantly recognised the similarities, although it had not been a deliberate reference:

I'd not really thought about that at all when I did it, but obviously that was in the back of my mind ... having played a lot of gamelan then you're bound to have these things in your head without necessarily thinking about it ... the piece is so sort of frenetic and anxious up 'til that point ... and then something's got to happen to somehow complete the piece in a way that's going to be satisfactory. So that was the feeling behind it. (Interview transcript 2012: 4)

This serves as further illustration of how significant a role Campion's knowledge of gamelan music plays in his compositions; in this case, it crept in at a structural level in the writing without his even being consciously aware of the influence. Generally, however, his approach to composition is usually to take a completely fresh stance, avoiding the structures and approaches of Javanese music.¹⁴⁹

My pieces are not at all, in any sense that I can think of, particularly influenced by traditional gamelan, although there are ... instances of being influenced by it that I hadn't really realised, obviously, like the *pathetan*

¹⁴⁹ One exception is *Racikan*, based on *sekaten* form.

idea.... But my feeling was I can't possibly build on a tradition like this, so I'm going to really have to take this from a different perspective ... just purely create something that, a sound that I feel is me.... [C]reating contemporary music for gamelan that's sort of traditional-like, ... the idea of the *balungan* or a *mipil* style or something, it just doesn't... come out like that for me. (Interview transcript 2012: 6)

Case Study K

Symon Clarke: *Three Exits* (2007)

Recording: R-K.1, **Score:** S-K.1 (Exit I only)

Symon Clarke is a London-based composer who has written for the BBC Philharmonic, the Gabrieli Brass Ensemble, the Medici String Quartet and many other high profile ensembles and soloists. During the 1990s, much of his compositional energies were dedicated to producing works for gamelan, first through the Southbank Centre's New Music Group run by Adrian Lee, then through Srawana (which arose out of Lee's commission to write music for a National Theatre production of *A Midsummer Night's Dream*) and later through AlphaBeta Gamelan. He has also written two works for Sinta Wullur's chromatic Multifoon gamelan.

Clarke's approach to composing for gamelan is, for the most part, un-*karawitan*-like in approach: through-composed, fully scored, and not drawing overtly on Javanese structures, though some idiomatic instrumental techniques are retained.

Three Exits is a relatively recent composition, commissioned for a 2008 Cambridge Gamelan performance by the group's director Robert Campion, who has a long-standing interest in encouraging the composition of virtuoso repertoire for *gender* (Clarke, email to author, 15 December 2013). A trio for flute and two *gender* players, it was composed with Campion and Isabelle Carré (a flautist and Southbank Gamelan player) in mind as performers:

- Player 1: Flute and Alto Flute in G
- Player 2: *Gender panerus – slendro* (marked GP S in the score)
Gender barung – pelog barang (GB7)
- Player 3: *Gender panerus – pelog barang* (GP7)
Gender barung – pelog nem (GB1)
Kempul 6

The tonal system is based upon hybrid scales created from all three tunings, utilizing all *slendro* and *pelog tumbuk 6* gamelan pitches, as well as their nearest-equivalent Western pitches: Bb, C, Db, D, Eb, E, F, Ab, and A:

Slendro 1 2 3 5 6 ≈ Db, Eb, F, Ab, Bb

Pelog 1 2 3 5 6 7 ≈ D, E, F, A, Bb, C

Clarke suggests that the sound world created by the flute

can be heard quite well as a slightly out-of-tune version of the gamelan instruments but recognisable as a combination of the pitches used by the gamelan in any given passage. The reverse is also true – the gamelan can be heard as a bastardised version of the flute.

(Email 2 December 2013)

This pitch set was not so much planned out beforehand as allowed to emerge organically from the compositional process; as Clarke explains, ‘I found it was difficult to use the missing “western” notes (G, F sharp, B etc.) except in fast figurative passages’ (email, 2 December 2013); in fact, these notes are never used, even in such phrases. The stretched octaves of the Cambridge *gender* – the *gender panerus* being substantially sharper than the *gender barang* – were not overlooked but rather accommodated within the harmonic development.

The resultant tonal system is essentially based around a nine-note pitch set, but with microtonal variations upon each note which seem more a feature to be enjoyed than a bug to be overlooked. For example, F, s3 and p3 all function as a single note harmonically speaking, yet without the rich spectrum of pitches generated between them, or the ambiguity of the resultant varied intervallic relationships, much of the charm of this work would be lost. The approach chimes with Clarke’s longstanding interest in exploring the harmonic potential of gamelan, and an awareness of the pitfalls of taking too Western an approach. Speaking about composing for gamelan generally, Clarke recounts:

[I]t took me a long time to understand the [gamelan] scales. And if you don’t internalise them as a composer you just can’t do it – you can’t write using an approximate version of a scale on a keyboard, you have to somehow be able to sing it in your head or sing it out loud. And ... then the fact that harmony just doesn’t work in any Western sense at all, you can’t invert chords, chords don’t make much sense as chords, you have to find all sorts of ways of creating harmonic progression – and actually the Javanese do it through mode, they do it through *laras*. And you have to invent your own ways of doing that. So I invented lots of different scales

within them, and in some pieces I wrote which used mixed tuning it was quite interesting to write with hybrid scales based across two tunings.

(Interview transcript 2011: 7)

In the case of *Three Exits*, Clarke created one mode for each movement - a nine-note and two eight-note modes - defined primarily by different tonic notes:

Figure K.1: Modal pitch sets for each movement of *Three Exits*



(Clarke's compositional notes, emailed 2 December 2013)

The tonal centres are clearer in some movements than others; the second movement is audibly rooted around a Bb tonic, whilst the first movement rarely settles upon Db: whilst this pitch may have been instrumental in planning the work, it is not evident as a tonal centre. Clarke explains:

The scales above in practice sound about the same, it's only the supporting harmony/resonance that's a little different, and that arose out of the three very different kinds of music that constitute each movement.... I could not transpose or invert material in a way that would make the development of thematic material coherent - it made much more sense using that same pitch set and break up / juxtapose or extend-shorten material and create differing contexts for each movement in which to do this....

I found that I could only manage one 'character' per movement and development of themes/harmony was never going to be lengthy or even protracted because I could not make the harmony move around very much - hence the short movements and the title ... you go so far and have to stop/exit.

(Email, 2 December 2013)

Rather than grand structures based upon harmonic development, then, each movement offers a static, simple snapshot based upon a limited quantity of musical material, using the same limited developmental processes to expand material or compress it into distinctive gestures which are reworked, repeated, combined and seen from different perspectives.... Once the processes are worked through in each movement the music heads peremptorily for an exit. (Clarke, programme note, 2012: 2).

Exit I is characterised by careful interplay between gestures and tuning in *gender* and flute. As can be heard in the opening, both ‘sides’ anticipate and reinforce notes played by the other. For example, in bar 1, the C and Bb on the flute are echoed with a p7/6 trill by *gender* 1, followed by a trill of p2/3 by *gender* 2 anticipating the Eb and F. At the start of bar 3, Gender 1 plays s5/6, anticipating the first two non-grace notes of the flute’s next phrase (Ab and Bb), whilst its final F is echoed down an octave by *gender* 1 on p3:

Figure K.2: *Three Exits*, Exit I, bars 1 – 4

The musical score for Exit I, bars 1-4, is presented in three staves. The top staff is for the Alto Flute in C, the middle for Gender 1, and the bottom for Gender 2. The flute part begins with a glissando and a trill, followed by a series of notes with dynamic markings from *ppp* to *ppp*. The Gender 1 part features a trill and notes with dynamic markings from *pp* to *mp*. The Gender 2 part features a trill and notes with dynamic markings from *pp* to *mp*. The score includes various musical notations such as trills, glissandi, and dynamic markings. The tempo is marked as 'Calm' with a metronome marking of 88, and the time signature changes from 5/4 to 3/4 and back to 5/4. The score also includes performance instructions like 'poco rall.' and 'a tempo'.

This kind of careful reinforcing of similar pitches is prevalent throughout the movement, and the vagueness of the actual notes in the mode (for instance the difference between C and p7) is further accentuated by the use of ordinary and colour-tone trills, wide vibrato, glissandi, harmonics, hollow tones and multiphonic techniques in the flute part, as can be better seen and heard in the following passage:

Figure K.3: *Three Exits*, Exit I, from two bars before section C (~1m35s in recording R-K.1)

The score for Figure K.3 consists of three staves: A. Fl., Gdr 1, and Gdr 2. The A. Fl. staff features a melodic line with dynamics ranging from *mp* to *ppp*, including a *f marc. 5* section. It includes time signatures of 4/4, 2/4, 3/4, and 5/4. A box labeled 'C' indicates a *poco rall.* section. The Gdr 1 and Gdr 2 staves provide accompaniment with fingerings and dynamics like *f*, *più f*, and *mp*. Time signatures for the guitars include 4/4, 2/4, 3/4, and 5/4.

Although the composer does not call for it, flautist Carré – herself a gamelan player proficient at *suling* – does often adjust her tuning to that of the gamelan in this and other passages. As many long flute notes are written deliberately unstable – for instance, employing wide vibrato – the intuitive choice is to finally settle upon a pitch which matches that of other ensemble members. For instance, the D natural in figure K.4 below begins flatter (partly because it is an underblown pianissimo) than the p1 from *gender 2*, but ends up, after a wide vibrato, settling upon this sharper *pelog* version of the note.

Figure K.4: *Three Exits*, Exit I, rehearsal mark E (2m19s in recording R-K.1)¹⁵⁰

The score for Figure K.4 features three staves: A. Fl., Gdr 1, and Gdr 2. The A. Fl. staff has a long note with a hairpin indicating a *F-Vb* (fast lip vibrato) and dynamics from *pp* to *mp*. The Gdr 1 and Gdr 2 staves have accompaniment with dynamics like *mp* and specific fingerings (e.g., 3 2 3 2 3 2 for Gdr 1 and 6 6 1 6 1 6 1 6 for Gdr 2). Time signatures are 3/4 and 4/4. Boxed labels 'GPS' and 'GB 1' are present.

¹⁵⁰ The F-Vb between two dotted hairpins instructs the player to gradually increase to a fast lip vibrato and back to normal.

The overall effect of this movement is reminiscent of a conversation between old friends: different voices, different ways of communicating ideas, but each gently reinforcing or supporting the other's point, finishing each others' sentences, picking up the first person's idea and running with it; occasionally airing opposing views, but ultimately operating very much in cohort to anticipate, create and reinforce closely interworked gestural material.

In Exit II, flute and *gender* operate rather more independently, further exploring three motifs developed in the first movement. The *gender* play repeating cells of vaguely *cengkok*-like, mixed-*laras* material (which first begin to coalesce at the end of Exit I, section H). These cells accompany unpredictable flurries of flute, grouped into clusters of variations, perhaps sharing an opening gambit, but with their ultimate outcome not following any obvious process, like somebody repeatedly throwing a ball: despite similar technique on each throw, the trajectory varies randomly each time, chaotically changed by microscopic differences in force, spin or environmental conditions:

Figure K.5: *Three Exits*, Exit II, bars 5-8, flute



The rich, microtonal nature of the pitch set is more apparent in this movement, perhaps because the more obvious use of mixed *laras* in the *gender* primes the ear for it, and also because the rapid flute notes are impossible to bend to the gamelan pitches. The regular rhythmical counterpoint of the *gender* parts is also conducive to vertical harmonic structures, with the lowest-sounding pitch tending to imply a root note in a chord. For instance, *gender* 2 in the first cell suggests a kind of modal I V cycle, from p6 to p3 (with p2 suggesting a leading note to p3):

Figure K.6: *Three Exits*, Exit II, bar 1, *gender*

Due to the interval sizes being quite different from those found in a Western scale, the resultant harmony sounds fresh and new. This kind of writing exploits what is, for me, the irresistible charm of taking a vertical harmonic approach to a mixed-tuning pitch-set, producing chords which are both familiar and strange, poignant and enticing, neither an out-of-tune version of Western harmony, nor a weak pastiche *balungan* which has failed to escape the composer's diatonic thinking.

Harmonically speaking, Exit II is squarely in *sp6* (Bb); this tonic is present as the root note of each cell almost throughout the piece, shifting only briefly to *s2* (Eb-ish) in section D:

Figure K.7: *Three Exits*, Exit II, section D, *gender* parts

The sense of tonic is established entirely by the *gender*: the flute flurries may be given context by the *gender* cells, but are in themselves more-or-less devoid of harmonic meaning: put different notes under them and their nuance would be changed.

Overall, the movement has a (very) loosely palindromic structure. The *cengkok*-like *gender* cells repeat a few times before changing by a few notes into something subtly different (in a manner bearing hallmarks of minimalist influence). The third cell leads into an intense central section (rehearsal mark C) comprising an insistent five-quaver-long, high tessitura *gender* ostinato, with high-pitched staccato flute exclamations replacing the legato flurries. Section D creates a moment of delicate stasis, the strong Bb/ *sp6* tonal centre briefly lifting to *s2*, whilst the flute makes use of the third motif borrowed from the first movement: a long flute note with glissando to a short one a semitone below (which first occurs in Exit I, just into section F). Section E acts as a bridge section, tumbling down

towards more familiar material: the Bb/ sp6 tonic and legato flute. From G, the first three *gender* cells are repeated in reverse order, but the asymmetry is imperfect: at the end, the flute briefly recaps its semitone glissando motif to finish off the movement.

The thoughtful, delicate character of Exit III offers perhaps the most ambiguous, atonal sound world of all three movements. This movement, '[t]akes the figurations of the first two movements and plays around with them in different juxtapositions with some new material derived from them' (Clarke, email, 1 December 2013). As with the first movement, there is considerable usage of tone-colour trills, flutter-tonguing and multiphonics in the flute. Whilst the tonal centre of F is certainly more in evidence than Exit I's Db, Exit III feels less strongly modal, perhaps because the careful overlapping of shared pitches between gamelan and flute is not such a significant feature. The frequent use of multiphonics makes the actual flute pitches truly unpredictable in some places, and the ethereal tonality produced by these and other extended-technique notes (harmonics, hollow-tones and such-like) balanced against bowed *gender* towards the end of the piece make the focus of this movement seem decidedly more timbral than pitch-based.

Three Exits offers an original tonal world that supports vertical harmonic structures whilst avoiding poor imitations of the diatonic system. Despite the rich, microtonal pitch set, it operates within a bounded modality: the ear recognises a limited pitch set in which notes have a specific relationship to one another, the intervals between them carrying musical meaning – of tension and release – for the listener. Like *Pieces of Five and Three*, it is a carefully crafted study in what can be done with the actual pitches of a gamelan, avoiding the pitfalls of asking *slendro* and *pelog* to 'stand in' for a Western scale.

Case Study L

Nye Parry: *Fuzzy Logic* (2005)

Recording: R-L.1

Nye Parry is primarily an electroacoustic composer who led the Sonic Arts programme at Middlesex University and has more recently been involved as an academic at Trinity Laban Conservatoire, the Guildhall School of Music and Drama and as a research fellow at the London College of Communication (University of the Arts).

Having spent his teens fascinated by electronic music, particularly synthesisers, he was recommended to attend the University of York in 1984:

But when I looked at York I said it looks very performancy, and I didn't consider myself at all a performer. And my sixth form teacher said, "Yes but they consider performance to be sweeping across the piano with a broom." And I said, "Alright that sounds like the place for me then."

(Interview transcript 2011: 1)

As well as studying electroacoustic composition, Parry became involved with the gamelan, where he had plenty of exposure to new music by Ki Nartosabdho, Neil Sorrell, Clive Wilkinson, Lou Harrison and various pieces of English Gamelan Orchestra repertoire such as Michael Parson's *Changes* and Michael Nyman's *Time's Up*. After graduating, he moved to London to join the Southbank Gamelan Players, becoming involved with performances of Adrian Lee's *Alicesongs*. He was increasingly drawn to Balinese gamelan, initially learning *angklung* and later *gong kebyar*.

More recently, Parry has been involved with Lila Cita, the *gong kebyar* based at City University, and in the LSO St Luke's Community Gamelan, another Balinese ensemble owned and run by the London Symphony Orchestra as part of their outreach programme. The LSO has thus far commissioned two works from Parry, who feels that although not explicitly stated, it is their intention 'through gamelan, to give members of the community experience of playing with orchestral musicians, and the experience of playing contemporary music' (ibid. 11). This raises a number of specific challenges: to find ways to combine Western and gamelan instruments (see Chapter 6); to create music playable by amateur musicians with little prior experience of music-making; and to incorporate professional orchestral musicians in a way that does not create a sense of imbalance between the musical forces. Parry's first commission for the group added an extra

challenge: it was for a concert not long after the instruments arrived, badly damaged in transport and terribly out-of-tune. With no prospect of getting them retuned in time, it was not only necessary to consider the different tuning of gamelan and orchestral instruments, but the oddity of the gamelan itself.

These challenges, as constricting parameters often do, provided inspiration. Finding that ‘it was quite interesting to hear all these tiny little shifts between the different tunings of the different instruments’ (ibid: 7), Parry combined the out-of-tune gamelan with bamboo *angklung kocok* (bamboo shakers), string trio, two trombones and ambisonically-projected electronic sounds, juxtaposed such that the focus was upon textures and timbres that made a feature the mismatched tunings.

The gamelan parts are built from ‘aleatoric or stochastic clouds of material’ (ibid: 7): amorphous textures of semi-indeterminate length, producing effects which are quite tightly specified by the composer, but do not dictate exactly what each individual plays. Parry draws the analogy of a cloud of gas, whose behaviour can be predicted without needing to know the exact path each molecule follows (interview transcript 2013: 1). Being primarily an electroacoustic composer, creating textures and combining them in a hands-on, experimental process was a natural way of working for Parry, who carried out much of the creative process in rehearsals with the group:

[I]n a way it was more of a devised composition, there was a lot of sitting in the room with the gamelan saying well why don't we try this... if this half of the group carries on playing 6 and this half of the group moves to a 5, that sort of thing, so there are these pitch transitions through the thing.¹⁵¹ (Interview transcript 2011: 8)

The format of *Fuzzy Logic* not only provided the amateur group with the experience of playing with professional musicians, but exposed them to elements of contemporary music – such as aleatoric processes and textural aesthetics – that they might otherwise not have encountered, let alone participated in as performers. Yet Parry was also keen to ensure the work drew on techniques being developed through learning traditional music:

[I]t's not going to just be pastiche gamelan, but it's also not going to ignore the fact that they're learning gamelan, so I'm not going to ignore that ... it's not going to ignore damping techniques or it's not going to

¹⁵¹ It is worth clarifying that whilst this was a rehearsal-based process, it was not an especially collaborative, group-composition approach, except in that the fine detail of what exactly was played and when was left up to the individual.

ignore cycles, ... the structures are going to be such that they can learn it as gamelan. (Ibid: 11)

One of the biggest challenges which shaped the composition arose from more prosaic constraints, such as never knowing quite who would turn up to each rehearsal; Parry explained that as well as patchy attendance, 'People can join in right up to the last day before a concert, they're expected to fit in to the thing' (ibid: 6). The stochastic approach neatly sidestepped this potential problem: 'because they were just doing these clouds and things they could navigate their way through without having to play the same instrument every week, and be the same people every week' (ibid: 7). Interestingly, the score for the piece was created by one of the players; Parry initially wrote instructions on a whiteboard, and the group started to come up with names for the various cloud textures, such as 'frogs' for the *angklung* clattering, and 'ship's bell' for another. Eventually, somebody made a simple graphic score using intuitive symbols – such as a ship for the ship's bell, or keys for a section where keys are dragged across instruments – and distributed this to fellow-players.

One important element of the work was spatialisation. The electronic sounds came from the gamelan, recorded with players arranged in a circle around an ambisonic soundfield microphone (which records a three-dimensional audio image). The soundfield recordings were triggered by Parry at appropriate moments (effectively treating the computer as another live instrument in the ensemble) and projected through a two-dimensional, four-speaker array surrounding the audience. Parry set the soundfield to slowly rotate on its axis, shifting around the speaker array, with the intention that the motion would draw listeners' ears to be more aware of the electronic element. A further dimension (literally) of the spatialisation came from the trombones who, playing from the gallery above the audience.

The remarkable thing about this work is the ease with which all the disparate elements – professional and amateur playing instruments from different sides of the planet – are integrated into a structure that serves them all without asking any to compromise or bend towards the others. There is space for the orchestral instruments to play in an idiomatic and skilled way, such as the string trio's flourishes at 1m12s and 2m0s in recording R-L.1, whilst the gamelan players (mostly beginners with little experience of their instruments to draw upon) create complex textures from simple actions, as in 'chains' section (from 3m0s).

There is also space for the disparate tunings to coexist without really impinging upon each other, even in sections with a strong sense of tonality, such as in the rhythmical section which emerges around 4m30s, where the chaotic pitches emerging from gamelan (which includes both pitched and noise elements from instruments struck with mallet handles) does not impinge upon the string trio's phrases of repeated perfect fifths resolving towards a resolutely Bb tonic. This is in part achieved by the alien-ness of the timbres: there seems little need to hear the gamelan as contributing to the same tonal system as the orchestral instruments. Although it is pleasant in moments where they do coincide with the pitches or at least fit in with the tonal system (for example, the earlier part of the brass section from 6m22) it is not particularly disturbing when they diverge into two completely unrelated spectra of pitches (as begins to happen around 7m20s). This ease of combining pitch and timbres no doubt has a lot to do with Parry's electroacoustic-style approach: much as a computer music composer might combine various processed sound files on using mixing software, moving them around until they seem to work together, the rehearsal-based process allowed effective combinations of gamelan clouds to emerge and less effective ones to be abandoned.

Whilst *Fuzzy Logic* was clearly a success in meeting all the challenges inherent in the commission, offering imaginative solutions to integrating instruments from disparate musical systems and incorporating professionals and amateurs, it came in for criticism from some experienced gamelan musicians who felt it undermined the kind of technical and group ensemble skills they valued. One of its critics was the group's Balinese teacher and occasional composer, I Nengah Susila who compared it unfavourably to Parry's more tightly structured and Balinese-influenced piece, *Lilacita*.

[F]or him, gamelan is all about the community and the musicians acting as one. So ... the fact that they're all playing in free time these clouds of material is against the basic principal of gamelan. I think of it, actually, as they are all contributing to one sound,... so it's more of a Western cultural metaphor I suppose, that you're acting autonomously and individually, but you are still contributing to the community. So that's what I've tried to persuade him is what's going on. (Ibid: 7)

I suggested that the way of working in *Fuzzy Logic* was perhaps closer to the Javanese *karawitan* model, where individual players act with autonomy within a unifying structure, and we mused (inconclusively) upon whether a Javanese musician would find it as troubling, or find it troubling for the same reasons. Parry observed that music such as this,

which bears stronger influences from Xenakis and Ligeti than Balinese gamelan, requires a different way of listening. To someone interested in the interaction of melody and rhythm, or the actions taken by individual players, *Fuzzy Logic* might sound quite chaotic; rather, it is best appreciated on a sensual level, through its shifting textures, timbral juxtapositions and spectral explorations, leaving the more cerebral, logical concerns of melody and rhythm behind.

Case Study M

Charles Matthews: The Augmented Gamelan

Recording: R-M.1

The Augmented Gamelan is a collection of gamelan instruments (not all from the same gamelan) played by humans and machines, with the boundaries between the two not always entirely clear. It emerged through Charles Matthews' doctoral research (submitted in 2013) on applying Javanese musical theory in electroacoustic composition.

Matthews is unusual amongst those writing for gamelan in that he does not consider himself to have a musical background, even questioning whether his role should be described as 'composer'. Piano lessons to Grade 1 aside, his longstanding interests have more to do with sound, as evidenced by a youthful fascination with the sound of modems, aeroplanes, his brother copying Spectrum computer tapes, and the noises between stations on the radio. During his teens, spent in Japan, this interest developed: finding it less interesting to play his electric guitar than 'mistreat it', he experimented with manipulating and chopping its recorded sound with samples from CDs. Exposure to the Japanese noise scene, where he 'really started understanding the possibilities of things like feedback and also appreciating quite literally painful aural experiences' (email to author, 19 September 2013) further cemented this interest. As a result, despite being involved in what most people would consider a music technology/ composition-based doctorate, Matthews positions himself as something of an outsider when it comes to music:

In some respects I'm reluctant to classify what I do as music, or feel the need to stipulate a definition every time I talk about it because I'm afraid to being subject to value judgements in areas people might associate [with] it... [T]he ideas of melody and harmony often feel like a complete mystery to me. It's not like I don't feel like I could ever understand them, but I don't want to have to understand them in order to present what I'm really interested in doing with all these other parameters - development in timbre, spatialisation, rhythm to a certain extent - and maybe they're all things that together form a definition of music. (Email to author, 19 September 2013)

In the 1990s, Matthews created and performed electronica within the alternative club scene, but was frustrated by manner in which commonly-used machines such as midi keyboards and twelve-note piano rolls impose a bias towards equal temperament, melody

and harmony which, as the quote above indicates, was not where his interests lay. Discovering the world of electroacoustic music and algorithmic programming, of Schaeffer, Stockhausen and Cage and the concept of music as ‘organised sound’ proved something of an epiphany, allowing him to situate his interests within the realms of sonic art (email, 19 September 2013).

Although aware of and inspired by gamelan used as a sound source by electronica artists such as 23 Skidoo and Autechre, Matthews himself became interested in a more thorough engagement with the ensemble. He joined a class at the Southbank and currently plays with the Southbank Gamelan Players and Siswa Sukra, making gamelan his first serious foray into learning music, and one which provided a more accessible way into concepts more typically associated with music, such as melody and rhythm, as well as a fruitful point of integration with his sonic explorations. In his doctoral research, he:

aspired to approach electroacoustic processes with gamelan as a sole idiomatic reference point, particularly in the domain of rhythm and pitch. In my own capacity as a composer and performer I felt that manipulation of these parameters was my weakest resource, and it represented one of the primary reasons I had become interested in studying gamelan: to find a melodic framework that I could apply to my own compositions. (2013: 171)

Although Matthews’ doctoral research questions (2013: 4) deal with the technical and cultural implications of combining gamelan and electroacoustic composition, his works seem conceptually and aesthetically bound more by a fascination with boundaries and their blurring: blending electronic sounds with acoustic, intermingling humanly-devised material with software-based *garap*, and playing upon the interface between pitch and rhythm using pulses devised from beat frequencies and pitches derived from rapid pulses of noise.

One significant inspiration was the effect of sympathetic resonance, which may be familiar to gamelan players who have experienced hearing instruments ‘singing back’ when singing or playing a drum in the midst of a gamelan. Matthews exploits this phenomenon by attaching transducers – essentially small speakers – to instruments such as *bonang pencon* and playing sounds through them such that the instruments vibrate in sympathy, apparently ‘playing themselves’ without human agent. In his *Bonang Studies* (2011), these sounds are mostly sine waves tuned to the pitch of the instrument, causing it

to ring; elsewhere (such as in the Augmented Gamelan set) percussive impulses and washes of filtered white noise are used to create less-obviously pitched sounds, which are nevertheless coloured by the spectral response of the instrument being triggered. Piezoelectric microphones return the sound, which can then be further manipulated before it reaches the speakers. Transducers playing white noise impulses through *pencon* can be heard from 6m40s into recording R-M.1,¹⁵² where they emerge from the texture of computer-generated sounds in a rhythm matched to that of the ‘beating’ between two closely-pitched sine waves (recalling Matthews’ interest in the boundaries between pitch and rhythm) before veering off into their unstable own tempo, eventually settling down to more regular *kempyang/kethuk* patterns as the *gender* comes in (around 8m45s).

Figure M.1: Augmented Gamelan instruments, with transducers and piezoelectric microphones attached



A key aspect of the research was development of software patches (using Max/MSP) to extrapolate *garap* – such as *mipilan* – from *balungan* notation, capable of changing in tempo and density in the manner of Javanese *irama*. This automated *garapan*, which forms the basis of the *Bonang Studies*, runs the transducers, allowing the computer to operate ‘as an autonomous entity in performance’ (2013: 184), responding to changing conditions (such as shifts in *irama*) alongside human players. The means of response is again a hybrid solution: tempo changes can be pre-programmed into an internal clock, such that live

¹⁵² The Augmented Gamelan, performing at the Union Chapel, London, 30 June 2012.

performers must follow the computer, or controlled through hardware (a slider on a mixing desk) such that the software can, via a human agent, respond to changes led by the musicians.

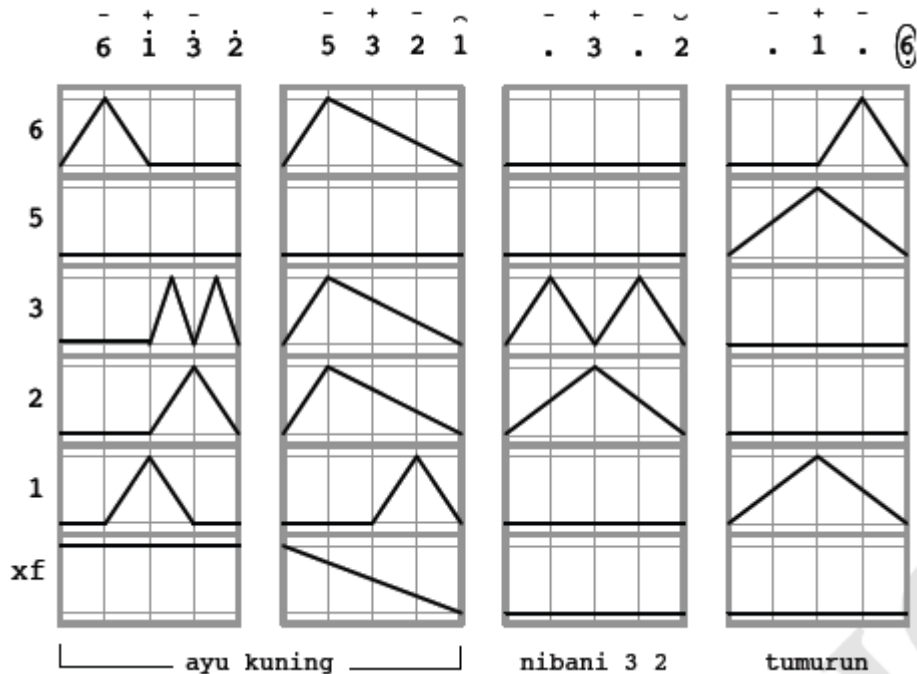
Matthews was keen to balance the automation of software-controlled transducers with ‘a sense of human interaction, experimentation and playfulness’ (2013: 175) in performance. This interaction between machine and human found its expression through the Augmented Gamelan ensemble: four acoustic musicians (*pesindhen/ kethuk*, two *gender* and *slenthem*) and a fifth performer (Matthews) operating transducer-*bonang* and various computer-generated sounds.

Figure M.2: Charlotte Pugh, Malcolm Milner, Cathy Eastburn, Robert Campion and Charles Matthews perform an Augmented Gamelan set at the Union Chapel, London, 30 June 2012



As well as the transducer-augmented instruments, tones created through granular synthesis using samples of gamelan instruments, and low-frequency sine waves representing gongs contribute to the texture. A further interactive technique is the use of ‘electronic *cengkok*’: sine waves tuned to *slendro* and *pelog* and controlled manually by means of a mixing desk (one fader to each pitch) designed to integrate with standard *karawitan cengkok*, responding to vocal and instrumental lines to give the impression of sympathetic resonances, displaced in time, anticipating notes (2013: 176). They can be heard

accompanying *Ketawang Pangkur* from 1m04s of recording R.M.1. Figure M.3 below shows how the sine waves coincide with, anticipate or create *mipil*-like patterns from the *balungan* in the last *gongan*, with the ‘ramps’ indicating the motion of faders through time: Figure M.3: Ramp-based *cengkok* accompanying the final *gongan* of *Ketawang Pangkur*¹⁵³



The repertoire, which Matthews prefers to refer to as arrangements, rather than compositions, is based upon suites of existing *karawitan* repertoire – both free-rhythm and metred – interlinked through electroacoustic and improvised textures into which one piece dissolves and another emerges. Despite more-or-less eschewing the title of ‘composer’, Matthews’ Augmented Gamelan material is loaded not only with original material, but truly novel arrangements (what would be described as *penataan* in Java). As the name implies, this is *karawitan* ‘augmented’ through the agency of machines which participate in, accentuate, comment and expand upon the facets of traditional gamelan. Matthews seems to find most appealing or intriguing, providing a unique and delicately beautiful perspective on familiar musical material.

¹⁵³ ‘xf’ stands for crossfade between different sound sources for each note (2013:176). The third *gatra* is marked to be *garaped* as *nibani*; as in his *mipilan* software, for simplicity’s sake Matthews uses a slow *mipil* to *garap nibani*.

Chapter 6

Beyond identity, beyond Britishness

One question which seems to me implicit in the title assigned for this paper rises in connection with the term ‘bi-musicality’.... At UCLA there are several advanced graduate students who manage themselves quite capably in several different musical cultures. Here then are we to speak of ‘tri-musicality’ or ‘quadri-musicality?’ Perhaps we shall come close to the heart of the matter if we return to Webster’s basic definition and retitile this paper simply to read: ‘The Challenge of Musicality’.

(Mantle Hood, ‘The Challenge of Bi-Musicality’, 1960: 58)

From a certain perspective, much of the gamelan activity discussed in this thesis can be attributed to Mantle Hood, whose advocacy of immersion in the musics of other cultures, rather than the hands-off, objective approach favoured by most musicologists half a century earlier, spurred the adoption of gamelan ensembles in university music departments around the world. Though famous for advocating bi-musicality, the quote above speaks of Hood’s long-term vision that through such activities, the skills and structures embodied in other musical systems (epitomised in his article by various Asian musics and their associated processes of aural learning and improvisation) would eventually become part of a balanced, all-encompassing musicality.

I find myself wondering whether this quote also speaks of an intuition or hope that this universal musicality would begin to escape geographically/culturally bounded distinctions, such as that between ‘Oriental’ and ‘Occidental’ (to which Hood refers repeatedly in this article). Although at the time he wrote this, things had moved on from the ‘comparative musicology’ approach of the early twentieth century where European art music was compared to the other three kinds – ‘Oriental’, ‘primitive’ and ‘folk’ (Merriam 1964: 5) – the prevailing attitude within ethnomusicology in the 1950s and 60s was ‘a predisposition to respect, even to revere, cultural differences’ (McAllester 1979: 180), combined with an innate sense that the ethnomusicologist’s role was to understand and record these different systems and the behaviours associated with them, in order to understand, if not actively preserve, their distinctiveness. On the other hand, Hood was himself composing for gamelan from the early days of its introduction to the UCLA music department, as were his pupils (Diamond 1992a: 116), so the shift of focus to change, acculturation and cross-cultural influences which came to dominate ethnomusicological discourse in the 1970s and

80s may not have come as the great surprise that McAllester somewhat impishly claims it did:

After all our impulses to cherish and protect, we should realize that human culture is not a flower with fragile petals ready to drop at the first frosty touch of a new idea. Culture is more like an irresistible plague, pandemic to humankind. New ideas are the food it feeds on, and these can no more be stopped than the perpetuation of life itself. (1979: 181)

By the early 1980s, there was a general acceptance that

[t]he view of the world as a system of musics with centers and boundaries must also take into account the rapidly increased accessibility to most people of a large variety of music.... The idea of the world of music consisting of a large number of discrete systems, more or less acceptable for the past, may not work in the present, when there is much less to keep the musics of the world separate. (Nettl 1983: 50)

In his 2005 update of the same passage, Nettle describes a world in which the concept of discrete systems has indeed collapsed, in terms which suggest Hood's multimusical vision has been realised. He suggests that as the 'result of enormous changes in communications technology', 'the ubiquity of computers', 'the ubiquity of travel' and 'the development of multiethnic nation-states',

[t]his multimusical culture as we experienced it around 2000 might be interpreted as a world society learning more music, becoming multimusical, acquiring the second, third, fourth musical languages, vastly increasing its musical tolerance, symbolic of the greater cultural diversity found in most societies; alternatively, maybe more realistically, it could be seen as the expansion of a single musical system that is enriched (or, some would say, polluting itself) by adding materials and styles, a kind of musical neo-colonialism reflecting social and political developments. (2005: 59)

The negative inflection of the latter clause speaks of the kind of anxieties expressed by Lomax's fears of cultural 'grey-out', which he compared to pollution of the biosphere created by 'a mismanaged, over-centralized electronic communication system ... imposing a few standardized, mass-produced, and cheapened cultures everywhere' (1972: 3).

Though such concerns are very much of an era where, unlike today, different musics were considered discrete, unchanging and in need of protection, they proved an insightful

antecedent to critiques of the Western-dominated World Music scene, accused of applying a veneer of appropriated exoticism to decorate mass-produced commercial pop, as discussed in Chapter 2.

Such critiques, whilst important in challenging the inequalities played out in the global commercial scene, have limited application to the kind of music discussed in this thesis – new music for gamelan created in Britain. On one level, it is easy to sidestep that discourse because new compositions for gamelan are, by and large, overlooked by the commercial imperatives of ‘global’ mass-media, lacking the racially-based stamp of so-called ‘authenticity’ demanded by industry and audiences (a point we will return to below) not to mention the absence of a steady, marketable beat. But also, and more significantly, I propose that they are outside of the Orientalist/commercial-exploitation discourse, as well as beyond the scope of Born and Hesmondhalgh’s accusations of appropriation of ‘marginalized musics ... as a resource for the reinvigoration of Western music’ (2000: 8), because they tend to be the outcome of a deeper engagement with the gamelan and its associated musical structures, techniques and practices. Rather, this kind of musical activity exists within Nettl’s more optimistic reading of the situation: ‘increasing musical tolerance’ and ‘greater cultural diversity’ brought about as the result of transnational flows of musical influence, mediated by technology but not dominated by it.

As Mendonça suggests (2002: 4), the British gamelan scene might better be understood through narratives such as Mark Slobin’s ‘affinity groups’: non-commodified, face-to-face, small-scale networks, independent of industrial/commercial interests or ethnic/cultural background, sharing ‘a jointly imagined world which arises from a set of separate strivings temporarily fused at a moment of common musical purpose’ (1993: 60). However, she points out that several British gamelan groups, such as the English Gamelan Orchestra (EGO) and AlphaBeta also operated on the level of ‘bands’ which Slobin distinguishes from the ‘charmed’ (and implicitly amateur) ‘circle’ of the affinity group as being professional specialists ‘that play for the pleasure of paying customers’ (2002: 26-27).

Whilst Slobin and Mendonça’s approaches are helpful in understanding the motivations of performer-participants, in the case of composition for gamelan, Thomas Turino’s ‘trans-state cultural formations’ offer further insight, contextualising the complex webs of geographically and culturally untethered musical identities at play. Turino outlines three such formations: immigrant communities, diasporas and cosmopolitan formations (2003:59). Given the absence of any sizable or influential Indonesian community in the

UK, the term of real interest to us here is the last – cosmopolitan formations – which describes communities where people have adopted ‘constellations of conceptions, ethics, aesthetics, practices, technologies, objects and social style’ that do not relate directly to their own geographical, cultural or ethnic background but are defined, rather, by ‘the absence of an original homeland as a key symbol, if not an actual ground for the formation’:

Whereas members of a diaspora trace their lineage to an elsewhere, cosmopolitans may well be native to their own location.... The ideas, practices and technologies of a given cosmopolitan formation travel through communication loops independently binding people culturally who are not, otherwise, related by location or heritage. (Turino 2003: 63-64)

Giving an example from a period spent at the University of Zimbabwe undertaking fieldwork on rural Shona music, Turino notes that

my middle-class neighbours in the Mabelreign suburb knew less about rural Shona music and indigenous ceremony than I did and sometimes more about jazz and US country music than I did. In spite of the African cultural-insider status granted to these friends by the discourses of race, ethnicity and nationalism, they were culturally quite distinct from the majority of their countrymen. Yet they were ... *authentically* Zimbabwean cosmopolitans, and belonged to the local variant of the same modernist-capitalist formation that I did. Their authenticity was based in the fact that they were socialized within this cultural formation; this was simply who they were. (2003: 63)

This last sentiment is echoed in many of the interviews undertaken for this thesis. Of the 37 UK-based artists interviewed in this study, only two¹⁵⁴ had any ethnic or historical links to Indonesia. For most, gamelan is just one node of a complex web of musical interests, tastes and activities, based as much upon personal choice as cultural background or history, conforming to Slobin’s observation that ‘today’s musicmakers tend not to care about the origins of items in their repertoire, domesticating a wide variety of sources to perform useful household tasks’, whilst ‘omnivorous consumers ... take in any musical nourishment’ (1992: 7). Except perhaps where deliberately cross-cultural (i.e. ‘fusion’)

¹⁵⁴ Aris Daryono and Ni Made Pujawati (with whom I informally discussed her artistic collaborations as a dancer).

projects are concerned, most composers just go ahead and create the music they create, reflecting on questions of identity later, if at all.

I found that conversations about identity with informants mirrored, to an extent, the shift of perspective within ethnomusicological discourse outlined above, moving from a clearly bounded perception of ‘our culture’ and ‘other cultures’, to one in which influences of multiple cultures are acknowledged equally, and beyond this to a kind of unbounded, almost ‘anti-identity’ mindset in which cultural pluralism is considered too crude a tool to describe the multiplicity of shifting influences at play, and in which geographical boundaries are less important than the depth of the individual’s engagement with the musical systems concerned. Whilst these different attitudes are not exactly generational or chronological, there has been an overall shift in focus (or at least language) through time, from the 1970s and 80s through to the present. The most recent generation of composers (those who began writing for gamelan in the 1990s and 2000s) were the least likely to label themselves as primarily one kind of musician or another (for example, ‘a Western composer’), and most likely to find discussions couched in terms of ‘identity’ uncomfortable, problematic or irrelevant. This shift has been accompanied by an increasing tendency to consider music upon purely musical terms: not devoid of context, but with that context less easily definable in terms of geography, nation or (especially) race. Jody Diamond’s impassioned manifesto ‘There is no They There’ represents this rejection of bounded identities:

If ‘world music’ means all music except Western music, it perpetuates a hierarchy of knowledge. It separates Western culture as reality from Other culture as an exotic variation to be observed.

‘We’ know who ‘they’ are but they don’t know who we are.

We understand the entire world but they only understand part of it.

We decide what is good for our world and for theirs.

We can participate in their world but should not have too much influence....

All of these propositions must be abandoned.

There is no they there.

(1990: 12; emphases in original)

Before looking at what composers say about identity, it must be borne in mind that all the conversations outlined below are just that: words placed around complex, abstract thoughts. Whilst there are some instances of very clear distinctions between how people perceive or locate themselves, there are others where the biggest difference is linguistic: reading between the lines, the underlying attitudes are not always so dissimilar, but couched in the fashionable or acceptable terms of the time. The sentiments in earlier quotes are equally nuanced, complex and carefully considered, but the language available to informants to shape their thoughts has become more subtle over time, more able to represent the multiplicity of influences at play, influences which are themselves undergoing change and responding to each other in a feedback loop of complex, trans-cultural flows. On the other hand, the words we use to describe reality shape it too, so increasingly subtle language enables more complex conceptualisations. Either way, rather than a complete paradigm shift in attitude, it is useful to think of this as a refinement of a model, with each subsequent generation of thought enabled by the progress made by the previous one.

Discourses on identity

The following section outlines comments and writings about personal identity by the composers discussed in this thesis.¹⁵⁵ Aside from ordering these quotes in a manner which roughly represents this shift from bounded to unbounded concepts of identity, I make little attempt to comment upon these comments, preferring to let people's words stand for themselves. To avoid oversimplifying or undermining any nuance of these responses to a complex and difficult topic, these quotes are often long and only minimally edited. Some are repeated from earlier in the thesis.

.....

Beginning with the trope McAllester describes as a 'predisposition to respect, even to revere, cultural differences' (1979: 180), my first example comes not from Britain, but Holland. Dutch composer Ton de Leeuw's stated view was that despite careful study of the

¹⁵⁵ Readers interested in narratives of identity in the period before that covered here may wish to consult Cohen's comprehensive investigation into representations of Java and Bali on the international stage from 1905-1950, which provides a wealth of examples covering the shift from the 'spectacle of otherness' (such as the sexualised exoticism of turn-of-the-century 'Indian' dancer Mata Hari) through to the paradigm of respectful engagement with the 'music of the other' characterised by Mantle Hood and dance ethnologist Clare Holt's generation (2010).

structures and philosophies of other musics, his background was primarily as Western composer, and this is what he brought to writing his one gamelan piece, *Gending* (1975) which, despite its name, does not attempt to draw on Javanese structures at any more than the most impressionistic level. He was, according to Jurrien Sligter, ‘strongly aware of the danger of what is called “exoticism”’ and, despite his great interest in Japanese and Indonesian music, remained unwilling ‘to imitate it, to use any ... characteristics of it without understanding’ the implications behind them (interview transcript 2012: 1).

My evolution, as outlined above, passed through four stages. It began with my affinity with Asian music, then ethnomusicological studies, personal contact with Asian music on the scene, and finally the growing significance of the philosophical backgrounds that had always interested me. Equally important was that the East was no more than a catalyst in my evolution, which was basically a western and contemporary process of development. Speaking more generally, the accent in my thought does not lie on East-West contrast, but rather has always centred on that which connects these worlds, both in their common resources and the threats to them, the gradual undermining of the cultures of the West and of modern Asia. (de Leeuw 1986: 78)

Mark Lockett, a former EGO member and builder of Metalworks, indicates that despite gamelan being very deeply integrated into who he is as a musician, his conception of himself is essentially as a Western musician:

I’ve been playing gamelan for so long really that it doesn’t really feel like anything different or foreign in a sense, it just feels part of my history, it’s something I never really planned.... I suppose when I was a child I thought I’d be a concert pianist and that would be it, you know. And of course when I went to university Neil Sorrell, he kind of destroyed all that!... I think for me it’s been always a process of discovering and learning new things, and its still going on really....

I think basically the gamelan isn’t a sacred tradition; there are instruments which are visually and aurally beautiful, and perfectly accessible to anybody, and so I just thought very early on: well I’m not Javanese, I don’t come from that tradition, and so it’s pointless trying to pretend that I am. You know, it’s obviously very fascinating and there’s a lot to learn, but in the end I’m a Western European. Plus the fact that I

felt very strongly that there was this other tradition of gamelan, which was the American gamelan, you know, which was something founded in the 1970s by Robert Brown and Lou Harrison, and that it was already well-ingrained into American culture, into the experimental music scene, and in a sense I belonged just as much to that as to anything authentically Javanese. (Interview transcript 2012: 12-14)

Robert Champion similarly engages deeply with gamelan (he is one of the UK's most knowledgeable *karawitan* players and teachers and has studied in Java) but nevertheless as a composer, apart from one *sekaten*-based piece, he does not feel inclined to draw upon the structural codes of 'someone else's culture' preferring his own mode of expression, which is closer to contemporary European art music norms.

My feeling was I can't possibly build on a tradition like this, so I'm going to really have to take this from a different perspective and ... just purely create something that, a sound that I feel is me.... It doesn't really come into my head as creating contemporary music for gamelan that's sort of traditional-like,... the whole process, the idea of the *balungan* or a *mipil* style or something, it just doesn't come out like that....

I don't like dogma about anything really,... and I'd feel dogmatic about saying look, I'm not going to do it like this, definitely. Because at one point, I might say that what I'd like to write is a nice *ladrang* in *pathet sanga*, and why not?... So nothing like 'this is a conscious decision' ... its just that it doesn't come out like that for me. And also in the back of my mind, I suppose yes, this is such an amazing tradition and I'm not part of it, but I'm part of a different culture that's playing it, and I can't try and build on something, someone else's culture in that way, it doesn't work. (Interview transcript 2012: 7)

For AlphaBeta founder and Southbank Gamelan Player Joe Field, Javanese music remains 'other' despite his involvement over many years:

To put this into context, I think that even the most experienced and knowledgeable of British gamelan players, like Neil [Sorrell], John [Pawson], Andy [Channing] and Pete Smith, would accept that gamelan is rooted in philosophical, spiritual and cultural elements of being

Javanese which can never be fully subsumed into our consciousness. Thus, I've never thought that I'm writing 'Javanese' music, even when I wrote a full scale *gendhing*, which is 95% traditional, apart from a few elements of *garap*. I use Javanese structures and techniques when they suit the piece. I do find the music (and dance and *wayang*) an inspiration in various ways, but, ultimately, I write for gamelan because I find the sonorities and textural possibilities endlessly fascinating. (Email to author, 22 September 2013)

Field recognises the shift in attitude towards an unbounded, less distinct sense of identity described above, but does not see it as an entirely positive thing. However, he suggests that this undermining, or redefining, of identity is not unconnected to gamelan's success in Britain, and that engaging with other cultures can in fact be seen as a contemporary expression of 'Englishness' (or Britishness):

First, there is the promotion of the idea of multiculturalism in Britain. We are told (required, in fact) to celebrate other cultures, so the idea of doing salsa, or Bollywood dance, or gamelan as a hobby or leisure activity has become almost as routine as Sunday morning football or going to the cinema. Second – and ... this is obviously related – there is the ever-diminishing sense the British people, especially the English, have of their own identity. There isn't scope here to expound on this, but this identity has been systematically undermined over the past fifty years in the service of a particular agenda. Increasing numbers of people have no real sense of what it means to be British or English. Nature, including human nature, abhors a vacuum and a major part of what makes us human is individual consciousness and, therefore, a sense of individual identity. Our nature will always seek something to give it that sense of identity and cultural context. It may derive from all sorts of things. It may exist largely or even wholly in our subconscious, rather than our conscious mind. It may be a complex set of imperatives or it may (increasingly often) be bound up almost entirely in one thing. Historically, things like race, religion and family were much the most common. Now, we see people's self-image being centred on things like a football team, or One Direction, or sexuality, or animal rights, or secular fundamentalism – or even gamelan!

I get the impression that gamelan is a significant part of the sense of identity of quite a few British gamelan players. Of course, this is not to deny that some people find, in gamelan, an expression of areas of their personality which didn't find an outlet elsewhere. I would say that that's the case with me. In fact, I feel very English indeed, more than I ever have. My interest in other cultures has fostered, rather than supplanted, that feeling. In turn, my strong sense of Englishness specifically increases my respect and concern for other cultures.

(Email to author, 22 September 2013)

A sense of one's own culture being reinforced through engagement with others is referred to by Naga Mas member Mags Smith (Chapter 2/ Case Study E), who found that engaging with gamelan encouraged her to connect with Scottish culture, with which she is associated by dint of birthplace, but had previously felt ambivalent towards as a stereotyped marker of identity:

My experience of playing gamelan has led me to have more of an interest in Scottish-ness: getting involved in another culture's music and related arts got me quite serious about some of my own.... When I was asked to do something Scottish with gamelan I thought what do I know about Scottish music? Very little. I learned a lot about bagpipes, exploring Celtic music alongside gamelan. I've always found it slightly embarrassing to be Scottish – we have a joke: 'don't come back as a walking shortbread tin', you know, what's all this tartan about? So it's actually helped me connect to something of my own culture. (Interview transcript 2011b: 5)

However, unlike those quoted above, Smith does not so clearly define herself by the culture she describes as her 'own': it is something she has recently chosen to explore, one option amongst many. American-born composer and percussionist Jon Keliehor (also, until recently, a member of Naga Mas) more specifically draws a distinction between self and culture in relation to the many musical systems he draws upon by use of their instruments:

As a musician, percussionist: I have been drawn to look into the music of other cultures through my small collection of instruments from several world cultures. I am able to incorporate the sounds of these music instruments into the contemporary dance environment, providing live

music for dancers. *I think they help me measure the distance between self and culture* [author's emphasis].

As an individual: I have absorbed influence from musical activities and encounters coming from several sources that could include something simple, such as an instrument I hold/play, a concert I've attended, or a book I've read. Or more complex sources/activities such as a teacher and the conveyance of technique, hours of music analysis/listening, experience with nature and animal sounds. All these have informed my music as a composer/performer.

As a composer: I have been fascinated by diverse cultures and their music, and have absorbed a few small music ideas from an equally small number of regions/cultures. I have inhaled. I know how to absorb influences, enter into a self-similar state of mind with them, to extract a kernel or two of information. To this extent I am a sponge, yet my ability to absorb is quite small. Instead I turn towards the imagination, a fantasy state of personal invention, perhaps taking only a sip from the tea of external culture. I have borrowed. I have often failed at trying to borrow 'styles of music' from elsewhere, yet I have tried. I have really only found myself and my efforts.

In composition there seems to be a significant distance between 'borrowing a little bit of style' and accomplishing a successful translation or acquisition of a cultural music form. Yet in-between those two lies a world of imaginative possibilities, not necessarily without extra-cultural influence, that offer the composer a chance to explore their own personal, self-directed music flow.

(Email to author, 16 January 2013)

Keliehor's location of self amongst (or beyond) a multiplicity of influences is a common trope amongst those writing for gamelan; there are echoes of it in Dennis Murphy's creation of 'Thoomism' (see Chapter 1) as a space in which to locate his own artistic expression, indebted but not beholden to Indonesian and American musical mores. Former Gamelan Sekar Petak member Peter Moran explains this in more pragmatic terms:

Well, all the different ... music I got into from different countries over the years was really part of that same journey of finding new things and interesting things. It's the same way that I went from listening to simple

popular and rock music when I was young and then went into more progressive stuff and got more experimental with my band, and from there got into composition and contemporary music – it just represented new ways of thinking about music and new ways of making music.

So around the time I was studying gamelan at university we also did Japanese music, Native American music – we'd done all sorts of things. I was also big into Alan Lomax and field recordings from the early twentieth century and big into Indian music as well... So gamelan was just part of that, something new. (Interview transcript 2011: 3)

For Lou Harrison, locating himself amongst multiple musical worlds was an important way to distance himself from European art music norms. He even went to the extent of renaming European music as 'Northwest Asian' in order to avoid privileging one kind of music above another, 'self-consciously fighting a Eurocentric view of music and the world':

Cizmic: I'm wondering along these lines, being an American composer and having some predisposition to a western outlook, if you find that coloring how you approach gamelan music, or Korean music, or non-western music?

Harrison: Well, no, as I say, they're all music. Each is a special kind. (Cizmic 1999)

As mentioned previously, for some composers, such as Nye Parry, gamelan is their primary form of musical engagement:

I've now been playing gamelan for over half my life and I'm actually much more comfortable writing for gamelan than I am writing for western orchestra, for example, but I've never played in a Western orchestra. At least with the gamelan I've played all the instruments, I know how they feel and I know what they can do within the frequency range and how fast they can go and all those things. So my intimate knowledge of them as instruments is much greater than most Western instruments. And my knowledge of them as instruments is tied to what I know about the structures that they do. (Interview transcript 2011: 15)

Similarly, Charles Matthews' interests are more closely aligned with sonic arts than music, and Javanese gamelan is the only music he has ever engaged with to any depth. For him,

even the labels ‘musician’ and ‘music’ are problematic, but more so is the attempt to describe what he does as in some way cross-cultural:

I don’t know about considering myself a musician or not – it’s something that I battle with on and off. In some respects I’m reluctant to classify what I do as music, or feel the need to stipulate a definition every time I talk about it because I’m afraid to being subject to value judgements in areas people might associate it. For example,... the ideas of melody and harmony often feel like a complete mystery to me. It’s not like I don’t feel like I could ever understand them, but I don’t want to have to understand them in order to present what I’m really interested in doing with all these other parameters – development in timbre, spatialisation, rhythm to a certain extent, and maybe they’re all things that together form a definition of music....

I think the problem has returned or been intensified again with the links to gamelan, and people describing what I was doing in terms of a combination of Western music and gamelan. For similar reasons to what I’ve mentioned above I found this difficult, even offensive, as I sometimes feel like what I’m doing is by definition excluded from being Western music, if not music itself. In context, some of the first definitions of gamelan were based on comparisons between the two – i.e. gamelan being defined in how it differs from ‘Western music’ – people don’t play from a score, there’s a lot of variation, the idea of rhythm is different, tuning isn’t as strictly fixed - that sort of thing. It’s taken a while for me to realise that this is where some of the roots of my issues with these discussions were....

In some respects, this is something I enjoy about gamelan music or *karawitan* – I’m happy to accept the fairly narrow, if often vague or abstract in some respects, definition that people I’ve spoken ascribe to it. If I might not understand why exactly, I find it much easier to hear that a teacher I respect says a new composition is not *karawitan* than to hear that it isn’t music. And I often appreciate the idea of a distinction between *karawitan* and *musik* (though more often in conversation I’ve found people refer to *musik barat*, essentially Western music) ... the idea that it is a different activity, that there are different connotations....

I could write about this for ages but I think somewhere in there there's an explanation for my reluctance to call myself a musician, or certainly a 'Western musician'. (Email to author, 19 September 2012)

Matthews' focus on the music rather than its origin, on *karawitan* rather than Java, and beyond that, upon sound rather than music with all its culturally-bound associations, enables him to situate himself somewhat outside the dialogue of cultural identity. Although his creations do not exist within a vacuum, the path he negotiates between various influences is driven by aesthetic impulses rather than a decision to associate himself with a particular culture by proxy of its music, or a sense that he is associated with one by birth.

A preference for focusing upon music and a distaste for labels of identity also characterises John Jacobs' response:

So this idea of identity, which is always going to be about grouping people together, it's always going to be a pigeon-holing exercise, a taxonomy, so if you undergo that kind of categorisation in order to describe the likely behaviours, there might be an extent to which it works – and I don't really have a big problem with the likelihood that Google, for example, with not that much data about what I do on a daily basis might quite accurately predict various things that I'm going to do – but at the same time for us to start having a conversation about who I am, in those terms, is very uncomfortable, because the whole conversation is framed in a way which taps into that side of our human nature which is sorely tempted to start reinforcing the nature of in-group. And the horrid thing about any reinforcing of in group is that what you really define is out-group. So there's something that on a profound level disgusts me about couching a conversation in terms which I feel are inviting me to tap into a side of myself which is abhorrent and disgusting in humans. I'd rather find ways, if possible, to have those conversations about cultural elements that are not geographically connected; I'd rather find ways of having the conversation where the nature of the conversation instead invites us to reinforce our more generous sides.

Perhaps to tie it back to purely musical practice: actually, I'd rather be looking for those points of common humanity because its more fruitful in so many ways, because you're reinforcing a world-view which

makes it difficult to suddenly get caught up with an in-group, engendering an out-group.... So that's the thing – it's more comfortable on a personal level. But also it does seem to tie together with a general approach to understanding somebody else's perspective, including a type of music that you come to unable to comprehend initially: if you look for that deep point at which there's something in common, you suddenly feel after – in my case probably over two years of playing in the gamelan – you suddenly feel *seleh*, and understand just how profound the difference is there, but you don't sort of conclude therefore, 'Wow, its true I'm never going to be Javanese, Javanese is something fundamentally different from British'. Instead what you do, if your interest is in being able to understand both types of music, you carry on searching.

(Interview transcript 2013: 1)

Although Jacobs' final statement seems to be the antithesis of de Leeuw's, it is worth drawing attention to sentiments shared in both, particularly the desire to focus upon what is held in common, both musically and humanly rather than on cultural difference. A desire to discover points of connection and understanding is a thread which runs through all the interviews conducted for this thesis, and has remained important, even as conversations about identity have changed and people have become less likely to consider themselves as belonging to a particular, monolithic culture.

One final thing to note about this collection of statements is that what people say about identity does not necessarily reflect their approach to composition. For example, in the interview cited above, Harrison was quick to dismiss that Western art music had any more influence upon his music than any other, yet as discussed in Case Study I, his style and perceptions in fact remained inextricably rooted in the diatonic tonal system; as others have noted, 'His interests in "acculturation" ... notwithstanding, Lou Harrison's expectations are firmly grounded in Western music history' (Thomas 1983: 90). Reflecting on his own music, Joe Field acknowledges that even if his pieces are '95% Javanese' his self-conception is firmly rooted in a sense of 'Englishness'. This disjunct illustrates the limits of the linguistic model suggesting that semiotic analysis of culturally-associated codes within music can reveal much about how the authors situate themselves conceptually with regards to identity, a point which we will return to in discussions of 'Britishness' below.

Discourses on authenticity and hybridity

It is worth reiterating the continuity of the ideas outlined above, observing the way one set of attitudes shapes and enables subsequent ones, through processes of both refinement and rejection. The roots of latter-day discomfort with labels of identity can be found within earlier discussions around authenticity and hybridity, which are a recurring trope amongst informants involved at the start of the British gamelan scene in the 1980s: a period where conceptions of authenticity based upon ethnicity or reified concepts of tradition were being actively debunked, and narratives of change and hybridity were coming to dominate ethnomusicological debate. These informants actively rejected the concept of authenticity based upon race, geography, dress codes, ‘correct’ behaviour, or the careful emulation of musical style from a fixed (therefore imaginary) tradition, with several important figures asserting instead that hybridity of British gamelan composition was itself the key to a real, honest, in-the-moment authenticity, and was essential to establishing a living, changing, thriving gamelan tradition in Britain.

For example, Mark Lockett recalls how groups from Indonesia, or groups of Indonesians based abroad, were sometimes favoured over the EGO for concert bookings:¹⁵⁶

because, you know, there’s the idea of people going to a concert of ‘real’ Javanese people playing the gamelan rather than this bunch of Westerners – even though in many cases they weren’t quite as good as us – for example, when ... the Indonesian Embassy staff decided that they would start a group, ... they would get concerts when we couldn’t, because they were Javanese. But they weren’t musicians and their standard of playing was way below the EGO’s. But it’s one of those strange, ethnocentric things, you know, it’s part of a wider debate, whether world music ensembles can be played by people from outside the tradition.... I think with educated musicians it probably isn’t so much of an issue, but I think probably with the general public it is. (Interview transcript 2012: 14)

This situation was most infamously replicated surprisingly recently in 1998, when a gamelan was required to play the first half of a London Philharmonic Orchestra concert

¹⁵⁶ EGO’s membership consisted mainly of British players, though there were a few Indonesian musicians such as Sri Hastanto, who was one of the directors from 1982 (Mendonça 2003: 527).

featuring Messiaen's *Turangalîla Symphony* at the Royal Festival Hall. Rather than invite the venue's resident and expert Southbank Gamelan Players, the LPO flew over an ethnically Indonesian amateur community group from Germany to perform what Sorrell describes as 'the famous concert of eight *lancarans*' (email to author January 2013), whilst the SBGP were relegated to interval music in the foyer. This misjudgement did not go uncommented upon in the media, with a reviewer for *The Times* describing it as 'political correctness of the worst kind' (Helen Wallace, quoted in Mendonça 2003: 523).

As well as responding to restrictive views of authenticity from concert promoters, audience members and critics (particularly in the 1980s when the image of a 'bunch of Westerners' playing Javanese gamelan was still decidedly odd), several informants expressed a strong sense of discomfort where they perceived a too-sincere effort amongst gamelan participants to replicate Javanese culture with all its trappings (often filtered through a heavily exoticised interpretation based upon a sense of mysticism so readily associated with 'Eastern' cultures):

A well-travelled Javanese teacher said if you want to hear the most old-fashioned and arcane and retrograde gamelan playing in the world, you go to the United States, [or] the *kraton* in Jogjakarta, possibly! They're only interested in doing it authentic *kraton* Jogya style. And that's an infection. That's a Western attitude ... and it's an academic attitude: that's the background its coming from. I've never, ever met a musician ... from anywhere really, not a real musician, who's had that attitude. (Roth, interview transcript 2012: 16)¹⁵⁷

For Neil Sorrell, this trope tends to be epitomised by over-the-top expressions of respect towards the instruments (he speaks with some incredulity of a group in Europe who used to make a ceremonial offering of flowers and incense for their *gong ageng* every Friday) and by discussions over what non-Indonesian gamelan groups should wear in performance:¹⁵⁸

The one that really sums it up for me though is the dress code. Cos you know – at Wesleyan we had to dress in the Javanese gear ... sarong, the jacket, the cap. And [the director] Bob Brown would have a *keris* in his

¹⁵⁷ It should be borne in mind that Roth's quote gives a opinion from several decades ago, relating to a segment of American gamelan players who were particularly concerned with authenticity, some of whom were actively were opposed to the idea of Americans composing for the gamelan. See, for example, Becker 1983.

¹⁵⁸ The heated debate on whether or not to wear Indonesian dress has consumed considerable energy and space on the gamelan listserv, and forms a substantial subsection in Mendonça's thesis (2003: 510-515)

belt.... And I just thought we look idiots,... you've got these gangly, hairy, white legs sticking out the bottom of these sarongs, we look idiots!... I didn't want anyone to think we're trying to look Indonesian, or trying to pretend to be Indonesian – that's my ultimate one – you know, we're Westerners and that's it. We can aspire and all the rest of it but we're not Indonesians. (Interview transcript 2011a: 22)

For Sorrell, this kind of attitude is related to a particular view offered by critics (for example Time Out's review of EGO's first concert in June 1980¹⁵⁹) that British people do not have the right to play gamelan, let alone write new music for it:

It's that thing that again gets my goat, where people say it's sacred music and you can't do it because you're defiling it, or it's sacrilegious. And I thought it can be, but they just don't understand it. Again, it's that kind of idea that they seem to think they understand the culture better, from a smattering of this and that. And then they give a distorted idea, and you think, you go to Java and you see people fooling about in the gamelan, drunk out of their minds ... doing all sorts of irreverent things – I've seen people step over instruments, I've seen everything: you know, they respect it, you think that's fine, and they have the spirits and the instruments and you think fine, you respect all that but it doesn't make you go 'Oh god, we can't touch that.' (Ibid.)

Whilst, as Roth points out above, such sentiments are rare amongst professional musicians, several former EGO members described a tension between two camps. In one were those who felt the priority should be to hone skills in traditional music through intensive study in Indonesia, and on the other those who felt that the new music component represented the most interesting development the group had to offer. Mark Lockett relates:

I think there was a hardcore of traditionalists in the group, which weren't actually the Javanese musicians, strangely enough. But I think there were some people who thought we should all be going to Java and studying and being immersed in the culture, and there were other people in the group who thought great, we're not Javanese, we're here, we're English, let's do something with these instruments, you know. (Interview transcript 2012: 4)

¹⁵⁹ Unfortunately, I have been unable to locate a copy of the review to quote: the British Library's copy of the relevant edition was missing from their collection.

And I thought it was a terrible shame when it split up – there were all sorts of circumstances surrounding the demise of EGO but I think one of them was the fact that the people wanted to ... go off and study or ... found other groups in order to start classes in Javanese music, ... whereas I think by the end of that tour I definitely had a sense that EGO was doing something very innovative, you know, forming a sort of British gamelan culture, with some very interesting composers in the group.
(Ibid., 14)

Of course, intensive study abroad and creating new music are not mutually exclusive: many of the composers in this thesis (e.g. Roth, Jacobs, Pugh, Matthews) have done both, and their compositional styles have been greatly affected by engaging with new music in Java. An argument I have alluded to (but not explored as fully as I would have liked to in this thesis) is that a depth of knowledge of *karawitan* and of instrumental technique informs high quality composition – see Miller 2005 for a more thorough exploration of this. It is undeniable that intensive study of *karawitan* (or other gamelan forms) was absolutely essential to building a healthy, vibrant British gamelan scene; however the idea that emulating Indonesian practice as accurately as possible was more important or preferable to creating new music was strongly refuted by informants (all of whom, it should be noted, were composers). Like Lockett, Field emphasised that the Javanese musicians who were in the UK teaching and performing with EGO were the least likely to encourage this kind of attitude, and very supportive of new music endeavours:

It's interesting that almost all the Javanese artists we've worked with have said: 'We're very happy that you want to play gamelan, but don't think you must religiously play Solo style or Jogya style or whatever: develop a "*gaya* London", adapt Javanese music for your own purposes, compose *kreasi*' ... It seems to me that any artistic endeavour in which the artist seeks to suppress his/her own personality and cultural background will be an arid, academic exercise. Worse than that, it may be dishonest – a fake – and the very opposite of any of the (numerous!) valid definitions of art. (Email to author, 22 September 2013)

Andy Channing points out that the development of local style of playing gamelan – in both traditional and new music – was inevitable given the circumstances:

Well it was never an issue for me. I mean I'd never seen myself as a traditionalist ... because I believe that ok, we're playing Javanese and

Balinese gamelan here, but it's going to be different: we're feeling it differently, we're not Javanese or Balinese.... You know, you take *Ricik-ricik* and play it here, it becomes something different. It has its roots in Java but it becomes something different. So for me it was just an extension to then write pieces for gamelan. So I felt that gamelan was something that we were kind of planting in English soil and new flowers were growing. (Interview transcript 2011: 11)

This horticultural analogy was a direct inspiration for Clive Wilkinson in writing *English Garden* (Case Study D), which was written at least in part in response to criticism from a fellow student in York who 'had a real go at me for writing for gamelan, this "ancient tradition" with this huge amount of repertoire behind it'. Wilkinson's compositional response was that:

Basically, an English garden is anything but English,... a lot of plants come from America, lots of plants come from China and Japan and India. You know the rose, we think of as an English plant. Well there might be an English rose, but it's been crossed with flowers from China.... So you get this crossing of plants, hybridising, and you have Henry Cowell talking about how a lot of the best music was hybridised, and is a mixture of several things. (Interview transcript 2011b: 29)

For Roth, this recognition of not just the inevitability but the importance of hybridity in creating a strong local scene formed a core tenet of his beliefs about how gamelan should proceed in the UK, shaping decisions he made when establishing the Southbank Gamelan which continue to have an impact today:

It's a simple botanical fact: if you're going to transplant this tender plant from an alien climate and soils and tradition and expect it to survive, then its got to take root. And its got to take root with new nutrients, new soils. So there's got to be new growth. It's the only way its going to take root properly. And I really believe that passionately.

And everything I did at Southbank was based on that: right from the beginning I had ... a new music group, as well as teaching traditional classes.... But the inspiration for that, the traditional and the new stuff, came from Neil [Sorrell]. It started with Neil before I went to Java, so that was his inspiration, and it's the most important thing he did, certainly for me.... And I got it from Humardani of course, from the

other side. He absolutely confirmed it, he said ‘of course you should be doing that, it’s the most important thing you should be doing.’ So I never had the slightest doubts about that... Otherwise its not authentic – the authentic thing works both ways, its absolutely true. (Interview transcript 2012: 16)

The concept of healthy hybrids, rather than earnest imitations, as legitimising the British gamelan scene was, Mendonça points out, supported by supercultural institutions, most notably funding bodies. According to minutes of a meeting between EGO and the Arts Council from August 1980, shortly after the group formed, funding body representative Annette Morreau stated that ‘she would rather invest large sums of money in real Javanese musicians than us. It would be different if we were playing our own music’ (cited in Mendonça 2003: 522). Similarly, Adrian Jack, speaking as Director of the Institute of Contemporary Arts (ICA) stated:

I can accept the idea of Indonesians writing new pieces within a tradition.

I can also accept English or western composers writing music for the instruments of the Gamelan. But the idea of western composers and musicians trying to enter the Gamelan tradition does not interest me unless they study and absorb as much as Indonesian musicians. (It is interesting to them but others want to hear the real thing). (Letter to Jan Steele, 1981, quoted in Mendonça 2003: 523)

Leaving aside the question of what is meant by composition within or outside of tradition (or at what point western musicians might become the ‘real thing’), the fact remains that ‘for EGO,... this supercultural feedback acted as confirmation of a path most people were already taking (i.e. creating their own repertory) rather than pushing the group in a new and unwanted direction’ (ibid. 524). The fact that the UK’s first performing Javanese gamelan group was creating new music from the outset, and that many of its members went on to found gamelan groups elsewhere, was to have a profound effect on the way the British gamelan scene developed.

Discourses on Britishness (and other –nesses)

One of the research questions I was invited by my supervisor, Neil Sorrell, to consider (and found myself uncomfortable with for reasons I found difficult to articulate at first) was:

What is distinctly British about the British gamelan scene? Whilst acknowledging that this is a natural question to arise, having framed the thesis as covering composition for gamelan

in Britain, it implies a focus on national identity rather than simple location that I remain unsure can be answered reliably, without resorting to stereotypes, generalisations or false-positives. Britain's gamelan community has developed differently to those in Holland, North America, Australia, Japan, Hong Kong and so on, but the extent to which this is due to different cultural norms, historical circumstance, timing or the effect of a few key individuals is difficult to pick apart.

On reflection, the reasons for my discomfort with the question were not unrelated to the sentiments expressed by Matthews and Jacobs, who do not exactly reject all claims to identity, but prefer not to locate either their own or other people's in geographically/culturally deterministic terms. A discomfort with culturally-loaded terms seems to reflect an increasingly nuanced conception of what culture actually is in the twenty-first century. What Joe Field describes above as a systematic undermining of a sense of Britishness to me reflects a growing recognition that national identity is a collective illusion, a dream constructed by nobody and everybody (as Slobin points out, 'There is no Board of Directors that monitors hegemony daily, adjusting and fine-tuning it' [1993: 27]). Like other problem terms 'tradition' and 'authenticity', 'Britishness' as a concept implies a discrete cut-off, a line – or rather a box – drawn in the sand: on the inside go all people, objects, processes, aesthetics and thoughts that are declared distinctly 'British', on the outside go the 'others'. Mix the content of any two boxes and you have a hybrid.

This fails to recognise the innate hybridity of everything British, Javanese, Indonesian, Dutch, Australian, American, Icelandic or anywhere else in the first place. At a roundtable discussion at the Expressions of Britishness Conference (2012), one Western classical scholar extolled the virtues of Elgar as a quintessentially 'English' composer, whilst others argued that his style is, analytically speaking, very much within the Germanic classical-Romantic oeuvre. Elgar came to prominence for his Englishness in the same period that many countries in Europe were undergoing nationalist phases, discovering and celebrating (or appropriating) local folk idioms whilst asserting distinctiveness from neighbouring countries. With the First World War looming, German-ness was a less desirable trait to be associated with than it had in the recent past, whilst nationalist expressions Russian-ness, Frenchness, and so on were also on the rise in their respective countries; in other words,

the label of Englishness in fact reveals a good deal more about the socio-political pressures of the time than it does about Elgar's music.¹⁶⁰

Javaneseness is equally hybrid: as discussed in Chapter 1, even the most refined court music of Central Java is a hybrid of Hindu-Buddhist, Islamic and local animist remnants (Sumarsam 1995: 13-18), and that is before considering the interplay between court and village styles, the effects of Dutch colonialism, and the ongoing gradual shifts in style between each subsequent generation of musicians, who are themselves inevitably affected by ideas from beyond *karawitan*. Indonesian-ness represents the most obvious example, being the result of a recent and overt nation-building exercise to unite hundreds of islands, many of which had little more than Dutch colonial rule in common prior to independence, by applying a unifying marker to a plethora of cultures – which are themselves, of course, as hybrid as German-ness, Dutchness, Hindu-Buddhistness and so on: all hybrids of hybrids of hybrids. Like the infinite regression problem which asks what the cosmic turtle carrying the earth stands on, once you start looking closely at the components of any given culture 'it's hybridity all the way down'.

It is this uncertainty over what is meant by Britishness and whether it is meaningful to even try to define it, not to mention the socio-political implications behind why one might wish to do so, that is at the root of my discomfort with approaching this research question. Growing up in a place and time (1980s London) when the Union Jack flag seemed mainly associated with British neo-Nazis, but also when multiculturalism¹⁶¹ was embedded in the education system¹⁶² and postcolonial guilt in the air (for those who chose to inhale), my ambivalence towards overt statements of national identity and their implied patriotic subtext is arguably itself an expression of Britishness, common to many of my generation with similar backgrounds.

Turning to gamelan music, obvious examples of code-mixing, such as the use of Shakespeare, Welsh myths, pianos, concerto forms and other handy signifiers, operate at too simplistic a level to offer any great insight. Attempting to relate the balance of structural codes within a piece to the already-hybrid cultures that spawned them is also an ill-fated endeavour: as noted earlier, composers' stated self-conceived identities do not

¹⁶⁰ I am indebted to the discussion at the conference, both panel and audience, for this observation.

¹⁶¹ This term has fallen somewhat out of favour: academics tend to prefer 'interculturalism' as a more accurate and less divisive term, whilst in the UK at least, with nationalism and mistrust of 'foreigners' on the rise, it is political poison.

¹⁶² See Mendonça (2002: 258-272) on how multiculturalism and the National Curriculum.

necessarily correlate with compositional decisions, making the resultant music an unreliable 'text' for revealing anything about identity.

On the other hand, as the following discussion outlines, there are differences between the British gamelan and those in Holland, the US, Australia, Japan, Hong Kong and elsewhere, particularly in terms of its historical development and demographics, though if a snapshot were taken today, those differences would not seem very pronounced: at a fundamental level, all these scenes involve performance of traditional and new music to varying degrees, and differences in opinion over the balance are more pronounced on a group-to-group level than country-by-country. The main differences seem to be the speed with which new music became incorporated into the scene and the degree to which it is emphasised today, and this is perhaps the most useful way to proceed.

North America

Due to the long-established history of gamelan in North America and the number of academics professionally involved with the scene, there has been a great deal published on the subject of new music for gamelan in the US and Canada. It would be impractical to attempt to portray the vast range of attitudes, philosophies and compositional approaches (which may not be more wide-ranging than those in other countries, but are certainly more written-about) in this brief synopsis; anyone interested in further reading can plunder the relevant works listed in the reference list. However, I will pick out a couple of themes that highlight some differences between the US and the UK.

Composition has been a well-established part of gamelan activities in the US since the 1970s. Various accounts of gamelan in the US note that much of the country's early composition for gamelan tended to be written for homebuilt American ensembles (for example, Murphy 1974, Hadley 1993, Miller and Lieberman 1999) whilst Javanese-made gamelans were mainly used for teaching purposes in universities, taught by Indonesian musicians. Neil Sorrell noted that whilst studying at Wesleyan (1969-71) he encountered next to nothing in the way of new music, and only became aware of Lou Harrison's compositions back in the UK in the 1980s (interview transcript 2011: 4). He suggests that the tremendous amount of respect for Indonesian teachers in American institutions may have led to a certain hesitancy, in those early days, towards attempting composition on instruments of Indonesian origin (a point echoed by Becker 1983:86 and explored more fully below). This is reflected by the emphasis Lou Harrison places on the fact that he was first invited to write for Javanese gamelan by Pak Cokro (Hadley 1993: 30).

On the other hand, suggestions of conservative attitudes towards the gamelan in those early days belie the radical nature of creative engagement with the ensemble, which for some served as way to escape the gravity well of European art music, as McGraw explains:

In America gamelan may function as an apparatus of aesthetic transgression. Generations of American composers have been drawn to gamelan partly because its unique tuning is radically divergent from Western models. The spread of Western tuning systems via global capitalism has overwritten vernacular intonations, and many American composers have heard in gamelan tunings a form of symbolic resistance against the rationalizing logics of imperial modernity. To ears trained in the Western tradition gamelan can represent a pseudo-disorder, a potentially subversive noise that allegorically betokens difference and marginality, representing a statement against repressive control. (2013)

Generally, none of the British composers I spoke to referred to their engagement with gamelan music in such overt terms of political opposition (though Roth did jokingly describe it as a way to escape the ‘Stalinist’ atmosphere of university-based composition in the 1970s!¹⁶³); nor did Mendonça’s survey of reasons why people became attracted to gamelan uncover this kind of essentially negative, oppositional motivation (2002: Ch. 6). Although there may be plenty of gamelan players around the world for whom engagement with gamelan is also an expression of alterity, who would recognise it as betokening ‘difference and marginality’ and even perhaps a ‘statement of resistance’ against mainstream culture (I personally find these statements ring true for me), using gamelan consciously as a tool to negate or undermine an assumed European/Western heritage (or, as some put it, to fill the void of an absence of heritage [e.g. Corner 1986: 23; Drummond quoted in Mason 2014]) is probably a particularly North American thread in the narrative of international composition for gamelan.

Japan

Rather than the negation of Western identity, Pete Steele describes how in Japan, during the Second World War, Balinese music was co-opted into asserting a pan-Asian identity to support colonial imperialism, using hybridity to serve hegemonic ends ‘which bonded Japan to other Asian peoples while simultaneously subjugating them within a multicultural

¹⁶³ Unfortunately, this was at the pub, hence un-recorded.

hierarchy' (2013: 108) – in other words, using music to create a narrative of a unified Asian cultural sphere to legitimize Japanese imperial ambitions in the region. Although the colonialist aspects of this trope have faded, the more contemporary fusions he cites also bear traces of 'Bali's ... nostalgic resonances within Japanese popular culture' in which 'Balineseness evokes a sense of primordial Japan' (131) and the creation of an "Asian dreamworld" in the Japanese consumer imagination' (133). In terms of the ease with which gamelan has been adapted to local contexts, Steele takes the approach that 'While the Japanese ability to assimilate foreign cultural practices irrespective of origins has become a negative cultural stereotype, ... such decontextualization allows Japanese artists to imbue Balinese music with distinctly local relevances' (2013: 106).

This reading certainly resonated with my own experience in Japan, where those contemporaries who had an interest in Asian cultures were spurred on by a recognition of something familiar from Japan's own recently-lost, pre-industrial culture – in contrast to the trope often encountered amongst Europeans and Americans, especially in the mid-twentieth century, who approach Asia with reverence for spiritual and philosophical concepts which are seen as alien to, but deeper than, the materialistic pragmatism of Western culture (see, for example, the Ton de Leeuw quote above).

Australia

Aline Scott-Maxwell describes how Australia's proximity to Indonesia has led to strong cultural ties between the two countries, including a substantial Indonesian community. Although her paper offers several case studies of local creative engagement with gamelan, she observes that the participation of local Indonesian community members in many gamelan groups may have led to a greater focus upon traditional forms, compared to North America or the UK. She notes that Australian groups tend to

valorize traditional repertoire and practice, aiming to reproduce an 'authentic' product and audience experience, or at least a 'staged authenticity'.... Few groups experiment with the creation or performance of new, non-traditional style compositions.... I propose that it is partly the deep engagement that many Australian gamelan-players have with Indonesia, together with the participation of Indonesians in gamelan groups, that creates unease about using the instruments of gamelan music in non-traditional ways. To some extent, Australian gamelan groups see themselves as representing Indonesia to their audiences. (2013: 8)

Netherlands

Due to its colonial history, there is also a sizeable Indonesian community in the Netherlands, and it has similarly in the past been suggested that the Dutch gamelan scene is relatively conservative: McDermott recalls being told by a Dutch friend in the 1980s that ‘gamelans there are “more Catholic than the pope”’, although he notes the *karawitan*-focussed Gamelan Widosari run by Elsje Plantema had recently (in 1984) started including some new works by Harrison and de Leeuw (1986: 17). This viewpoint would be hotly contested by gamelan composers living in the Netherlands today: the country has a long history of new music for gamelan, and de Leeuw’s *Gending* was composed in 1975 (compared to Harrison’s first work for Javanese gamelan which dates from 1976¹⁶⁴ [Miller and Lieberman 1999: 174]). However, a significant number of those writing for gamelan in the Netherlands are of Indonesian descent (Sinta Wullur, Renadi Santos, Claudia Rumondor), or grew up in Indonesia (Roderik de Man) and/or have been involved in commissions for Ensemble Gending, which encourages composers with no experience of gamelan music to write for the ensemble. Generally speaking, on a brief field trip to the country I encountered far less of the informal, amateur, group-based composition for gamelan than in the UK. Composition was widespread but very professionalised, again largely due to the influence of Ensemble Gending which only commissions works from ‘card-carrying’ composers (although younger members of the group had recently formed a breakaway ensemble to explore a more improvisatory, collaborative approach [Michel Ponsioen interview transcript 2012: 5]).

With regards to the UK, Roth and Sorrell both suggest that the absence of a substantial Indonesian diasporic/immigrant community in the UK was influential on the way the scene developed:

Actually the very fact that gamelan was so completely alien was to its advantage over things like Indian music. Because, you know ... if you go into a school and do an Indian music class, where half the kids are Indian and half the kids are not suddenly you’ve got territorial issues. This is our music, this is not our music. The great thing about gamelan here is that it doesn’t belong to anybody – there’s no Javanese

¹⁶⁴ Harrison’s first work for American (homebuilt) gamelan was composed in 1971 (ibid.), though there is no indication de Leeuw would have been aware of his work.

community in this country at all. And that actually I think, psychologically and politically was a huge advantage. And they certainly find this when they go into prisons.¹⁶⁵ (Roth, interview transcript 2012: 28)

This has undoubtedly assisted the ease with which gamelan has spread through public life in the UK: Mendonça, for instance, cites it as one of many reasons for gamelan's inclusion in the first English National Curriculum for music, established in 1992 (2003: 288). It may also help explain why new music became such an important part of the British gamelan scene right from the outset: the absence of territorial issues meant there was no sense of its 'belonging' more to some within the group than others, making it easier to take ownership through creative engagement.

Sorrell ventures that another reason composition gained such rapid hold was that unlike America, there were no Javanese musicians teaching here in the initial stages. This, combined with sheer desperation to fill EGO's first concert, scheduled only two months after the group had convened, with something other than *lancarans* and a drawn-out *gendhing bonang* (see Chapter 1), led Sorrell to create the first British piece for gamelan:

I think it's the case that if there had been a Javanese expert around we would have deferred completely to him/her and focused on traditional stuff (as had been my experience in America). Composition started in EGO for our very first gig (1980) when I noticed we were rather short of material and hastily composed *Gendhing Campur*,¹⁶⁶ to serve as a kind of 'Young Person's Guide to the Gamelan'.... I don't mind admitting that I would have felt nervous doing any of what we did if a Javanese expert was observing us. Sri Hastanto was in the UK doing his PhD at Durham ... so when he came along of course we went with his teaching but also continued our composition work, which by then was fairly well established. (Email to author, 24 January 2014)

It should be emphasised that whilst people might potentially feel more self-conscious about starting to write for gamelan in the proximity of a respected expert (see also Becker 1983: 86), there is no suggestion that Javanese teachers themselves would have discouraged composition, although their presence would have facilitated a steeper learning curve when

¹⁶⁵ Roth is here referring to Good Vibrations, which runs gamelan workshops in prisons (not the incarceration of gamelan players!).

¹⁶⁶ *Gendhing* 'Mixture'.

it came to traditional music, possibly removing the pressure to balance programming with new works. As Joe Field (quoted above) and Mark Lockett (below) note, Indonesian artists who later taught EGO were enthusiastic supporters:

House: Do you think the fact that there were fewer Indonesian teachers and musicians working in the UK than the US meant it was easier to compose here, that there was less baggage attached?

Lockett: Strangely, I never felt there was any ‘baggage attached’ when working with Indonesian musicians. Because I think from the very first, when we had Supanggah and Sri Hastanto working with the EGO, they always struck me as being extremely open-minded, receptive people, and they – as far as I remember – they never really imposed their point of view in the way they taught: they would offer advice but they wouldn’t say no, you don’t do it like that, you do it like this. They were very, very good teachers, actually. (Interview transcript 2012: 4)

Similarly, as mentioned above, Harrison’s initial impetus to compose for gamelan came from an invitation by Pak Cokro, whilst, as Sorrell recalls, at Wesleyan, Javanese teaching assistant Sitalakshmi’s enthusiasm in helping create a tongue-in-cheek gamelan arrangement ‘the famous tune’ in Beethoven’s Ninth Symphony (interview transcript 2011: 4). So although some informants speculate that the presence of Indonesian teachers or group members might have inadvertently created psychological barriers to composing in the early stages of international gamelan scenes, I have encountered no accounts that suggest Indonesian teachers being anything other than very encouraging of local composition.

One of the reasons I hesitate to assign any distinctive features of the gamelan scene in the UK to some kind of innate ‘Britishness’ is the significant influence of key individuals – many of them not British – upon its development. For example, Lockett cites Supanggah and Sri Hastanto as very supportive of local new music endeavours, and they had both come through the system at ASKI Solo when it was directed by S.D. Humardani, who was committed to encouraging new composition for gamelan as a means to state its relevance to modernity (Humardani 1981: 243; also Benamou 2010:11-2, Roth 1986: 60-1). Whilst Humardani was supportive of new music internationally, his encouragement was a by-product of an ethos rooted the project of modern Indonesian nation-building through the creation of academies of the arts (Sumarsam 1995: 127-9) that drew (in something of a feedback loop) upon Euro-American models. Roth cites Humardani, along with Sorrell, as

a major influence on his advocacy of new music, which he put into practice as both teacher and in setting up the Southbank Gamelan programme (interview transcript 2012: 16).

To introduce another level of random chance to the situation, the UK's strong historical association with ASKI Solo (at the expense, it might be said, of links to Jogya) might not have occurred were it not for the chance meeting between Humardani and Eric Taylor of Durham University in a hotel in Indonesia, shortly after the more conservative Joganese *kraton* group pulled out of the Durham Oriental Music Festival because they did not want to play on a Solonese gamelan (Chapter 1). Whilst I am not seriously suggesting that a particular attitude towards composition became embedded in British gamelan from the outset because of a decision by the Indonesian Embassy in London to acquire a Solonese rather than a Joganese gamelan back in 1977, this narrative of happenstance serves to emphasise the catalytic effect of specific individuals.

Similarly, Neil Sorrell's enthusiasm for new composition, based upon a strong feeling 'that gamelan should take on a local identity' (email to author 24 January 2014) had a profound effect. Many British gamelan players – especially amongst the first generation – learned gamelan with Sorrell at the University of York, where the music department's reputation for composition and novel approach to course structure provided both a steady stream of young composers and an open-minded attitude towards the creation of new gamelan music.

.....

So, finally, to return to the question of what is British about the British gamelan scene. A glance at gamelan scenes elsewhere in the world shows that despite different rates of uptake, local creative engagement has proven something of an inevitability. The presence or absence of a sizeable Indonesian community may have an effect on how rapidly a culture of new music was established, but this is also more of a circumstantial than existential difference. If Britain had longstanding colonial ties with Indonesia (instead of, say, India) things would probably look different. Had British institutions expended the money that US colleges invested in bringing over Indonesian teachers, it might have been different. If the first performing gamelan group had been based in a university focused upon educational bi-musicality, rather than a gigging ensemble (EGO) packed with composers, it might have been different. If the UK's main association was with Jogya rather than Solo, it might have been different. If gamelan in the UK had gotten going in the 1950s, when a more reified concept of 'tradition' dominated, it would certainly have been different.

In the dialogue with the Arts Council and the ICA quoted above, Mendonça notes the feedback between supercultural attitudes and EGO's in regarding new music as validating British gamelan. It could be pointed out that the key advocates for new music (Roth, Sorrell, Lockett et al) were part of the same culture that spawned the funding criteria of these bodies, and it is therefore unsurprising that there was a shared understanding of what would give the group legitimacy. On closer inspection, however, that shared cultural understanding is not particularly different from that in the Netherlands or North America or Australia: in all these countries there have been passionate advocates for new music, but also those who argue that it is less important than developing skills in traditional gamelan forms.

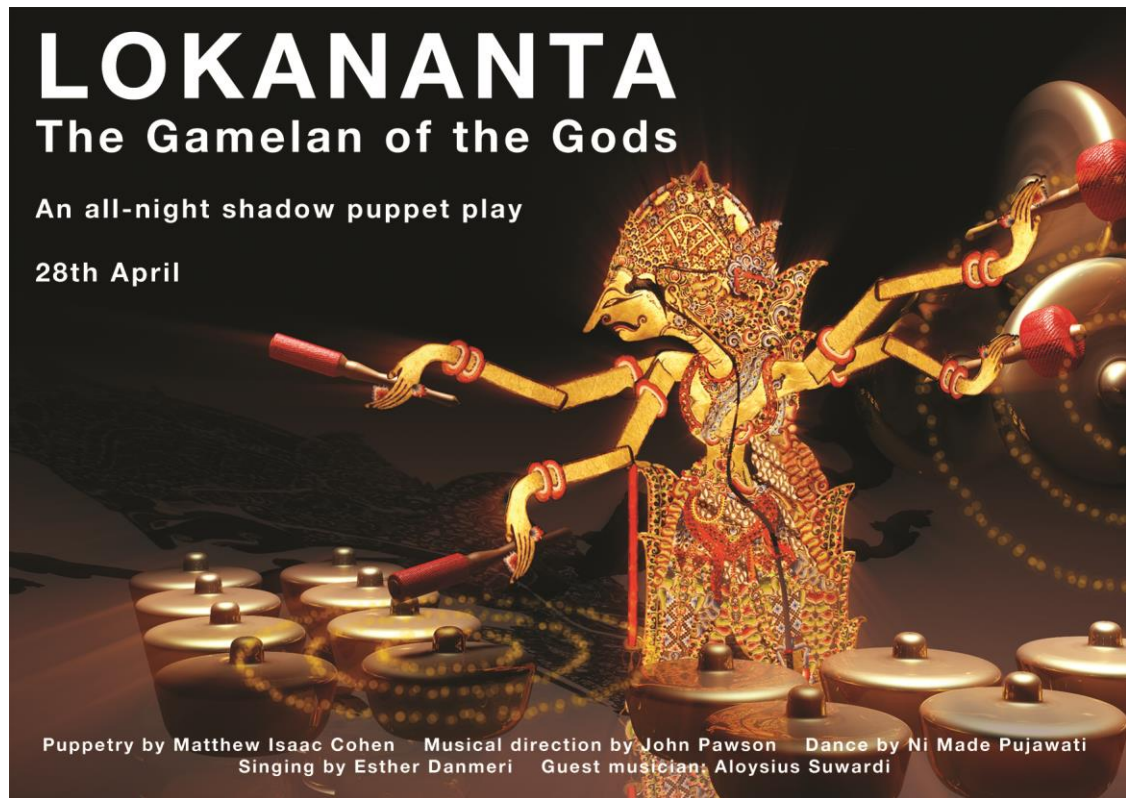
Pete Steele (2013) neatly avoids a deterministic approach to characterising local gamelan scenes through the music they produce by instead focusing on shared and rejected dreams and imaginings: of Balineseness, of Asianness, of liberal multiculturalism, of primitivism and nature, of steam-punkish fantasies of pre-industrialised utopian futures. Whilst acknowledging local conditions and histories, the identities he writes of are based in landscapes of the mind, functions of the collective consciousness born of real places and eras but not bound by them. Given that cultural identity itself is nothing more than a construct of the mind, a collective dream, this imaginary landscape provides a very real space in which to examine narratives of identity

Rather than struggle any further to distinguish a more mundane British identity from the tangle of circumstances and individuals that have come to characterise its gamelan scene, I follow Steele's lead and offer instead one final, very personal, case study: an imagined mythology created to represent of the origin of gamelan and how it came to be an expression of Britishness.

Case Study N

Lokananta, the Gamelan of the Gods

Figure N.1: Leaflet for *Wayang Lokananta*¹⁶⁷



In 2012, prompted by a nudge from the director of the Oxford Gamelan and former York student, Pete Smith, who observed some anniversaries approaching – 30 years of Gamelan Sekar Petak and nearly 40 years of Neil Sorrell in the department – we decided to hold The Gathering of the Gamelans, a four-day conference, inspired in part Sumarsam’s account of how during the reign of Paku Buwana X, *dhalangs* would gather annually at court to discuss and analyse stories (1992: 52). The intention of our event was to draw the whole UK gamelan community to York for four days of workshops, seminars and performances, exploring Javanese gamelan teaching, performance and composition.

As if this was not enough to keep us busy, we decided to commission an all-night *wayang* in the middle of the conference – and in case that was too simple, it was decided to involve as many gamelan groups from across the country as possible in the performance. The result was *Lokananta: The Gamelan of the Gods*. We invited Isaac Matthew Cohen, a professor at Royal Holloway University of London, to be our *dhalang*, and he requested

¹⁶⁷ Design by Chris Walker, Bright White.

John Pawson as musical director (a title Pawson was later to eschew, with typical humility, in favour of ‘musical coordinator’). Cohen floated the idea of using the myths surrounding Lokananta, the first gamelan created by the gods: a resonant story with which to celebrate the arrival of Sekar Petak in Britain. Derived from a number of nineteenth century, mostly Solonese manuscripts, the source material for Lokananta was rather lacking in strong dramatic elements, so Cohen interwove other Indonesian legends involving sound, noise and music, taking inspiration from the *banjaran* theatrical structure developed by Indonesian dhalang Ki Nartosabdho (1925-1985) to tell the story of a single character (in this case not a person, but a musical genre) based on a variety of myths (Cohen, interview transcript 2012: 1).

The *lakon* tells of a devastating war being fought in heaven between the gods. Their magical weapons make an appalling racket as they clash together, prompting the god Shiva (Batara Guru) to suggest that it might be nice to have some tuned weapons which sound more pleasing to the ear. This eventually leads to the creation of Lokananta, a magical gamelan which plays itself without musicians. The knowledge of music is spread to the humans on earth, even reaching distant foreign shores, where – true to the tradition of incorporating contemporary references into wayang – characters such as Lou Harrison, Icelandic singer-songwriter Björk, and of course York’s own motorbike-riding Neil Sorrell become enamoured of it and embark upon various gamelan-related adventures in The Tardis.¹⁶⁸

Given the subject matter, this was to be a performance in which music would be foregrounded to a much greater extent than in traditional *wayang*. Pawson (himself a York alumnus) felt the performance should be made as inclusive as possible, involving gamelan groups from across England, Scotland and Wales, forged together into regional ‘collectives’ which would take on different sections of the wayang. The resulting spectacle involved over 170 musicians from fifteen different groups, each with their own unique style and approach to gamelan performance: from the highly-developed *karawitan* skills of the Southbank Gamelan Players to the wild bagpipe-fusions of Glasgow’s Gamelan Naga Mas, all brought together under a single musical vision.

The *wayang* featured a dizzying variety of musical material, exemplifying the different personalities of the groups. This included a *talu* (overture) of Javanese pieces from Midwest England, exuberant bagpipe and flugelhorn improvisations (*Iron Pipes* by Mags

¹⁶⁸ A police box-shaped time machine from the longstanding BBC series Doctor Who.

Smith and Barnaby Brown and *Gamelunk* by Simon J. van der Walt) from Scotland to accompany the clowns; a fifteen-part choral work performed in the round by singers from York hidden in the audience (*Thirty-gatra Gendhing* by Neil Sorrell [choir] and John Jacobs [gamelan]) marking the creation of a magical gong; a *kroncong* arrangement of *Langgam Ngimpi* for string octet (arr. Pete Smith) which I was delighted to play violin in; and a 2 a.m. punk-rave version of Andy Channing's *Pig in the Kraton* complete with Chinese shawm, loud-hailer, and sunglasses, which happened to perfectly fit a moment in the *lakon* where a courtly discussion is interrupted by a rampaging wild boar. The magical performance of Lokananta without musicians was created electronically by Charles Matthews, in consultation with Pawson. Underlying this diversity of hybrid compositions, Pawson built a hidden musical narrative to support Cohen's story, introducing historical forms as they developed according to Java myth and history, from the sound of a single gong, through the two-note *kodhok ngorek*, the three-note *monggang*, the four-note *carabalen*, up to the five notes used in more recent *karawitan* forms (Pawson 2012). This gradual development reached a dramatic climax in a profound moment of unification, when the divine battles resolved peacefully and the song *ketawang Subakastawa* emerged in the uplifting *laras pelog pathet nyamat*, sung by every musician in the room, joining in from wherever we were scattered.

Unusually for *wayang kulit*, the drama also involved dance, performed by Ni Madé Pujawati, allowing the narrative to escape from the screen and enter into the real world, whilst an electroacoustic response to the event was provided by the sound installation in the foyer described in Chapter 5.

Though our approach to the performance was far from traditional, one of our key aims as hosts was to recreate, as best we could, the atmosphere of *wayang* events in Java. To achieve this, we eschewed the easy option of using the Music Department concert hall which, as past experience told us, would probably have had the audience stuck in their fixed seats, politely observing the action in near silence, despite all exhortations to do otherwise. Instead, the event was held in a large dining hall, with the screen in the centre and cushions, chairs and tables scattered on both sides, encouraging the audience to move around and experience the performance from the puppeteer/gamelan side of the screen as well as the shadow-side.

Figure N.2: *Wayang Lokananta*, view from the puppeteer's side of the screen



University caterers took on the challenge of providing Indonesian food, but unlike Java, there was a bar providing alcoholic refreshment – something that my fellow-organisers insisted was an essential element of a viable British-Indonesian hybrid. Unfortunately, as a result the local council ruled that under-16s could not remain past 9pm, for which we came under some attack on the international gamelan listserv, though it was notable that whilst some armchair commentators from the other side of the Atlantic thought we should do away with the alcohol, British parents repeatedly assured me they would prefer to have a drink out with the family and take their children home earlier.

Lokananta marked something of a watershed moment for the British gamelan scene. It was the first full-scale, all-night wayang performed in the UK with not only British musicians, but with a non-Indonesian *dhalang*, performing a specially commissioned *lakon*. It was the first ever performance (perhaps in any country) to involve such a wide swathe of the gamelan community. Given this, the level of proficiency, in terms of not just new composition but classical repertoire, was of a very high standard; professional players with many years experience studying and performing in Indonesia joined in with amateur groups throughout to achieve the level of richness in texture and inflection that typifies Javanese music at its best. As Pawson put it, ‘It [was] incredibly vibrant and the amount of

diversity [was] just amazing. . . . It was a really positive, strong statement of where we've got in thirty years' (Interview transcript, 2012: 7).

Conclusions

Wayang Lokananta's artistic strength rested upon two important strands which can be seen as the resolution of the debate over the direction of EGO's development: whether it is more important to study intensively in Java and achieve the highest possible level of proficiency in *karawitan* (and related forms) or whether the focus should be on new music, to make gamelan relevant to its new home. *Lokananta* showed that these aims are inextricable: the ever-growing level of gamelan skills in the country – supported by dozens of players who have dedicated their adult lives as professional musicians to learning *karawitan* – provides fertile soil and nutrients for the growth of high quality local composition.

I was personally struck, returning to York in 2009 to undertake this doctorate, how far the group had developed since I was an undergraduate (1997-2000),¹⁶⁹ through the long-term participation of students who had stayed in York and the presence of *darmasiswa* scholars who had spent extended periods of study in Java and were teaching advanced techniques and tackling more complex *gendhing*. This has had a marked effect upon new composition, providing a strong skills base for collaborative creativity and enabling the creation of complex, *karawitan*-influenced works and other improvisatory forms, as well as supporting student composers in creating ambitious, large-scale projects accompanying *wayang* and plays.

Previous chapters explored the many manifestations of hybridity in gamelan compositions written in Britain. Chapter 2 explored how structural code mixing can be seen as part of a 'normalisation process' (Lightman, upcoming PhD diss.) of taking possession, demystifying and de-exoticising the gamelan. For audiences, it can provide toe-holds, recognisable markers from which unfamiliar music can be approached. For composers, code mixing can offer a pathway to a deeper understanding of Javanese music, making it possible to move beyond Orientalist 'borrowings' of superficial impressions towards knowledgeable engagement with a music that ceases to be the culture of the 'other', becoming integrated into the composer's own musical life.

¹⁶⁹ Admittedly, was something of a low point for the group, which had lost a number of longer-term, experienced in the preceding few years, leading to a drop in the complexity and ambition of works performed from 1995 onwards, as can be heard in the group's annual concerts.

Chapter 3 explored how practices associated with Javanese gamelan offer alternative methods of generating music. For those interested in devolving creative input to musicians, a *karawitan*-inspired open-ended approach can provide a framework for highly detailed, large-scale forms which retain all the advantages of collaborative processes – spontaneity, variability, sociability, and the combination of expertise – without compromising on the quality of musical outcomes. Chapter 4 examined how non-prescriptive scores can form a point of negotiation between composers and musicians over the boundaries of creative roles, the gaps in the information they provide representing a space for creative engagement with musical ideas. Such working methods usually demand the presence of the composer in rehearsals, which is both an advantage in terms of allowing richer engagement between participants than is usually common in Western art music, but also making it difficult for such pieces to escape their original performance context. Chapter 5 analysed how mixing instruments forces composers to tackle points of philosophical disjunct between musical systems as embodied in the physical properties of instruments, through resolving differences, disguising them, highlighting them, or building something new from all available components.

One common thread which has run through all of the music explored in this thesis is that of ensemble: of the interaction between musicians, and of how gamelan offers ways of collaborating and communicating that are not traditionally used in Western art music, yet distinct from those found in rock, jazz or folk. For many players, this sense of ensemble is one of the main appeals of playing *karawitan*, as evidenced by resistance in some quarters to playing from prescriptive notation (Chapter 4), or to a click track (Chapter 5).¹⁷⁰

In a report on the 1997 Yogyakarta Gamelan Festival, which featured compositions from across the Indonesian archipelago as well as the United States, the Netherlands, France, Australia and Singapore, Diamond quotes the festival's director, Sapto Raharjo, as saying

“Gamelan is a spirit, not an object,” For Sapto..., gamelan is not just a set of instruments, but a musical world that encompasses tools, musical structures, social processes and spiritual sensibilities.... a conceptual domain in which we can create the future by building on the

¹⁷⁰ It also emerges in Pete Steele's thesis where he relates that Taylor Kuffner's *Gamelanatron* ensemble involving a gamelan played by automated robotic arms was “given the cold shoulder” by a number of American gamelan groups', whilst *Gamelan Elek Trika* which involves a group of humans improvising on gamelan-shaped but completely synthetic instruments was readily accepted (2013:98).

past, honoring the origins of gamelan while we expand its horizons.

(Diamond 1997, online)

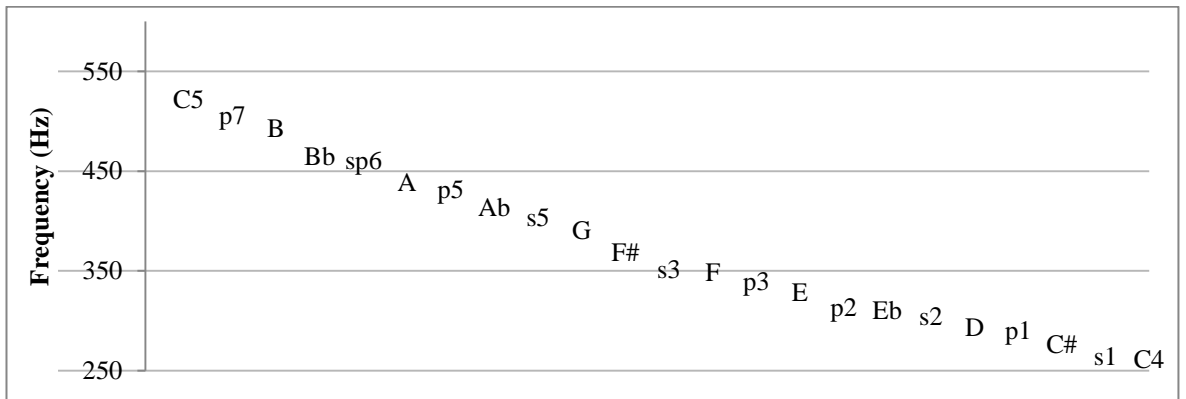
This powerful statement of gamelan as a shared, imagined culture encapsulates the reason for its international reach, the appeal that stretches across physical and arbitrary boundaries of nation and culture. The exotic visual and timbral impact of the gamelan may have drawn many musicians outside Indonesia to engage with its music, but it is gamelan as a 'conceptual domain' which has allowed it to contribute so much to the richly varied landscape of sounds and ideas which characterise the playground of twenty-first century music-making in which concepts of 'their music' and 'our music' have been replaced by simply music.

The seed that was planted over three decades ago has grown: in just over thirty years, the UK has built a gamelan tradition from scratch, going from a 'bunch of Westerners' playing *lancaran*, and blooming into community that spans the country, involving hundreds of participants performing *karawitan* and creating new music in ways that express deep engagement with an ensemble not belonging to a distant, untouchable other, but to the here and the now.

Appendix 1 – Gamelan Sekar Petak pitch analysis

s3H	702
F	698
p3H	687
E	659
p2H	629
Eb	622
s2H	611
D	587
p1H	581
C#	554
s1H	531
C5	523
p7	507
B	494
Bb	466
sp6	462
A	440
p5	433
Ab	415
s5	405
G	392
F#	370
s3	353
F	350
p3	341
E	330
p2	314
Eb	311
s2	305
D	294
p1	291
C#	277
s1	265
C4	262
p7L	253
B	247
Bb	233
sp6L	231
F3	175

Graphic representation of Sekar Petak's *slendro*, *pelog* and equal temperament



Appendix 2 – Recordings

Case Study A

R-A.1: Alec Roth, *Full Fathom Five*. Gamelan Madu Sari, Vancouver, 1989. [Personal Archive 0071]

Case Study B

R-B.1: Neil Sorrell, *Missa Gongso*. Gamelan Sekar Petak and The 24, Sir Jack Lyons Concert Hall, York, 11 May 2011. [Personal archive 0140j]

Case Study C

R-C.1: Daniel March, *Pieces of Five and Three, tumbuk 6*. Gamelan Sekar Petak, Sir Jack Lyons Concert Hall, York, 7 June 2002. [Personal archive 0020f]

R-C.2: Daniel March, *Pieces of Five and Three, tumbuk 5*. Royal College of Music Gamelan, Spitalfields Festival, Spitalfields, London. [Personal archive 0067]

Case Study D:

R-D.1: Clive Wilkinson, *English Garden*. With Joe Browning (shakuhachi), students from The Northern School of Contemporary Dance, and Gamelan Sekar Petak; Sir Jack Lyons Concert Hall, York, 27 May 2009. [Personal archive 0028h]

Case Study E

R-E.1: Barnaby Brown, Mags Smith and Naga Mas, *Iron Pipes*. Rutherglen Town Hall, 29 September 2009. [Personal archive 0144b]

Case Study F

R-F.1: John Jacobs, *Fair Roses*. Gamelan Sekar Petak, Sir Jack Lyons Concert Hall, York. 26 May 2010. [Personal archive 0029e]

Case Study G

R-G.1: Andy Channing, *Pig in the Kraton*, AlphaBeta gamelan CD. [Personal archive 0063i]

Case Study H

R-H.1: Ginevra House, *Waterlily*. Gamelan Sekar Petak, Sir Jack Lyons Concert Hall, York, 23 May 2012. [Personal archive 0068h]

Chapter 5

R-5.1: Robert Champion, *Overy Dunes*. 2007 [Personal archive 0083]

R-5.2: Clive Wilkinson, *Fullstop*. Gamelan Sekar Petak, Sir Jack Lyons Concert Hall, York, 13 June 1990. [Personal archive 0008b]

R-5.3: Simon J. van der Walt, *Gamelunk* [Personal archive 0106]

R-5.4: Robert Champion, *Miniature*. 2008. [Personal archive 0086]

R-5.5: Anthony Clare, Ngèsti. Gamelan Sekar Petak, Sir Jack Lyons Concert Hall, York, 4 June 1986. [Personal archive 0004d]

R-5.6, a to j: Sinta Wullur, *Ten Bulls*. [Personal archive 0096a to j]

Case Study I

- R-I.1: Lou Harrison, *Concerto for Piano and Javanese Gamelan*. Performed by Belle Bulwinkle (piano) and Gamelan Si Betty. [Personal archive 0035f]
- R-I.2: Lou Harrison, *Concerto for Piano and Javanese Gamelan*. Performed by Nicky Losseff and Gamelan Sekar Petak, 15 May 1998. [Personal Archive 0016e]
- R-I.3: Clive Wilkinson ... a long way of seeing.... Gamelan Sekar Petak, Sir Jack Lyons Concert Hall, York, 25 May 2011. [Personal archive 0140d]
- R-I.4a-c: Neil Sorrell, *Concerto for Prepared Piano*. Gamelan Sekar Petak, Sir Jack Lyons Concert Hall, York, 4 July 2001. [Personal archive 0032t-v]

Case Study J

- R-J.1: Robert Campion, *My Mother's House*. [Personal archive 0084]

Case Study K

- R-K.1: Symon Clarke, *Three Exits*. Rymer Auditorium, Gathering of the Gamelans Conference, University of York, 27 April 2012. [Personal archive 0049d]

Case Study L

- R-L.1: Nye Parry, *Fuzzy Logic*. LSO Community Gamelan, LSO St Luke's, London, 2005. [Personal archive 0065]

Case Study M

- R-M.1a and b: Charles Matthews, *Augmented Gamelan* concert. Union Chapel, London, 30 June 2012. [Personal archive 0079]

Appendix 3 – Scores

S-A.1: Roth, *Full Fathom Five*

S-B.1a: Sorrell, *Missa Gongso*, 'Kyrie' (gamelan)

S-B.1b: Sorrell, *Missa Gongso*, 'Kyrie' (choir)

S-C.1: March, *Pieces of Five and Three* (tumbuk 6)

S-D.1: Wilkinson, *English Garden*

S-E.1: Smith, Brown et al, *Iron Pipes* (annotated)

S-F.1: Jacobs, *Fair Roses*

S-H.1: House, *Waterlily*

S-I.1: Harrison, *Concerto for Piano and Javanese Gamelan* (1st mvt)

S-I.2: Wilkinson, ... *a long way of seeing...* (piano)

S-I.3: Sorrell, *Concerto for Prepared Piano* (1st mvt)

S-J.1: Champion, *My Mother's House*

S-K.1: Clarke, *Three Exits*

Glossary

alus	Refined
angklung	Balinese bamboo gamelan
angklung kocok	Balinese bamboo shakers
balungan	Skeleton melody - also used to refer to the instruments that play this melody
banjaran	Theatrical structure developed by Ki Nartosabdho, in which the story of a single character is told based on a number of separate myths
barang	A pathet
bawa	Vocal buka (introduction before the first gong)
bedyaha	A refined and sacred courtly dance
bentuk	A set form, type of piece
bilah/ wilah	Bar-shaped bronze keys
bonang	Melodic instruments: play elaboration of balungan melody
bonang panerus	Small bonang
buka	Introductory passage leading up to the first gong
carabalen	A historical 4-note gamelan form
Carnatic music	Classical music of South India
celempung	Zither
cengkok	A melodic 'unit' played on some soft instruments which lands on a cadential note such as <i>seleh</i>
ciblon	Drum which plays elaborate rhythms
dados	Medium <i>irama</i>
degung	Sundanese gamelan
demung	Balungan instrument
dhalang	Puppeteer
gadhon	Soft (gadhon instruments include <i>gender</i> , <i>gambang</i> , <i>rebab</i>). Also used to describe an ensemble of soft instruments.
gamakas	Melismatic figurations in Carnatic music
gambang	Wooden instrument similar to xylophone
gambang gangsa	Undamped tuned metallophone
gambangan	Gambang <i>garap</i>
gamelan gedhe	Full gamelan
garap	The idiosyncratic realisation of a core melodic idea by particular instrument, may sometimes be used in English as a verb - 'to garap one's part'
garapan	Specific <i>garap</i> for a piece
gatra	Unit of music similar to a bar, but with the strong note on the last beat. Usually four beats long
gaya	Local style, e.g. <i>Gaga Solo</i> , <i>gaya Jogya</i>
gender	Struck tuned metallophone played with two soft beaters
genderan	Melodic phrases played by the <i>gender</i> the manner in which the <i>gender</i> 'garaps' its part in <i>karawitan</i>
gendhing	A piece of music, large scale classical form, instrumental music in general
gerongan	Vocal chorus, usually all-male in traditional music
gong ageng	Big gong

gong kebyar	Balinese gamelan which plays loud, rhythmically complicated music. Relatively recent (early twentieth century)
gongan	A gong cycle; the music between one gong (ageng) and the next
imbal	Pattern of rapid interlocking notes split between two musicians
inggah	Main section of a large <i>gendhing</i> , often in <i>irama wilet</i> or <i>rangkep</i>
<i>irama</i>	Concept related to tempo, or timescale
<i>karawitan</i>	Classical Javanese music
kemanak	Hand-held gongs, shaped like bananas, traditionally associated with ancient ritual music
kempul	Tuned hanging gongs
kendhang	Drum
kenong	Colotomic instruments: large knobbed gongs resting on strings
kepatihan	A notation system commonly used for gamelan
ketawang	A musical form
kethuk	Colotomic instruments: small, indeterminately tuned knobbed gongs on strings
kodhok ngorek	Literally "croaking frog," this is a ceremonial form involving a two-note ostinato (656. 6565) played on weddings, birthdays and circumcisions at the kraton
kotekan	Interlocking patterns, usually of 2, 3 or 4 notes (Balinese)
kotekan embat	A four-note kotekan
kraton	Palace, court
kroncong	An Indonesian-Portuguese hybrid folk music dating from the sixteenth century
ladrang	A musical form
lakon	Narrative/ storyline of a wayang
lancar	Very fast <i>irama</i>
lancaran	A musical form
laras	Tuning, note set (slendro or pelog)
lima	A pathet
merong	Often the first main section of a large <i>gendhing</i>
mipil/ mipilan	A bonang figuration
miring	Tones outside the <i>embat</i> of the gamelan, sung or played by non-fixed pitch instruments
monggang	A historical 3-note gamelan form
nem (pathet)	A pathet
nyamat	A pelog pathet, also known as manyura
panerus	Small (e.g. Bonang panerus = small bonang)
panerusan	Collective noun referring to the soft (gadhon) instruments
pathet	Hierarchical structure of notes, similar (but not identical) in concept to mode
pathetan	1. An instrumental passage, often played as prelude or postlude to a <i>gendhing</i> . 2. A song sung by the dhalang in wayang performances.
peking	Small, high-pitched <i>saron</i>
pelog	Seven-note tuning
pendhapa	Open-sided venue used for performing gamelan in Javanese kraton (courts)
pencon	Struck metallophones shaped like knobbed gongs

pleng	Gamelan tuned without stretched octaves
rangkep	The slowest <i>irama</i>
rebab	Bowed string instrument
rebanan	Melodic phrases played by the rebab/ the manner in which the rebab 'garaps' its part
sampak	A musical form used in wayang
saron	Metal keyed balungan instrument
saron sanga	A saron with two extra notes at the top of its range, used to accompany wayang
seleh	Final, strong note, usually fourth in a gatra of four notes
shakuhachi	Japanese vertical bamboo flute
sindhenan	Melodic phrases sung by the pesindhen
siter	Plucked zither
slendro	Five-note tuning
slenthem	Low-pitched balungan instrument
soran	Loud (e.g. Instrument, ensemble)
suling	Bamboo flute
sulingan	Melodic phrases played by the suling
suwukan	Large gong, between <i>kempul</i> and <i>gong ageng</i>
tanggung	Fast <i>irama</i>
tradisi	Indonesian word for tradition
tumbuk	A note which matches in both laras (tunings), e.g. Gamelan Sekar Petak is tumbuk 6: pelog and slendro 6 are the same pitch
tumbuk lima	A gamelan in which the note 5 (lima) is the same in slendro and pelog
tumbuk nem	A gamelan in which the note 6 (nem) is the same in slendro and pelog
umpak	A 'bridge' section in a large <i>gendhing</i> or the first section of a <i>ladrang</i>
wangsalan	Javanese text which offer moral instruction, often obscured with word play
wayang	A theatrical drama
wayang kulit	Shadow puppet play
wilah	See bilah
wilet	Slow <i>irama</i>

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