This paper arose out of the writing of two much longer and more general pieces of work: monographs on the music of Australian composer Don Banks (our leading modernist, in my opinion), and on that of the Hungarian/British composer Matyas Seiber. The conjunction of the two composers arises from two facts: firstly, that Seiber and Banks enjoyed a decade-long close personal friendship, which began when Banks left his native Australia to study with Seiber in London in 1950, and ended only with Seiber’s tragic early death in 1960, and secondly that the particular works of theirs I want to discuss here have a distinctive common feature: both were composed for jazz band or ‘combo’ and ‘classical’ symphony orchestra or chamber ensemble.

The genre in which aspects of jazz practice and classical practice interpenetrate is sometimes called ‘third-stream music’. The term derives from a landmark lecture given by American composer Gunther Schuller at Brandeis University in 1957 (cf Shoemaker 2001), but of course examples of the genre had started to emerge quite a while before that: for example the Concerto for Jazz Band and Orchestra, written for the 1954 Donaueschingen Festival in Germany by Rolf Liebermann (1910 – 1999), who, however, subsequently relegated his career as a composer to a secondary place in his life, when he became one of the leading musical administrators in Europe, eventually being responsible for, amongst many other things, the public presentations of the three-act version of Alban Berg’s Lulu and of Messiaen’s The Transfiguration of St Francis.

The third-stream idiom had something of a heyday in the period when Banks was most active (1950-1975), and he wrote several ‘third-stream’ compositions, as well as a substantial journal article on the topic (cf Banks 1971). ‘Classical’ musicians, in Europe especially, have tended to assume that the genre has rather petered out, but in fact, Schuller has recently drawn attention to evidence of its continuing, vigorous and varied life, albeit basically (as indeed one might expect) in America (cf Schuller 2000). Nevertheless, the abundance of such developments in very recent times amounts to a phenomenon one might justifiably call a revival, though recent examples incorporate some distinctive new elements, especially those drawn from what, at the turn of the 20th/21st centuries, has come to be called ‘World Music’ (cf Blumenthal 2001).

Compositions in which two radically different instrumental groupings are set in counterpoint with one another are not per se unusual in the standard European canon. Indeed, with some genres (for example the baroque concerto grosso) the interplay of unlike forces is the characteristic feature. What distinguishes the combination of jazz band and orchestra from such examples is that (to call on an illustrative metaphor) the two partners seem to bring to the marriage two quite different sets of personalities, behavioural tendencies and family histories. The assumption behind the metaphor is that one might find it useful to speak of musical institutions such as the jazz band or the orchestra in terms of qualities one might ordinarily ascribe to people, and that these very general features (a rich mixture of biography, sociology and history), taken together, constitute something which we may wish to designate as the musical ‘identity’ of those institutions. Without doubt, describing ‘identity characteristics’ is an enterprise fraught with many opportunities for distortion (for example type-casting and ‘racial’ prejudice), with music as with human beings, and one might wonder therefore why musicology would find it worthwhile to dabble in descriptions which may seem so speculative. The reason would seem to be that more established approaches (such as analysis of sonic elements), while on safer epistemological ground, have perhaps a tendency to marginalise cultural contexts which disinterested listeners experience as being one of the music’s most striking characteristics, so despite the problems, the ‘identity metaphor’ seems worth pursuing.

Embodiment of the third-stream concept in the juxtaposition of two such contrasting instrumental forces is, of
course, not the only way of dealing with the interpenetration of jazz and classical practices, and other Banks third-stream works, such as his *Settings from Roget*, composed for vocalist Cleo Lane and the Dankworth Quintet, handle the idea in other ways. Such juxtaposition is, however, a particularly graphic way of drawing attention to the hybrid nature of the genre. Nevertheless, Banks and Seiber handle this combative potential quite differently, as we shall see.

**A ‘Mixed’ Marriage**

Jazz ensemble and orchestra do indeed seem to carry with them markedly different cultural baggage, emerging as they did in different centuries and from backgrounds of different race and class, and the idea of a marriage of the two within a single work seems to call up some kind of comparison with a marriage between partners of mixed race, class or age. Stravinsky expressed a widely-held viewpoint when he averred that jazz was ‘a different fraternity altogether, a wholly different kind of music making’ (cf Stravinsky and Craft 1959).

Despite this attitude, there was, from the fifties, around the time at which Seiber and Banks composed their third-stream works, something of a vogue for the attempt to integrate the activities of these different fraternities in various ways. Gunther Schuller’s lecture, mentioned above, in which he proposed the term ‘third-stream’, was part of the Fourth Festival of the Creative Arts at Brandeis University in Massachusetts in 1957, in which six specially-commissioned pieces of this type were premiered: Jimmy Guiffre’s *Suspensions*, Charles Mingus’s *Revelations*, George Russell’s *All About Rosie*, Harold Shapiro’s *On Green Mountain*, Gunther Schuller’s *Transformations* and Milton Babbitt’s *All Set*. Despite the European example of Liebermann’s *Concerto*, mentioned above, the works which Seiber and Banks wrote in the ‘third-stream’ idiom were undoubtedly more influenced by *All Set*, since both composers knew Babbitt personally and indeed Banks had studied with Babbitt on a summer course in Salzburg in 1952.

The first of the two works on which I want to offer detailed comment in this article proclaims its mixed origins on the score’s very title page: *Improvisations for Jazz Band and Symphony Orchestra* is described there as being by two different composers: Matyas Seiber and John Dankworth. This work was premiered in London in 1959 by the London Philharmonic Orchestra and the Dankworth Band, conducted by William Steinberg. Despite the attribution to two composers, however, the counter-alphabetical listing on the title-page and the fact that the original manuscript in the British Library is entirely in Seiber’s handwriting, do tend to suggest that Seiber’s was the principal contribution, at least as far as authorship of the score (as opposed to the performance) is concerned. Nevertheless, jazz journalist Max Harrison (also a one-time student of Seiber) indicates particular passages which were written by one or other composer (cf Harrison 1976, 176 – 177). Harrison’s article, originally published in *Jazz Monthly* in July 1959, gives the impression, without quite saying so, that this information is based on what Seiber and Dankworth told him. The gist of what Harrison says is that Seiber determined the overall structure, much of the intermediate-scale architecture and certain features of harmony, orchestration and thematic development, but that certain of the most immediately striking features were contributed by Dankworth. These Dankworth contributions included, in particular, the opening 4-bar motif, the tonal reharmonisation of the main theme for its ‘Big Band version’ (bars 35 ff), the central ‘twelve-bar blues’ theme (bars 202 ff), and the cadenza-like passage for band towards the end (bars 252 ff). However, it seems that Seiber also elaborated Dankworth’s ideas in a few places, with interpolated or accompanimental material (such as in the aforementioned ‘Big Band treatment’ of the main theme, bars 35 ff), in the interests of better integration of the totality.

In the case of the other work on which I want to comment, *Equation I* for jazz band and ensemble, the John Patrick Orchestra contributed just as much as Dankworth and his band contributed to *Improvisations,* but
authorship is attributed solely to Banks.

Nevertheless, questions of attribution, copyright and moral rights are not my main concern here. Suffice it to say that the musical ‘mixed marriage’ proposed by the two works under consideration could be seen as raising some of the same kinds of question as mixed marriages between people, and one of the same dilemmas: how to balance respect for the individuals concerned against the expectation that a marriage involves sinking certain individual preferences in order to create a cohesive totality. Moreover, just as with human beings, the history of such musical marriages is sometimes a history of partnership enacted in a context of sometimes irreconcilable community prejudice. The prejudice against ‘mixed-identity’ hybrids is not peculiar to the ‘third-stream’ genre, of course. Critical attitudes (more in the nature of slogans or ‘put-downs’ than rational arguments) in the form of career-advancement strategies for the apartheid status quo couched as appeals ad hominem (two in particular: ‘It isn’t really X’ or ‘Oh it’s just Y’) very commonly characterise community attitudes to hybrid genres, and making the analogy with racial prejudice is perhaps not too far-fetched. Gunther Schuller, recalls, in his collection of autobiographical and critical essays (cf Schuller 1986) that some of the criticism to which he was subjected at this time came pretty close to accusations of racism (the term he actually uses is ‘racial callousness’).

(1) ‘It isn’t really jazz’ (reader fill in the last word ad lib) is a way of asking the ‘Thatcherite’ question (‘is-he-one-of-us?’), as a means of labelling a transgressive practice ‘beyond the pale’. In fact, the synthesis of elements of idioms formerly thought to be irreconcilable is one of the commonest forms of historical change, but such a synthesis is often opposed by protagonists of both of the elements which have gone into the synthesis, and it requires a generational change for the synthesis to find wide acceptance. One thinks of some of the reactions to the influence of the world of rock on other idioms in the 1960s (including the importation of the electric guitar, brought to bear on ‘folk’ elements by Bob Dylan and others, or the amalgam of rock and jazz by Miles Davis in Bitches Brew) or the interpenetration of Indian elements and jazz in John McLaughlin’s work in the 1970s, developments which were sometimes seen as one idiom ‘polluting’ the stylistic purity of the other. An extreme example was the ‘East-meets-West’ collaboration between Yehudi Menhuin and Ravi Shankar, which was as much an assertion of ‘spiritual’ values as sonic ones, and thus a prime candidate for criticism from listeners not sensitive to such values.

To take the particular case of Bitches Brew, the abundant literature recycling this venerable ‘is-he-one-of-us?’ prejudice (‘It isn’t really jazz’ while at the same time ‘It isn’t really rock’) is summarised and reviewed by Porter and Ouellette (cf Porter 1996 and Ouellette 1999). Some of the extreme attitudes outlined by Porter and Ouellette’s comment ‘arguably the most radically unorthodox jazz statement in history’ are essentially the same observation coloured by positive and negative authorial attitudes, and they tell us more about the authors of those criticisms than about the music.

This particular prejudice even extends to the music of immigrants who worked ‘between cultures’ in general, for example Hans Redlich’s rather patronising comments on Seiber’s own work:

‘...... It remains the tragedy of the uprooted composer to substitute polyglot versatility for the security of a national tradition. ..... The violent cross-currents of artistic influences ..... may easily result in a creative deadlock or in an encyclopaedic prolixity of style. Seiber manages skilfully to steer clear of both dangers, but only at the expense of musical substance .....’ (Redlich 1954, 148).

He’s wrong whatever he does! – not because of a lack of compositional skill, but because of the culture
from which the music arises. It’s a mode of criticism which students of imperial attitudes to colonial cultures may recognise only to well.

Milton Babbitt was irritated enough at having *All Set* criticised for being ‘not really jazz’, that his note on the work, reproduced as the sleeve-note for the 1974 LP recording, makes the following satirical rejoinder, in one of his characteristic prose styles (word-play tinged with gentle mockery):

> ..... Whether *All Set* is really jazz I leave to the judgement of those who are concerned to determine what things really are, and if such probably superficial aspects of the work as its very instrumentation, its use of the ‘rhythm section’, the instrumentally delineated sections which may appear analogous to successive instrumental ‘choruses’ and even specific thematic or motivic materials, may justify that aspect of the title which suggests the spirit of a jazz ‘instrumental’, then the surface and the deeper structure of the pitch, temporal and other dimensions of the work surely reflect those senses of the title, the letter of which brings the work closer to my other compositions, which really are not jazz.” (Babbitt 1974)

‘It isn’t really X’ articulates a strategy for preserving the apartheid status quo, and although the examples quoted by Smith and Jones are of relatively recent date, the strategy itself is as old as the hills. Alastair Fowler documents resistance to hybridity of genre in literature dating back at least to Horace, Cicero and Quintilian (cf Fowler 1982, 181), and the case of musical genres with such different ‘personalities, behavioural tendencies and family histories’ as those under consideration here is certainly comparable.

To be sure, the widespread snobbery about the ‘low’ character of jazz in the twenties and thirties, reflected even in the writings of those years by the celebrated German philosopher, sociologist and cultural theorist Theodor W Adorno (1903 – 1969), is rarely encountered 70 years later, although we need to take into account the attitude to popular music expressed in Adorno’s writings when we consider Seiber’s jazz background (of which more below), because Adorno specifically acknowledged Seiber as his principal informant on the subject of jazz (cf Adorno 1982, Chadwick 1995 and Wilcock 1997).

‘It isn’t really jazz’ is implicitly arguing rather for ‘Separate but Equal’ status. But in the end, the idea that the apartheid status quo is better for both components of the hybrid remains rooted in the same assertion of hegemony. The fact that the Klu Klux Klan supports ‘Separate but Equal’ as a social policy, on the grounds that it’s better for blacks as well as whites has not prevented society from unpacking KKK motives. Likewise, the fact that ‘Separate but Equal’ as a specifically cultural ideology is not confined to died-in-the-wool reactionaries, but just as likely to come from those who see themselves as of the liberal left – defenders of ‘progressive’ musical values – should not prevent us from deconstructing it analogously: as a strategy for reinforcing the cultural power, privilege and prestige of currently dominant idioms. The composer of *All Set* responded sarcastically to such strategies by indulging his lifelong penchant for the ironic deployment of excruciating titles in a more recent chamber work: *Septet, but Equal*.

(2) ‘Oh it’s just Y’, is an alternative strategy for preserving apartheid status quo. In a sense, this is the precise converse of ‘It isn’t really X’: a way of dealing with a transgressive practice not by declaring it ‘beyond the pale’ but by asserting that there isn’t really anything very special about it (ie patronising it as humdrum, even). There is something of the ‘straw man’ approach about this criticism: summarising the special characteristics of what one seeks to criticise in such a feeble way that it is made to seem not special at all, and even the most limited intellect can ‘blow it over’ like a straw man. ‘Just an altered submediant seventh’ (for example)
constitutes a possible description of the opening three bars of *Tristan and Isolde*, but hardly accounts adequately for the special qualities of that passage. The incorporation of microtonal elements into genres in which they are not conventional is an example of a transgressive practice which has sometimes met with this attitude. Kyle Gann’s characterisation of works from Johnny Reinhard’s 1999 *American Festival of Microtonal Music* as ‘marginal pop’ (cf Gann 1999) seems to qualify in this regard, though his suggestion that composers ought to try and reach some agreement on which microtones to use suggests an implicit acknowledgement that in amongst the chaotic multiplicity of individual experimental microtonal practice there might nevertheless lurk something new and significant.

Thus, the words ‘really’ and ‘just’, when used as elements of musicological discourse, should always flash warning signals and put us on our ‘deconstructive alert’, particularly where ‘third-stream’ or other hybrid phenomena are in question.

‘Vernacular’ and ‘Cultivated’

Instead of pursuing the ‘mixed marriage’ metaphor, however, we might note that a common way of accounting for the allegedly irreconcilable nature of jazz practice and classical practice at the time *Improvisations for Jazz Band and Symphony Orchestra* and *Equation I* first appeared (1959 and 1966 respectively) was driven by another historiographical model, under which the canon is divided along class lines. This is a division still widely adopted, of course. It would still be rare to encounter a discussion of Slim Dusty singing *The Pub with no Beer* and of Joseph Lateiner and the New York Philharmonic playing Elliott Carter’s *Piano Concerto* between the covers of the same volume, even though they are more or less contemporaneous musical phenomena. That may well be because of differences of other kinds, not simply class, but it is hard to avoid the impression that class plays a role.

On most of the personal curricula vitae which Don Banks put together during his lifetime for various job and funding applications, he categorised music such as his *Violin Concerto* or his *Sonata da Camera* as his ‘serious’ music, which, in these politically correct times, has come to have a class connotation, implying to a later generation that music such as his jazz and his film scores was considered trivial, or at least that it occupies some lower, less worthy plane of existence. However, it has to be said that I doubt Banks thought of his description ‘serious’ quite in that way; to him it merely implied something like ‘more formal’.

Wiley Hitchcock (Hitchcock 1974) used the terms ‘cultivated’ and ‘vernacular’ to describe two general tendencies in music in the US in the nineteenth and early twentieth centuries, and I have adopted them here, despite the problematic status of the terms (of which Professor Hitchcock is, of course, acutely aware), and with some particular reservations and modifications of my own. In order not to distort what he says, I quote him at some length (chapter 3, pp 51 - 60):

> Americans distinguish colloquially between two broad categories of music: they speak of ‘classical’ music and ‘popular’ music. The terms may be poor ones, especially the former (because of its several meanings), but they bespeak a common realization of the existence of two major traditions in American music. These I shall call the ‘cultivated’ and ‘vernacular’ traditions. I mean by the term ‘cultivated tradition’ a body to be approached with some effort, and to be appreciated for its edification, its moral, spiritual, or aesthetic values. By ‘vernacular tradition’ I mean a body of music more plebian, native, not approached self-consciously but simply grown into as one grows into one’s vernacular tongue; music understood and appreciated simply for its utilitarian or entertainment value.
Despite the different ways in which this passage might be deconstructed, and the particular attitudes which critics with different ideological positions might want to distil from Professor Hitchcock’s words, one can see what he means by observing, for example, that under the heading ‘cultivated’ he discusses Horatio Parker, Edward MacDowell and Charles Griffes, while under ‘vernacular’ he discusses Stephen Foster, Scott Joplin and John Philip Sousa. Moreover he is quick to define ‘folk’ music as different from either, to point out that musics can change their status over time, that the two traditions can interact with one another, and that there are various hybrid types.

Actually, when it comes right down to it, the terminological problem raised by political correctness is not really with ‘vernacular’, which most writers, for example Johnson (Johnson 1996), have been content to adopt, but with ‘cultivated’, which may seem to assume superiority, whether of race, class, manners, aspiration, values or whatever. But the equal sympathy for both traditions, which is very much in evidence in Hitchcock’s writing, suggests the alternative meaning of ‘cultivated’ as a sort of ‘horticultural’ metaphor: the definition which groups with ‘fostered, nourished, nurtured, and propagated’ rather than with ‘civilised, educated, polished, well-bred and refined’.

The implication of such an interpretation is that richness of musical life is enormously enhanced by the coexistence and perhaps interaction of the music which is cultivated by conservatoria, symphony orchestras and concert halls with the music which is played in bars and dance halls by ‘popular’ bands of various kinds, just as gardens and glasshouses complement the role of natural wilderness in preserving the environment as a whole and enhancing biodiversity. To be sure, the listings in Roget’s *Thesaurus* show that the meaning of ‘cultivated’ shades off to ‘sophisticated’ and ‘profound’ while ‘vernacular’ shades off to ‘slang’, ‘jargon’ and ‘gobbledegook’. However, both terms also shade off in the opposite direction as well: ‘cultivated’ to ‘abstruse’, ‘pedantic’ and ‘artificial’ and ‘vernacular’ to ‘demotic’ ‘natural’ and ‘unaffected’.

### Written and Improvised

Before proceeding to discussion of the *sound* of these two pieces, one cannot but acknowledge the limitations of what is able to be said about the scores without reference to aspects which lie entirely within the purview of the performance of the score, in particular the aspect of improvisation. A more complete account would need to work from recorded performances in which the John Dankworth Band and the John Patrick Orchestra make their improvisatory contributions. Despite this, I have decided to defer such comments for a return visit to these works at a later date, since I believe that imaginative interpretation of what is in these scores can still illuminate our topic, and that assertions which have sometimes been put forward in recent years to the effect that analysis of scores amounts to discussion of marks on paper, rather than of sounds is, at the very least, to make too much of an acknowledged limitation. In fact, both of these scores make rather limited provision for improvisation, and I’m sure that Seiber and Banks would have rejected the suggestion that the contributions of the jazz performers in *Improvisations* and *Equation I* were ‘not really jazz’ because most of their parts were notated in detail. In *Equation I*, especially, there is little improvisation *per se*; it is restricted to the odd bar here and there of ‘cadential free-for-all’ at the climax, interlude or coda within a larger section, and yet, as I hear it, its jazz ‘feel’ is even stronger than that of *Improvisations*. With Banks one has the sense of someone moving between the worlds of jazz and ‘classical’ chamber music in a more completely natural and relaxed way. While in some later ‘third-stream’ works Banks was to come closer to Seiber’s concerto-like approach of dramatic contrast and conflict, *Equation I* at least is a more completely achieved ‘marriage’.
This ability to move in the two ‘worlds’ with ease is incidentally and indirectly highlighted by Bruce Johnson’s (Johnson 2000) recent complaints that published assessments of Banks’ work in general, by beginning accounts of his career with his work after 1950, when he departed Australia for London, have neglected to take account of the influence of his Australian background. Considering that, throughout his 21 years in London, Banks always identified himself as Australian whenever opportunity arose, this seems a not unreasonable attitude. But there is another reason to accept Johnson’s view, namely that a more inclusive view of Banks’ career gives us better insights into his concert works as well. Without broaching the ‘Australian identity’ issue here, one of the things that a close reading of Equation I undoubtedly demonstrates is that, whereas most earlier discussions of Banks have tended to see his jazz works and his symphonic ones as manifestations of distinct, indeed contrasted sides of his musical personality, in fact Banks’ compositional approach and method in this avowedly jazz-influenced piece is not substantially different from his approach and method in works such as the Horn Trio or the Violin Concerto. Without excessive distortion, it is possible to claim that jazz was one of the wellsprings of his whole musical being, and of course, this aspect of his musical personality was indeed formed before he left Australia.

**Swing and Bebop**

Having set discussion of these two pieces in the context of these very general cultural metaphors, I should like to begin discussion of the individual works with some comments by way of comparison and contrast, in case the foregoing discussion may have given the impression that Improvisations and Equation I are similar works. In fact, Don Banks’ approach to jazz is quite different from Matyas Seiber’s. In part, this is undoubtedly just a reflection of the 18 years’ difference in the ages of the composers. Seiber (b 1905) began composing before the Second World War, whereas Banks (b 1923) really began after the war, despite some rudimentary juvenilia dating from the war years. Even though Improvisations was written as late as 1959, the jazz influences of an earlier age (the thirties ‘swing’ era of the classic big bands) can also be felt strongly (in character, that is, though not so much in its treatment of harmony, as comments below will show), whereas, for Banks, the jazz model is definitely that of the later post-war ‘bebop’ era. The choice of instrumentation tells this same story, since Improvisations is a symphonic work for big band and large orchestra, whereas Equation I is a chamber work for small jazz combo and chamber ensemble. It seems worthwhile digressing for a moment at this point to look at the background to these differences a little more fully, for they are surely a result of differences of biography and culture as well as differences of age.

**Seiber and Banks: jazz backgrounds**

Seiber was a student at the Hoch’sche Conservatorium in Frankfurt from 1924 to 1927, after which he took a job as cellist in an ensemble on a cruise ship, plying between Europe and North and South America, for a short time. Bradford Robinson states (Robinson 1994, 123) that Seiber claimed to have learned jazz during this period on a transatlantic steamer, although this ‘day-job’ probably built on an interest in the subject dating from his student days. At any rate, a year later, the Conservatorium director, Bernard Sekles, appointed Seiber to take over the Conservatorium’s recently-founded (January 1928) jazz course, the first of its kind in an important European institution of musical education.

Sekles and Seiber were widely pilloried in the profession and the press for this innovation, Sekles for being a blinkered idealist, Seiber for being an opportunistic careerist (cf Kater 1992, 21). Indeed, the furore even reached the floor of the Reichstag! (cf Robinson 1994, 217). One might wonder, therefore, what the motivation behind this appointment was, for Sekles was in many respects a rather conservative figure. Adorno, one of his earlier students, in his Minima Moralia (cf Adorno 1974), was distinctly unflattering about Sekles’ attitudes.
to progressive ideas, although without identifying Sekles by name. Nevertheless, Sekles was later, like many Jewish musicians (including Seiber), dismissed from his post by the racist Nazi Civil Service Law of April 7, 1933, and his work Die Hochzeit des Faun was one of the exhibits in the regime’s notorious Degenerate Music (Entartete Musik) exhibition, which opened in Dusseldorf in May 1938, although Sekles himself had died in the meantime (in 1934). The motivation behind the Frankfurt jazz course is examined by Michael Kater (cf Kater 1992, 17), who suggests that it was widely held in Germany at that time that German musicians had rather stodgy sense of rhythm, and that Sekles thought that the study of jazz might help to combat this shortcoming. Seiber also thought of jazz as a pedagogical tool, and wrote an article ‘Jugend und Jazz’ for the periodical Zeitschrift für Schulmusik in 1930 (cf Kater 1992, 217). Moreover, his collections of Easy Dances and Rhythmical Studies, composed around this time (especially the Rhythmical Studies), have a certain resemblance to Bartok’s pedagogical compositions, notably, of course, the Mikrokosmos, many of which also pose tricky rhythmic problems (though not usually jazz-related ones) for the student performer.

We can get an idea of the character of Seiber’s jazz seminar from writings by Peter Cahn, Adorno and Seiber himself (cf Cahn 1979, Adorno 1982, Seiber 1929, Seiber 1933/1965 and Seiber 1945) and it seems – remarkably! – that even a few sound recordings made by the class survive (cf Lotz 1988). One thing that is clear from this evidence is that Seiber’s relationship to jazz was somewhat that of an ‘outsider’: an observer, teacher, analyst and composer of jazz rather than a performer deeply immersed in jazz culture. Considering that his own instrument was the cello, and that he was also a member of the Lenzewski Quartet during his Frankfurt days, this should hardly surprise us, but it makes an interesting point of comparison and contrast with Banks, who grew up playing jazz from an early age. Banks’ involvement in jazz during his youth, as the pianist in various groups in Melbourne in the forties (including his own ‘Donny Banks Bopet’) and the way he drew on this experience afterwards, are discussed in greater detail by Johnson and Whiteoak (cf Johnson 2000 and Whiteoak 1998). The surviving jazz recordings from the late forties (cf Hair 1999, 144), though now in very bad condition, demonstrate that, in contradistinction to Seiber, he was from earliest youth, very much a jazz-culture ‘insider’: a performer for whom the language of jazz was ‘second nature’.

An interesting footnote to Seiber’s approach to jazz is provided by Adorno’s above-mentioned testimony to his reliance on Seiber’s authority in matters pertaining to jazz. Adorno’s attitude, it will be remembered, is essentially that ‘the material used by popular music is the material of serious music, now become obsolete’ (Paddison 1996, 100). Paddison suggests nevertheless that ‘Adorno had recognised the possibility of working meaningfully with regressive tonal and formal material – within the sphere of serious music, that is’ (Paddison 1996, 100).

Such recognition of the possibilities of ‘regressive’ material derives from Adorno’s implicit acknowledgement that ‘Historically, serious “high art” music had renewed its strength by borrowing from time to time from the “lower”, from “vulgar” music …’ (Paddison 1996, 95). Thus Adorno’s view that after Mozart’s The Magic Flute, perhaps the supreme exemplar of such a renewal, ‘it was never again possible to force serious and light music together’ (cf Paddison 1996, 94), seems at odds with some of his own opinions on Satie, Mahler and Weill. Moreover, ‘Adorno seemed to find it inconceivable that this process could also … operate the other way round. But as Sandner [cf Sandner 1973, 130] points out, ‘in the history of both jazz and rock music, there is quite clearly to be seen an almost obsessive pressure from the “subculture” towards “high art” music’ (cf Paddison 1996, 100).

For all of these reasons, Adorno’s attitude has, by the turn of the twentieth century, come to seem decidedly politically incorrect. Moreover, if Seiber was indeed Adorno’s informant, these attitudes seem not a little
puzzling, since in Seiber, Adorno had other examples of creative renewal through borrowings from popular music close at hand. For example, Seiber’s First String Quartet makes creative use of folk tunes, like the music of his teacher Zoltan Kodaly and of many other Eastern European composers, and makes Adorno’s patronising attitude to Sekles’ work in Minima Moralia, mentioned above, as pieces in which ‘oriental themes were regularly extended by the chromatic scale’ (cf Adorno 1974, 218) seem at least tinged with the ‘straw man’ attitude, outlined above. Indeed, throughout his life, Seiber continued to draw on popular material, covering the widest possible spectrum of sources, from Jean-Baptiste Besard’s 1604 anthology of Renaissance dance tunes, Thesaurus Harmonicus (a vast collection – 403 items – of which Seiber transcribed the greater part from the original tablature (cf Besard 1975)), through to Australian folk tunes (which he utilised in his music for the war movie A Town Like Alice, based on Nevil Shute’s novel: directed by Jack Lee and starring Virginia McKenna and Peter Finch).

Nevertheless, understanding this background may suggest why Seiber’s jazz seems, to later generations, a little stiff and formal (especially rhythmically) by comparison with Banks’. Indeed, Robinson is distinctly lukewarm about Seiber’s jazz sensibilities (Robinson 1994, 123 – 124, 205), although, at the time, Seiber’s jazz percussion tutor (cf Seiber 1929) was favourably received (cf Robinson 1994, 205). The evidence may strike us that way from a viewpoint of nearly 80 years later partly because what was considered to be jazz in Germany in the days of the Weimar Republic did not always distinguish sufficiently between jazz and what later critics tend to label as ‘dance music’ (which might nevertheless be jazz-influenced). However, given my comments above, it will be clear that I am reluctant to go down the road of trying to decide whether what Seiber did in the twenties and thirties was ‘really’ jazz; suffice it to say that there were clearly hybrid elements even in the idiom itself, as Seiber adopted it. To be sure, Seiber’s journal articles on jazz are sometimes concerned with characteristics which jazz shares with other musics, from Palestrina to Indian music! (cf, for example, Seiber 1945), rather than with the unique qualities and finer subtleties which, for example, Gunther Schuller’s accounts of the repertoire demonstrate (cf Schuller 1970, 1989). But probably this was because, as an evangelist for jazz, writing for ‘classical’ musicians, he wanted to write in terms which would reach his readership.

One of the outcomes of this relationship between Seiber and Adorno is that the elements of ‘dance music’ in Seiber’s jazz, to which one might conceivably attribute a certain artificiality or superficiality, may have coloured Adorno’s above-mentioned notorious view of the subject. This failure to make sufficient distinction between ‘dance music’ and jazz – not to mention many more subtle distinctions between genres of popular music – and to treat all varieties of popular music as if they were all equally degraded, has been, broadly speaking, the basis of most later criticism of Adorno’s attitude to jazz, for example that of Robert Witkin (cf Witkin 1995), T A Gracyk (cf Gracyk 1992), Wolfgang Sandner and Max Paddison:

As Sandner shows [cf Sandner 1973], when Adorno’s concept of popular music is examined, it disintegrates into a multiplicity of different elements, for example, light music, hit tunes, dance music, jazz and folk music. Such lack of differentiation is quite astonishing in someone who, in the area of serious music, is normally so insistent on the necessity for making the most subtle distinctions (cf Paddison 1996, 91)

Perhaps one might also extend this criticism to Seiber’s conception of jazz in the twenties and thirties, on the strength of the Schule fur Jazz-Schlagzeug and the Leichte Tanze, delightful though the latter pieces are. (They have become a canonical item of the pedagogical literature, and are still in print after 70 years.) Nevertheless, by the time of the collaboration with John Dankworth in the fifties, Seiber’s conception of the idiom had certainly become much more complex, and consequently Improvisations is a work of altogether greater musical ambition and achievement.
Banks too wrote about jazz, but only rather briefly, and his published comments on the bebop idiom are informal, journalistic and clearly not intended as more than an introduction to bebop for amateur jazz enthusiasts, written from a performer’s viewpoint. His comments are those of a practitioner, and they have nothing of the somewhat didactic, academic character of Seiber’s writings on the topic.

**Divergence and Integration**

*Improvisations* sets the orchestra and the band off against one another in a sort of *concerto grosso* mode, even to the extent of beginning with two versions of the principal (‘Dankworth’) theme. It opens with the orchestral version, characterised by atonal treatment of melodic and harmonic materials, with twelve-tone tendencies. At bar 35 comes the big band version, characterised by soaring and swooping post-romantic melody and quite sophisticated chromatic and modulatory (but nevertheless functionally tonal) harmony. The big band version of the theme is decidedly recognisable (by its contour, rhythmic details and metrical phrase-shaping, along with certain prominent intervallic similarities) as a variation of the orchestral version, but in the broad cultural sense, the identity which it projects is that of an altogether different world. The juxtaposition of the two versions of this theme vividly suggests the metaphor of mixed marriage.
Whereas Seiber’s approach makes possible a certain dramatic contrast, the Banks integrates the idioms more completely. Unlike Seiber’s principal theme, Banks’ theme is harmonised by static, *m motivic, not functional* harmony: in fact by the same two chords (derived from the theme) repeated over and over (sometimes combined as a polychord), variety being provided principally by the different syncopated rhythmic patterns in which they are deployed.

**Example 3**

*Tonality and Atonality*  
Before embarking on the analysis of further details of these two pieces, it is worth underlining the additional sort of mixture which emerges from Examples 1 and 2, namely that of tonality and atonality, since, at the time
these two works were composed (*Improvisations* in 1959 and *Equation I* in 1966), both Seiber and Banks were distinguished protagonists of the twelve-tone method of composition in their works for chamber and orchestral forces, whereas jazz, then as now, and notwithstanding a limited number of examples to the contrary, tends to base its structures on some form of tonality.

*Improvisations* is notated without key-signature, but is it possible to assign an overall key to the work? The piece begins right away with an orchestral statement of the main theme (in multiple-octave ‘doubling’), the first bar of which outlines the triad of F major, with the very first two tones (F and C) articulating one of the principal motifs. However, the theme taken as a whole is an atonal one (whose structure I discuss below), and if I assert that we may usefully think of the work as being ‘in’ F (or perhaps, better, ‘on F’ or ‘around F’), it is not because of the first bar alone, but because of subsequent events. The work’s sense of tonal centricity derives more from melodic than harmonic factors, for example the propensity of melodic structures to work towards culminating-points, final or intermediate, of F, or its dominant, C. To the harmony, notwithstanding exceptions such as Example 2, I attribute mostly motivic significance, by analogy with the way in which one might describe particular features of a nineteenth-century symphony (usually melodic or rhythmic ones) as motivic.

The F-orientation of bar 1 seems to be negated in much of what follows immediately. What we have is an antecedent/consequent phrase-pair, to be sure, but despite the outlining of the F major triad in bar 1, the ‘answering’ quality of the consequent derives not so much from tonal functionality (for example dominant answering tonic and the like) as on pitch-class complementation, i.e., the antecedent consists of the hexachord C Dflat D E F A, while the 10 pitch-classes of the consequent include the complementary pitch-classes Eflat F# G G# Bflat and B, so that the phrase as a whole outlines a complete chromatic aggregate. Likewise the second antecedent/consequent phrase-pair presents overlapping groups of 8 and 10 pitch-classes which also sum to an aggregate (cf example 1).

The tonality F is emphatically affirmed in the final bars of *Improvisations* (289-299), with the melodic top line (fl, tpts, a-saxes) reiterating the C-F motif *tutta forza* in the top register in manic fashion (though the harmony relates to several motifs used in other passages, for example the 0148 tetrachord, the 014589 hexachord and the octatonic scale, as discussed below). Indeed, this C-F motif is the culminating cadential gesture in a line which has been rising over and over chromatically to the C throughout the whole of the final section (252-299): A B C (tpts 252-9, 260-3, 264-6, 267-8) and A flat Bflat C (276-7). Moreover a transposition of this motif to the dominant forms the principal cadence at more or less the work’s half-way point (188-195), and like the final cadence, this intermediate one on C is preceded by a long melodic rise (this time to the goal-tone C itself, rather than to its dominant). As example 4 shows, this rise starts with the reiteration of the D-E-F motif (tpts, 170), and moves (octatonically rather than chromatically, in this case) to G and A flat (tpts, 182), and then B natural (183, 186) before reaching the top C in 188 (though, again, the harmony is motivic, along the lines of the parallel passage at 289-299, discussed above).
Example 4

The ‘perfect fourth’ motif, though ubiquitous, does not always carry an obvious ‘dominant-tonic’ flavour, except at one other point, namely the E-A timpani lead-in to the big band of the main theme at 30-35, though the cadence turns out to be a ‘deceptive’ one, with the E harmony resolving back on F at 35, rather than on A.

Complementing the atonal (orchestral) version of the main theme is the tonal (big band) version which appears at bar 35, characterised by a rapidly modulating functional harmonic progression, beginning with the F major triad. The structure and significance of this progression as a whole are discussed in some detail below. The aesthetic effect is something akin to that produced by Schoenberg’s tonally functional harmonisation of the twelve-tone theme of his Orchestral Variations op 31 for the well-known talk about this work which he gave for Frankfurt Radio in 1931. Schoenberg’s harmonisation is of course merely hypothetical, produced after the event, and the talk (cf Schoenberg 1960) claimed to show merely how he might have harmonised his theme, and explains why his choice of a twelve-tone harmonisation is more in keeping with its twelve-tone nature (cf examples 4a and 4b).
The parallelism with Seiber’s work is not exact, of course, since the big band version of the *Improvisations* theme actually modifies its melodic intervals as well as the harmony, thus giving it a markedly more tonal ‘feel’ (cf Example 2).

The impression that these scattered examples leaves is that the F-tonality of *Improvisations*, while incontrovertible, is nevertheless not a central determining feature of the work, as with the tonality of, say, a Beethoven symphony. Tonality is rather just one amongst several important features, and is prominent in some places but submerged by other features elsewhere. This characteristic seems to be confirmed by the way in which the harmony is notated, ie written out in full for the most part, and falling back on conventional jazz chord symbols in only 5 short passages (in 70 of the work’s 299 bars):

1. 35 – 48 (repetition of the main theme)
2. 73 – 80 (codetta to the first section)
3. 81 – 96 (opening of the development)
4. 107 – 130 (developmental episode)
5. 214 – 221 (climax of the development)

The sense of tonality in *Equation I*, on the other hand, is very much more equivocal. There is nothing quite like Seiber’s series of long structural lines leading to ‘goal-tones’. One could say of the tone centre of *Equation I* that it is ‘probably D’, but this centricity is really a feature more of the theme than of the work as a whole. Many passages are essentially atonal, with D thus becoming a ‘focus-point’ emerging from atonal surroundings. The role of the celebrated D-minor orchestral interlude in Alban Berg’s opera *Wozzeck* comes to mind as analogous, and there likewise, it is probably doubtful that one could reasonably describe the opera as a whole as being ‘in’ (or even ‘on’ or ‘around’) D. Even the theme itself in *Equation I* asserts the D by reiteration of focal melody-tones, not by any kind of ‘functional’ harmony. So tonality in *Equation I*, while present in some sense, is just one of several features: indeed even more a matter of ‘something lurking in the background’.

**Chord Structures**

The patterns of harmony in Seiber’s symbolically-notated passages constitute middle-scale structures with
coherent harmonic strategies of their own (which I discuss below), but I want to start examination of the
harmony itself with an aspect of the local harmonic detail, namely the chord-structures per se. The very
first actual chord of the piece (ie the one on the downbeat of bar 5, articulated as a simultaneity rather than
implied by arpeggiation) is a characteristic sonority (C-E flat-G-B). It would be far-fetched to designate it in
terms of harmonic function (surely not an altered dominant in F, given the presence of the major seventh?).
A more neutral summary designation would be as a concatenation of intervals (in semitones) 3-4-4 (ie three
thirds, major or minor, summing to a major seventh), ie in ‘motivic’ terms. The idea of a specifically harmonic
motif dates back at least to Wagner’s ‘Tristan’ leitmotif, but it is only with Schoenberg and music of the
‘post-Schoenbergian’ tradition that harmonic sonorities become motivic in quite such a thorough-going way.
Nevertheless, some forms of jazz of the 1950s and after, the treatment of such four-tone (and larger) sonorities
approaches the ‘motivic’, and clearly Seiber wants to draw on this ‘family history’ in Improvisations, to
complement the ‘swing’ associations of the principal theme.

Whole sections of Improvisations draw almost exclusively on this tetrachordal harmonic motif or on related
ones, ie on intervocal concatenations comprised of triadic sonorities plus a major seventh, or, expressed in
semitonal patterns, compounds of three intervals summing to 11, such as 344, 443, 434, 533, 353, 335. In
some passages these motifs are expressed in conventional chord-symbol form, though the imputation of ‘root’
status implied by such notation is often weakened by the texture and context. Consider, for example the 10-
chord sequence in the longest of these passages, at 107-130, where the composer(s) add(s) traditional chord
symbols for the alto-saxophone soloist: Amin_maj7, Eflat_maj7, F#min(maj7), C+(maj7), Eflat+(maj7),
F#maj7, Amin(maj7), Eflat_min(maj7), Cmaj7, Amaj7.

Here, the sense of root and root progression implied by the nomenclature is undercut by the textural layout
(the fifth as often above the root as below it, and no rhythm section to underlay a conventional voicing of the
tetrachordal sequence beneath the orchestral chords and the alto saxophone soloist), by the presence of the major seventh in every chord and by the constant turnover of all twelve tones within the space of 3 or 4 chords. The resulting effect is nearer to an atonal sequence (ie motivic, not systemically functional) than to ‘roving’ harmony (to use Schoenberg’s term): where there is no sense of ‘home’, there is no sense of what ‘roving’ could be, either. The sequence’s essential nature is more accurately captured by characterisation simply in
terms of its pitch- and interval-class content and twelve-tone turnover:

(1) A_C_E_G# (intervals 344)
(2) Eflat_G_Bflat_D (intervals 434)
(3) F#_A_C#_E# (intervals 344)
(4) C_E_G#_B (intervals 443) all 12 tones in chords 2-4
(5) Eflat_G_B_D (intervals 443)
(6) F#_A_C_E_D (intervals 343) all 12 tones in chords 3-6
(7) A_C_E_G (intervals 344) all 12 tones in chords 4-7
(8) Eflat_Gflat_Bflat_D (intervals 344) all 12 tones in chords 5-8
(9) C_E_G_B (intervals 344) all 12 tones in chords 6-9
(10) A_C_E_G (intervals 434)

In terms of Allen Forte’s listing of tetrachords by intervocal content, ‘triadic sonorities plus a major seventh’
constitute a very limited selection (four – 0148, 0158, 0147, 0347 – out of the total repertoire of 29 intervocally-
distinct tetrachords), and those used in the passage at 107-130 are all versions of either 0148 or 0158. The
tetrachords which are eliminated from the vocabulary include (on the one hand) those semitoneless ones with pronounced functional associations which are more prominent in earlier forms of jazz, such as dominant and half-diminished sevenths (both 0258 in Forte’s nomenclature, as they are inversions of one another), minor sevenths (0358), dominant sevenths with flattened fifth (0268), sevenths with ‘suspended fourth’ (0257), as well as (on the other hand) those with more than one semitone clash, such as populate much serial chamber and symphonic music contemporary with Improvisations and Equation I, for example Babbitt’s variously-partitioned aggregates, Boulez’s ‘multiplication-structures’, or the all-tetrachord, all-pentachord and all-hexachord harmonic vocabularies of the Carter concertos.

These tetrachordal motifs, saturated as they are with the ‘mixed’ sound of major and minor thirds (and their combination in the ‘blue’ trichordal 014 subset), together with the semitone/major seventh, incorporate and chime particularly comfortably with the ‘blue’ harmonic quality referred to elsewhere (cf for example, Example 14). Moreover, the harmonic motifs do not carry with them the same sense of constant reference to underlying diatonic collections within the chromatic flux as do functional harmonies. The scalar associations which the 0148 and 0158 harmonies suggest are the chromatic scale directly, not the chromatic scale through the diatonic. This approach to harmony, in which the semitone interval is a central element within the harmonic-motivic fabric, thus also constitutes part of a strategy for integrating the microtonal inflexions which are such a distinctive feature of jazz playing into the ‘mixed-identity’ marriage of Improvisations.

I suggest, therefore, that Seiber allocated privileged status to this limited repertoire of tetrachords and this particular way of deploying them in order to effect a rapprochement of the ‘personalities, behavioural tendencies and family histories’ of the jazz and symphonic contributions to Improvisations.

Of course, by no means all the harmonies in Improvisations are tetrachordal. Four-tone chords are the basic units of jazz harmonic vocabulary (as triads are basic units of the ‘classical’ Bach-to-Brahms repertoire), but of course some kinds of jazz harmony, especially in big-band jazz, draw upon a harmonic palette comprised of chords of 5 – 8 (or even more) tones: ie ‘chord extensions’. For example, the tetrachords whose semitonal interval components are 344, 443 and 434 (sets 0148 and 0158) are subsets of the symmetrical hexachord 014589 (saturated with the ‘blue’ trichord 014) and chord extensions which add one or both of the additional tones can be found in some passages. The ‘octatonic scale’ (0-1-3-4-6-7-9-10) – or more frequently its 5-, 6- or 7-tone segments – is also a commonly-used superset in Improvisations, but it is even more ubiquitous in Banks. Without generalising too far, one can say that one of its roles is to extend tetrachords with interval-structures such as 533, 353 and 335 (in set-theoretic terms: 0147 and 0347) in much the same way as the hexachord 014589 is used to extend 334, 343 and 433 (0148 and 0158) structures. Three random examples from Equation I, bars 66-8, 88 and 98, show three different hexachordal subsets (023467, 013479 and 023489) generated by three different ‘bites’ into the octatonic scale. However, the topic of chord extensions, their treatment in ‘third-stream’ music and their relationship to other kinds of post-tonal harmonic practice in general is a complicated one, worthy of a separate paper in due course.
Chord Sequences

The foregoing discussion of Improvisations has centred on the chord-structures and the twelve-tone ‘turnover rate’ of this passage at bars 107-130, but there is another aspect which should also be taken into consideration, namely the transposition-sequence suggested by the notation nomenclature (Amin_maj7, Eflat_maj7, F#m(maj7), C+(maj7), Eflat+(maj7), F#maj7, Amin(maj7), Eflat_min(maj7), Cmaj7, Amaj7). The principle of aggregate transposition-sequences which outline a diminished seventh is a common feature of Schoenberg’s later (‘American’) works, such as the Violin Concerto, the Fourth String Quartet or the Phantasy for Violin and Piano. The principle is also extended to other symmetrical divisions of the octave, notably the augmented triad.

Indeed, if there is a model for the approach to tonal structure in Improvisations and Equation I, it could perhaps be seen in those late works of Schoenberg, such as Kol Nidre and Ode to Napoleon, where a form of the twelve-tone method and a form of tonality intermingle, rather than in the world of jazz. Of course, these late Schoenberg works were often sniffed at by composers, notably Boulez, in the period following Schoenberg’s death in 1951, for reasons which could be seen as driven by the ‘irreconcilable prejudices’ referred to above, namely that the twelve-tone method was characterised by its progressive character, whereas tonality was seen as regressive, nostalgically recycling material from the past, while, on the other hand, later usages of tonality in the ‘post-modern’ era have often been deliberately (even militantly) reactionary (‘rolling back’ modernism’s brave new frontiers). Schoenberg’s ‘twelve-tone tonality’ has thus perhaps found its true progeny not so much in later chamber and symphonic music as in the unlikely environment of the ‘third-stream’ world (and perhaps also in some other jazz idioms contemporaneous with Improvisations and Equation I; but that’s another story).

We have already remarked that the sense of chord ‘roots’ in the passage at 107-130 is weakened by the texture and context, but there is one place where the 0148/0158 motifs of that passage are stated not as a chord but as a series of root progressions, namely in the ‘big band’ version of Dankworth’s theme itself (cf Example 2). Here, the 01458 pentachord F Gflat A Bflat Dflat, a superset of both 0148 and 0158 (cf the discussion above of the 014589 hexachordal superset) becomes a ‘motivic sequence’ outlined in functional harmonies, each of which is tonicised to some degree. Thus is established a motivic connection which mediates between the atonal world of ‘triad-plus-major-seventh’ chords (0148/0158 sets) with rapid twelve-tone turnover and the tonal world of chromatic but functional harmonies, related to the ‘diminished-seventh-related’ and ‘augmented-triad-related’ symmetrical root progressions found in late-romantic composers such as Liszt, Wagner, Scriabin, Rimsky-Korsakoff, early Stravinsky and others.
**Aggregates, Twelve-tone Series, Isorhythmic Patterns**

The most extreme form of extension applied to the tetrachordal elements is the twelve-tone aggregate. Such an extension, of course, belongs much more to the ‘classical’ idiom than to jazz, and is often accompanied by procedures in the rhythmic or textural domains which evoke the personality, behavioural tendencies and family history of that world. Although such treatment is more characteristic of Banks than of Seiber, there is one section of *Improvisations* where it reaches an apotheosis. This is the passage at bars 138 ff. It begins with the orchestral basses giving out a three-bar rhythmic pattern

![Example 6](image)

which is stated seven-and-two-thirds times (bb 138-163). This passage is followed and brought to a climax by a more rapid ‘codetta’ pattern of two-and-a-quarter bars:

![Example 7](image)

Although Example 7 is simply an ostinato, the first of these passages (bb 138-163) exemplifies so-called isorhythmic organisation, along the lines of certain historic isorhythmic compositions by medieval composers, though the detail of its application differs from the historical model in several respects. On the 11-tone rhythmic pattern (the ‘talea’) is superimposed a pitch-pattern (the ‘color’) of a different length (12 tones). Thus, a ‘12 against 11’ overlapping process of talea and color is established, whereby 12 repetitions of the 11-tone talea would potentially occupy the same duration as 11 repetitions of the 12-tone color. However, Seiber cuts off the process long before it has run its full course.

This ‘12 against 11’ structure is a more complicated ratio than anything I know of in the medieval repertoire, and the character of the color is likewise specifically of the twentieth century: it is a twelve-tone series, albeit a very simply-constructed one, consisting of alternating intervals of 6 and 5 semitones:

![Example 8](image)

….. otherwise known as a ‘derived’ series (a tritone dyad replicated 6 times).

What Seiber does with this material is to overlap it with itself in 3-part canon, with the *comes* following the *dux* at intervals of 2 bars (cellos) and 4 bars (violins).
Then an additional element is added on top of all this, with the entry of members of the jazz band: solo trombone (b 142), tenor saxophone (b 158), trumpet (b 158) and alto saxophone (b 162), who are not given notated music to play, but instructed rather to improvise until bar 169. A footnote in the score (p 20) adds the further injunction that the improvisations are to be ‘as “atonal” as possible’ (the inverted commas around ‘atonal’ are Seiber’s). Although what the qualities of such improvisations are to be is not specified further, I think we can take it that they should chime well with the characteristics of the orchestral string parts: that is, they should contain combinations of intervals similar to those of the string parts, and should try to keep as many different pitch-classes as possible in constant circulation. One doubts, however, that the jazzmen are being asked to imitate the isorhythmic and isomelic qualities of the string parts! Seiber allows for, indeed expects, that quite different things will emerge from their contribution. In other words, the double basses set up an ensemble situation which results in the interplay of two different musical identities. By ‘two different musical identities’ is meant here not just two contrasting types of materials or ensemble (as would be the case after all in a classical symphony or concerto), but two different worlds of music making, in which different modes of musical thinking, and different notions of the extent and limits of musical procedure collide and are compounded together by their being thrust into a particular context.

It is obvious that this passage is really driven by the string isorhythmic structure, and that the soloists from the jazz band are asked to enter into this musical identity to the extent of providing an obbligato compatible with it. The obbligato takes on some of its local features, but its essential nature emerges from a fundamentally different way of musical thinking. However, the passage which immediately follows the ‘isorhythmic’ section (bb 170-195) of Improvisations returns the two partner idioms into a more balanced relationship. It is, at one and the same time, both simpler and more complicated than the preceding isorhythmic passage. While there is nothing so complicated as the ‘12 against 11’ counterpoint of the isorhythmic passage, this material undergoes more extensive rhythmic variation both in the small and medium scale.

Let us assume for the moment that we can read the opening phrase of this passage as consisting of five-and-a-half bars, which I shall designate as a ‘head’ (5 rhythmically-varied repetitions of the 3-tone motif D-E-F) plus a ‘tail’ (cadential gesture: loud orchestral chord and arpeggio ‘afterbeat’). In fact, although the 3-tone motif, the chord and the arpeggio form the material of the whole section, their initial placements (as ‘head’ and ‘tail’) vary as the passage unfolds.

Notice that the ‘head’ has its own sense of cross-rhythm: in this case, 5 against 4 (5 repetitions of the ‘D-E-F’ motif in 4 bars). However, the whole passage, creating syncopation and cross-rhythm from three or four fixed thematic units in constantly-varied rhythmic placements, compares much more closely to the jazz’s rhythmic propensities than to the preceding ‘isorhythmic’ passage, with its 12 against 11. Nevertheless, setting the relationship between the different identities which go into the making of Improvisations against one another is part of Seiber’s overall strategy of dramatic contrast and conflict. With Banks, in Equation I at least, the different treatments of the material are fused at a much more detailed level, and while such a strategy may not have quite the expressive variety of Seiber’s concerto-like treatment, it makes for a more integrated totality.

In Equation I, the integration strategy is not so much to develop these cross-rhythms, as to expand and contract metrical units. Thus, for example the theme treats a stereotypical four-beat unit of jazz metrical patterning by internal expansion or contraction (4+4+5+4+4+5+3+4+5 beats, cf Example 3). Accompanying with this rather complex and esoteric treatment of the tune and cymbal rhythm, the piano accompaniment lays out its two chords, varied by syncopation and cross rhythm, an approach which comes near to Seiber’s treatment of
his ‘D E F’ motif referred to above (cf Example 4).

Tetrachord, Scale and Series

Equation I is clearly the work of a younger composer than that of Improvisations for Jazz Band and Orchestra, and to me it feels like the work of a composer with jazz even more deeply embedded in his musical personality. As suggested above, the jazz influence is of a different, more recent idiom, namely bebop, and this seems a slightly easier idiom to integrate into the context of post-tonal ‘classical’ chamber music, partly, perhaps because the bebop idiom is itself a more ‘specialised’ one than swing. Where Improvisations sets the orchestra and the jazz bound in opposition to one another, even to the extent of the two contrasting versions of the main theme, the material of Equation I seems to have been planned with the integration process even more firmly in mind right from the conception stages of the work. One of the features of the integrative process is the flexible way in which Banks moves between tetrachord, series and scale to effect the rapprochement of the two partner idioms.

The overall design of Equation I adopts the following layout:
1. Lento (crotchet = 48) [bars 1 ff]
2. Tempo 100 [bars 11 ff]
3. Meno Mosso [bars 40 ff]
4. Allegro (crotchet = 176) [bars 55 ff]
5. Moderato (crotchet = 80) [bars 98 ff]
6. Fast (minim = 92/96) [bars 108 ff]
7. Lento (crotchet = 60) [bars 122 ff]

and the discussion which follows is referenced to this plan.

Banks’ principal theme (bars 12 ff, section 2) is given in Example 3. This is an eight-tone theme, based on the concatenation of two tetrachords which are transpositions of one another, namely D, F, G and Aflat and Bflat, Dflat, Eflat and E (the second of which actually appears in retrograde order), resulting in the eight-tone scale D, Eflat, E, F, G, Aflat, Bflat, Dflat (in set-theoretic terms: 0-1-2-3-4-5-7-9).

Clearly the tetrachordal unit was chosen to suggest the ‘blue’ scale, with its minor third and flattened fifth scale-degrees, but this tetrachord-pair was also selected with a possible third tetrachord in mind, namely F#, A, B, C: a tetrachord which is not only a transposition of the others, but also the tetrachord which would complete a twelve-tone ‘derived’ series:

[D, F, G, Aflat] [E, Eflat, Dflat, Bflat] [F#, A, B, C]

In the Banks Collection (MS 6830) at the National Library of Australia, the pack in which the manuscript fair copy of Equation I is held (Folio Box 6, Pack 9) also contains a four-page foldout of sketches which include a listing of this twelve-tone series (the ‘original’ form) and three of its transpositions (by 3, 6 and 9 semitones), as well as its inversion and three of its transpositions. Figure 1 also adopts the pitch nomenclature of Banks’ labelling:
Banks’ sketch also includes an indication of the relationships between the tetrachordal segments of various transpositions of original and inversion, ie between Oa and Ib, Ob and Ia, Oc and Id, Od and Ic, namely that tetrachord D F G A flat of appears as tones 1-4 of Oa and also as tones 2, 1, 12, 11 of Ib, B flat D flat E flat appears as tones 5-8 of Oa and also as tones 10, 9, 8, 7 of Ib, and F# A B C appears as tones 9-12 of Oa and also as 6, 5, 4, 3 of Ib (and similarly all the tetrachords of all eight series-forms).

In the theme itself, the tetrachords are never used in exactly this way. Such ‘twelve-tone’ usage is reserved for developmental or coda passages, in accordance with Banks’ treatment of the twelve-tone concept more generally, that is to say, as a particular outcome of the treatment of more limited pitch-groups which may also generate other non-twelve-tone structures. In other words, the twelve-tone aggregate becomes just a ‘special case’ of a more generalised procedure. One such usage occurs in the last few bars of the work viz:

Elsewhere, the tetrachords tend to be combined in pairs rather than threes. One extensively-used pairing forms the ‘octatonic’ scale (0-1-3-4-6-7-9-10). Each of the three tetrachords of the twelve-tone series quoted above consists of a four-tone segment of one of the three possible different transposition of this scale, and when combined with an inversion of itself (rather than with a transposition, as in the series and in the theme) creates the whole of (that form of) the ‘octatonic’ scale. Let me refer to these three content-distinct forms of the octatonic scale as the ‘P’, ‘Q’ and ‘R’ forms.
Thus, D F G Aflat combines with E Dflat B Bflat to produce the scale-form D E F G Aflat Bflat B C# [the ‘P’ form]

............ while E Eflat Dflat Bflat combines with C A G F# to produce the scale-form C C# Eflat E F# G A Bflat [the ‘Q’ form]

............ and F# A B C combines with D Eflat F Aflat to produce the scale-form C D Eflat F F# G# A B [the ‘R’ form]

P, Q and R recur in various ways, generated by different treatments of the tetrachords. For example, in section 4 (Allegro) at bar 80, the trumpet and tenor saxophone present, in rhythmic unison, two inversionally-related tetrachords. Gflat, Eflat, Dflat, C and E, G A, Bflat, which sum to the ‘Q’ form.

Example 10

Sometimes the pairs are overlapping rather than discrete, producing smaller groups of 5-7 tones, rather than 8. For example, in section 1 (Lento), bars 3/4, the strings combine Eflat E F# A vertically and C# E F# G chordally, a different combination of transpositions of an inversionally-related pair which produces the hexachord C# D# E F# G A (023568), a subset of the same ‘Q’ form.

Example 11

On the whole, however, the eight-tone groups in Equation I are derived by combining two of the tetrachords from one or other forms of the twelve-tone series, thus creating an ‘alternative:’ form of the octatonic scale to the ‘standard’ one in which the intervals of tone and semitone alternate. This is the ‘octatonic’ form deployed in the theme, for example: Aflat A Bflat B C D Eflat F (01234679). There, of course, the tetrachordal components are kept distinct from one another (ie tone-repetition occurs only within each tetrachord) in order to retain the ‘blue’ quality, but often, the two tetrachords are merged into an eight-tone entity (ie tone-repetition occurs between the tetrachords as well), as for example in the cello phrase at bars 6 ff, whose pure ‘cultivated’ identity is accentuated by the gentle cantabile string timbre and phrase-shaping, not just by its timbre.
In a similar way, the tetrachordal components are used as the generators of 9-, 10- and 11-tone collections, as well as 5-, 6- or 7-tone ones. For example, the work begins with a 10-tone scrunch which consists of (reading from bass to treble) the octatonic form ‘Q’ (tones 1-8), overlapping with 6 tones from ‘R’ (tones 5-10), immediately followed by the two missing tones D and F on double bass, pizzicato (which then grow into a foreshadowing of the main theme by accretion (D F G followed by D F G Aflat).

Finally, the double-bass’ final tetrachord figure (Gflat F Eflat C) comes to rest on C and initiates the 11-tone pile-up on C which constitutes the final cadence. Since all 11-tone chords are identical in interval content it would be perhaps far-fetched to see this in ‘extended octatonic’ terms, except that the five-tone sonority at the bottom of the chord is one of the classic ‘blue’ harmonies (dominant seventh with the prominent false relation of the ‘blue’ flattened third degree in the upper octave, above the major third in the lower).

‘Diminished’ and ‘Augmented’ Scales: ‘Cultivated’ and ‘Vernacular’ Approaches
It remains to add a few very broad comments about these tetrachordal, hexachordal, octatonic, scalar and serial elements in other jazz of the forties and fifties. Let me preface my comments by a quote from Joachim
Berendt:
The flatted fifth became the most important interval of bebop..... Within ten or twelve years..... the flatted fifth was to become a ‘blue’ note, as common as the undetermined thirds and fifths familiar in traditional blues. (Berendt 1992, 17)

The octatonic scale (often called the ‘diminished’ scale in jazz parlance) can be treated as the concatenation of two tetrachords at the transposition level of the flatted fifth (eg C C# D# E and F# G A Bflat) and suggests why many chords and harmonic sequences in bebop draw upon it. The ‘major/minor third’ hexachord, 014589 (Schoenberg’s ‘Ode to Napoleon’ hexachord) reveals a different but related structure, viz that its complement is a transposition of the same hexachord at the flatted fifth, so that the hexachord and its complement can be juxtaposed to produce a twelve-tone aggregate, eg C C# E F G# A + F# G A# B D D#. This hexachord (sometimes now called the ‘augmented scale’ in jazz contexts) is also a feature of more recent jazz styles, such as those of Ornette Coleman (cf Weiskopf and Ricker 2002), whose harmonic character is anticipated in our ‘third-stream’ contexts.

With both ‘diminished’ and ‘augmented’ scales, there is sometimes a sense of chord-complementation (following a given chord by another using notes of the chromatic scale which were not present in the first) in the jazz context. Nevertheless, this rarely goes so far as a formal, sustained aggregate-formation principle, as in our Seiber and Banks examples. On the whole, the use of these materials in a jazz context, even a bebop one, is less ‘radical’ harmonically than with composers of the ‘cultivated’ tradition (late Debussy and early-to-middle-period Stravinsky above all), in the sense of being closer to ‘functional’ rather than to ‘motivic’ in character. The octatonic harmonies can essentially be construed as neighbour-, passing- or embellishing-chords attached to straightforward functional progressions, even simple cycle-of-fifths sequences (VI – I – II – V – I and the like). From this point of view, the use of octatonic material in jazz probably derives from Ravel or other post-impressionist harmony, more than from Debussy and Stravinsky. Thelonius Monk’s treatment of the opening of Gershwin’s ‘Nice Work if You Can Get It’ (cf Example 15) is characteristic:

![Example 15](Image)

Nevertheless, by such means, Improvisations and Equation 1 draw on some common elements and placed them
in two different contexts, contexts which call to mind the two different ‘family backgrounds’ which went into
the making of these two works: the ‘post-impressionist’ and ‘Schoenbergian’ background and its ‘cultivated’
character on one hand, and the jazz background and its the ‘vernacular’ character on the other, which between
them give the music its ‘mixed identity’. I have concentrated on what the two works have in common, while
nevertheless identifying certain differences (for example, the ‘swing’ and ‘bebop’ backgrounds, the different
interaction between ‘functional’ and ‘motivic’ harmony, the presence or absence of long voice-leading lines,
and, more generally, the relationship – peripheral or central – to the respective composers symphonic and
chamber production). These pieces stand as a reminder that, even though the fecundity of the ‘vernacular’
idiom as a source for the renewal of the musical language of the ‘cultivated’ idiom may have moved up the
priority-list during the postmodern age, it was by no means a forgotten idea during the period of the hegemony
of ‘High Modernism’, and was often asserted in that period, albeit naturally in a different way.

Recorded sources
As a footnote to this discussion, I ought perhaps to mention that both Improvisations and Equation 1 still await
recordings through which the actual sound of these works might be more widely available. At the moment,
Equation 1 is only available to Petherick Room readers at the National Library of Australia, where a copy of
the recording of a performance by the John Patrick Orchestra, held in the library’s Don Banks Collection, can
be heard. Improvisations is also only available via library collections: those which hold the little-circulated
1962 LP (British Saga, XIP7006).

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