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The Construction and Application of a Model for the Analysis of Linear Free Improvised Music

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This is a more or less unvarnished version of a paper that I initially presented at The 4th European Music Analysis Conference, Rotterdam in 1999 and again in a slightly altered form at De Montfort University in 2000. It sets out my first attempts to devise a system to analyse what Derek Bailey once described as the unanalysable (Wittgensteinians I know what you're thinking!). It is a much-reduced version of my Masters thesis, which I completed at De Montfort University in 1998 (if anyone is interested in seeing more feel free to contact me). Inevitably, my thinking has moved on since writing this and quite a lot of what I wrote then now seems naive (one reason why I haven't tried to alter the paper). However, I present it here because I feel that it contains some useful ideas about a still largely neglected area of study.

Bruce Coates 2002

Abstract

THE ANALYSIS of Free Improvised music is uncommon perhaps because it does not have a set of agreed rules from which it may be said to adhere or deviate. My research set out to devise a structure by which Free Improvisation could be analysed and to test its appropriateness through practical application. This system would also test my hypothesis that although there are many different stylistic approaches in the music there is a fundamental process common to all styles of Free Improvisation. However, I also hypothesised that there would be a difference of approach between so called 'ad-hoc' groups and 'long-term' groups and the system would allow comparisons to be made.

The study focused on the work of British improvisers spanning a variety of different stylistic approaches, including Evan Parker, Paul Dunmall, Keith Tippett, Derek Bailey and Paul Rogers. I chose to look at improvisation as a dialogical activity and therefore I did not look at purely musical, that is sound, phenomena but rather at the decisions that caused sounds to be made. A system was arrived at which examined the way in which players interacted defined in terms of a broad set of possible reactions — that is *agreeing*, *disagreeing* and *ignoring*. A graphic method of displaying this information was developed in order to show how these reactions constituted formal elements within the improvisation.

Introduction

My research explored the techniques and strategies employed by improvisers. As a result of this exploration the study aimed to identify any common methodology and to develop a method of analysis by which linear Free Improvisation,¹ regardless of the practitioners involved, may be

¹ I use the term Linear Free Improvisation to distinguish between stylistic approaches that are predominately melodically driven and those which rely more on pointillistic effects and the use of noise. Therefore much of this music may be described as Free Jazz. However I no longer think that this term is adequate to describe the number of approaches to improvisation that work in this as it ignores musicians who come to improvisation from classical, ethnic or rock backgrounds and whose music can not justifiably be described as jazz in any way.

examined. It concentrated on the work of British improvisers with passing reference to the work of continental European and American practitioners.

To define what Free Improvisation, as a generic term, encompasses has become an increasingly difficult task, as what is usually regarded as Free Improvisation is comprised of many different stylistic areas. It must therefore be defined as an approach to music making rather than as a particular style. However, it should also be recognised that it is the very fluidity of the situation that suggests that there may be universal approaches and techniques that apply in all Free Improvisation. These should therefore be identifiable, making the analysis of improvised music a possibility.

It might best be said that the structure of improvisation is provided less by formal elements than by the process by which the music is made. Therefore, when making an analysis of Free Improvisation it should be made from the point of view of the creative process rather than its product. In order to create an analysis of linear Free Improvisation it is necessary to identify approaches that are universal to all linear Free Improvisation rather than those that apply to individual improvisations. Small writes:

If musical performances establish relationships, no relationships can be established without the existence of commonly understood meanings, and there can be no meanings without rules. Where, then, do the rules come from which enable free improvisers to establish those vital relationships within the group and the intimacy which they seek? Clearly, not from outside constraints such as melodic, rhythmic or harmonic idioms, but rather from those universal patterns of human behaviour and response in which it is necessary for the players to believe implicitly, if not necessarily consciously, before engaging in such risky behaviour.²

In his *Treatise Handbook*, the composer and Improviser Cornelius Cardew wrote, "...logical structure is what an improvisation lacks."³ If he meant by this an outwardly imposed form then he is right but logical structure must equally come about by the decision-making processes involved in producing it. If these decisions follow, as indicated earlier, some universal approach enabling the combining and recombining of disparate and apparently unrelated musicians then a logical process must inevitably be at work within improvised music.

I therefore chose not to concentrate on individual style or language but to look at the way in which musicians interact with each other and so I chose to look at such aspects as musical roles and the way in which musicians behave towards each other. Free Improvisation is, I believe, a fundamentally dialogical activity. A group improvisation, however, may be a continual dialogue between all the members of the group or may break down into smaller units of that group either as defined solos, duos, etc. or as simultaneous solos, duos etc. within the texture of the group sound. These sectional relationships within the group are interesting because they are indicative of the relationships present within a group and may even give an indication of musical relationships outside of a performance situation. For instance a quartet that continually breaks down into two duos might be evidence of particular empathies within a group or it may be that the musicians work in this way outside of this particular playing situation.

Musical Roles

It would seem necessary to more fully investigate the way in which collectivity as a general idea relates to the job or role of the individual within the ensemble. The roles that a player chooses must influence the way in which they contribute to the overall dialogue. These roles do not have to be fixed in the way that they are within jazz and ought in theory to be more flexible. In the classic jazz quartet for instance, a rhythm section of drums and bass provides accompaniment to a melodic soloist with a piano, as both harmonic and melodic contributor, providing an axis

² Christopher Small, *Music of the Common Tongue* (London: Calder/Riverrun, 1994), p. 308.

³ Cornelius Cardew, *Treatise Handbook* (London: Peters Edition, 1971), p. xix.

between these two roles. In this situation these roles are relatively fixed. To look at whether improvisers take on fixed roles or take a more flexible approach would seem to contribute to an understanding of the way dialogue takes place.

The saxophonist Lou Gare gave this exposition of the roles within the improvising ensemble AMM, as he saw them during his initial membership:

Within AMM the four musicians at times took roles which suited the character of the instruments that they played. The piano and the saxophone took a more direct role of communication with the audience, with the saxophone taking a freer, wandering part and the piano relating and complementing. The drums often gave support, sort of guiding the music, with nudges and prods. While the amplified strings supplied endurance and the bulk of the sound. These roles shifted and changed with compensation occurring if one of the players failed. In AMM it has proved a mistake for one of the players to try and take over the role of another, and this is always the difficulty faced by a guest sitting in, how can he make a place for himself without treading on the toes of someone. In improvised music you must make a place for yourself.⁴

Modes of Behaviour

The difficulty comes in defining exactly what modes of behaviour are adhered to within the musical process. One could look at this process purely in terms of a set of 'manners' akin to social etiquette, for instance, not getting in each other's way, not as Gare indicates, 'treading on each other's toes', not obscuring or preventing someone from doing something. It would seem obvious, however, that it is not as simple as this, any set of 'rules' are likely to be governed to some extent by the combination of musicians that are playing. Therefore, the 'rules' or modes of behaviour are determined according to the particular playing situation, personalities, and relationships between musicians. If this is so then there is a pool of possible modes of behaviour from which groups draw depending on the particular group of people involved. However, these Modes of Behaviour are likely to fall into a broad set of categories. I asked the drummer Eddie Prévost whether he considered improvisers to be too polite in certain situations:

It can be a bit polite can't it, you need a few toes to be trodden on occasionally and that brings out some interesting responses. I think it's often useful to do those things, to be purposely obnoxious. You can't continue being obnoxious because people will simply move away from you and then you won't be doing it [improvising] but I think you're right that it can be too polite.⁵

There would seem to be an obvious analogy to the way that people converse in social situation. As in a conversation there is dialogue between people, questions are asked, answered, points made, etc. However, within Free Improvisation there are large sections when there are no silences or solos, as if everyone (or more than one person) is speaking at once. This does not reflect a conversation in such a recognisable sense. Therefore we must move to some other form of interaction. As in a conversation there is a range of expression going on, sometimes it may be aggressive, more often convivial, emotional, eloquent, faltering, diffident; the gamut of personalities and modes of behaviour could be said to be represented within the music. The way that these are accommodated would seem to affect the form of a piece as much as any other factor.

Graphic Analysis of Selected Recordings

The use of a purely verbal system of analysis was felt to be insufficient to communicate and illustrate what was happening within the improvisation. It was therefore decided to develop a visual representation from which information about the improvisation could be derived. This

⁴ Lou Gare, "Traditional Roles in AMM Music...", *Microphone: new music in Britain*, no. 6, July 1972.

⁵ Eddie Prévost, personal interview with Bruce Coates, 1997.

would take the form of partly score and partly analytical tool. This was done by developing a system of analysis based initially on the idea of a flow chart. This graphic analysis shows the reactions of improvisers to individual contributions from members of the ensemble and group contributions. The reactions shown split into three perceived general categories:

1. *Go with a contribution (Agreement)*

This could be defined as a response, which has a direct relationship with the preceding material — it might copy it directly or indirectly or have a similar tonality, related key or rhythmic structure.

2. *Go against a contribution (Disagreement)*

This was defined as a response that directly contradicted the preceding material — it might be in an entirely unrelated key, contradictory rhythmic pattern, or cut across the texture in an aggressive way for instance the use of high volume such as a cymbal crash during a very quiet passage.

3. *Ignore a contribution (either/or)*

This is perhaps the hardest to define. I define it as material that is not a direct reaction to anything else that is going on. An instance of this might be the occurrence of two separate groups of musicians in dialogue, neither group appearing to respond to the other.

The graphic analysis was laid out in the following way:

- A time line at the top and bottom of the diagram indicates the timing of the whole improvisation. Accuracy was dependent on the use of a Compact Disc player's clock, which indicated time in minutes and seconds. Therefore half and quarter seconds were distinguished by a combination of my ears and eyes and are therefore approximate. These are the smallest increments employed. This analysis not only shows the reactions of musicians but also highlights relationships within the ensemble over time, which are much less distinguishable by ear.
- Different coloured inks represented each musician — the colour had no meaning other than to delineate the different musicians.
- Horizontal lines represent the duration of individual contributions.
- The player's reactions are represented as vertical or diagonal lines emanating from these. Vertical lines represent a direct reaction to other player(s).

These vertical lines are in two categories:

i. Plain vertical line = agreement

ii. A vertical line with an arrowhead = disagreement.

- Diagonal lines have been used to represent a reaction to a specific event that has already happened (as opposed to something going on at the time); again, both plain and lines with arrows have been used.
- A dotted diagonal line was used to refer to previous material that the reaction is a direct result of, if not a direct reaction to. This was designed particularly for the representation of something that was the result of a contribution that happened several seconds previously.⁶

⁶ The analysis does not show reactions to something that happened longer than ten seconds ago for two reasons: 1) clarity of reading and 2) the possibility of coincidence over such a period of time although I do not deny the possibility that there may be a relationship.

Graphic Analysis of "DB/AB/YR/JZ/VM Part 1" from Company 91 vol. 1, Incus Records CD 16 1994

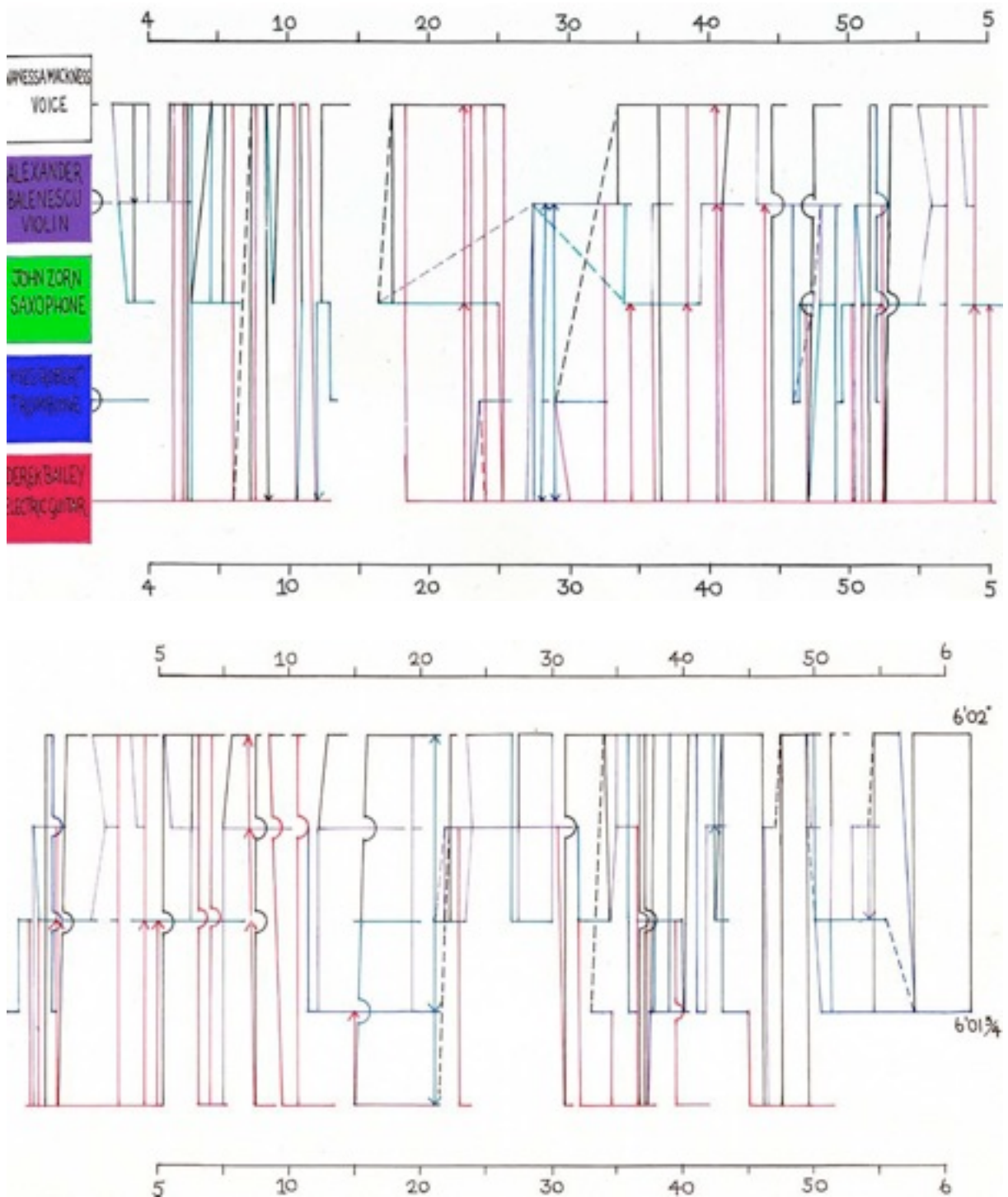
Recorded: "The Place Theatre", London 23rd - 27th July 1991

Vanessa Mackness — Voice; Alexander Balanescu — Violin; John Zorn — Alto Saxophone;

Yves Robert — Trombone; Derek Bailey — Guitar

Total Duration: 6'02"

Extract: 4'00" — 6'02"



This section was chosen because it represents a lengthy ensemble passage where there is a variety of activity from each of the members of the group. It also represents a good cross-section of their activities throughout the improvisation as a whole.

It shows defined subgroups and the dialogue across the ensemble that may otherwise be hidden to the listener in the overall texture. From the analysis, clear preferences emerge for working partners amongst the musicians. Therefore, an overall picture of how the musicians relate to each other can be established. In addition, the analysis shows those musicians who behave in a clearly dialogical manner, those who prefer to take a more passive and accompanying role and those who actively seek to disrupt or change the direction of the music. A musician may work in several of these ways through the course of the improvisation and these changes of role are also shown.

1) Individual Musical Roles and Modes of Behaviour

Vanessa Mackness

It can be seen that although she provides much dialogue with members of the group she is rarely an instigator of change within the improvisation. Her use of short phrases is pointed up and it is interesting that much of Bailey's material is directed at her.

Alexander Balenescu

The violinist's contributions throughout this example are in agreement with the other players. He is rarely the instigator of change. He also shows a preference for working in close duets with certain musicians rather than in larger subgroups. The relationships he forms prove to be fleeting and shift throughout the example.

John Zorn

The saxophonist engages in little dialogue throughout the example, he is however, responsible for instigating change in the improvisation and it is he who begins this section. The fact that he is more often responded to than he responds to others suggests that he contributes largely accompanying material in this section. His disagreement with the rest of the group at 5'21" is again a catalyst for a change of direction, it should also be noted that this is a direct reference back to earlier material. He is therefore content to provide largely accompanying material for the majority of this example, which give his disagreements more force.

Yves Robert

The trombonist's contributions are sporadic, but the analysis provides proof of his lack of diffidence as his disagreements with violin and guitar at 4'29" shows. He therefore operates in a supportive and accompanying role for the majority of the example, but occasionally provides soloistic material.

Derek Bailey

The guitar provides the most direct reactions to other musicians but seems to produce comparatively few direct reactions from the other musicians. This seems odd because of the amount of playing that he is doing and his direct approach. It is reasonable to conclude therefore that his role is supportive and accompanying rather than producing clear changes of direction within the improvisation. His constant reactions to and affirmations of his fellow musicians' contributions provide a framework that holds the rest of the improvisation together. This position also supports him as a kind of percussion instrument within the ensemble similar to the position of the jazz drummer.

2) Group Musical Roles and Modes of Behaviour

The chosen section follows the improvisation's only silent moment and represents a clear change in the improvisation's direction. The saxophone begins the section producing an almost immediate agreement from the voice. The guitar enters next in broad agreement. There is little dialogue in this first 20 seconds, however the guitar after an initial disagreement makes an attempt at dialogue with the voice and saxophone. The entry of the trombone at **4'23"** is in agreement with the guitar that then reciprocates. Throughout this section, the trombone entries are short. As has been noted, the guitarist plays for more of the time than any other member of the ensemble and that there is little direct response to him from the other musicians. This seems odd because of the amount of playing that he is doing and his direct approach. It is significant however that there is little direct opposition to what he is doing and this tends to support the idea that he occupies a supporting role.

It is reasonable to conclude therefore that his role is supportive and accompanying rather than producing clear changes of direction within the improvisation. His constant reactions to and affirmations of his fellow musicians' contributions provide a framework that holds the rest of the improvisation together. This position also supports him as a kind of percussion instrument within the ensemble similar to the position of the jazz drummer.

The violin on its entry at **4'27"** plays material that is directly related to that played by the saxophone near the beginning of the example (**4'18"**) and it is interesting that musical material should be returned to after such a long gap. This is a very compositional technique and not necessarily what one might expect to hear in a piece of Free Improvisation. It is possible that this is indicative of the violinist's background in the performance of notated music. The relationship between the two recurs throughout much of the example. Although there are subgroups within this section they are rarely stable, however, there are defined relationships between voice and violin, saxophone and violin and the most stable guitar and voice.

This tendency for interaction between one or two members of the group means that there are only a few sections of the example, where there is genuine interaction between all of the members. However, despite this there is general agreement across the group throughout. This may therefore be seen as indirect interaction, i.e. the musicians are aware of what each other are doing but do not engage in specific dialogue. The clearest exception to this method of working can be seen at **4'44"–53"**. Here there is genuine interaction between all of members of the group (if framed by the voice and guitar). Another example occurs at **5'34"** and seems to trigger the eventual ending of the piece.

The guitarist is more often in disagreement than any of the other musicians. As I have said, these disagreements do not seem to instigate change in the improvisation very often but the disagreement at **4'41"** instigates a reaction in agreement from the violin immediately responded to by the voice. The preponderance of disagreement may be seen as a provocative tactic, but as it rarely produces a reaction may be thought of as a collectively understood example of the musician's style, rather than a direct strategy.

The voice and guitar interact with each other more than with the rest of the musicians. This may be an indication that these two players have worked together before and are used to their respective working practices. However, the saxophonist has also worked with the guitarist and there is no such relationship in evidence here. This relationship acts a frame within which the other musicians interact.

From this data it can be seen that the relationships within the group generally follow the pattern of the hierarchical structure outlined earlier. However, it also reveals that this is slightly more complicated because of the framing position of the relationship between guitar and voice that was not readily apparent from listening alone. An ensemble in which there is a preponderance of melodic instruments could lead to a surfeit of soloists but this does not

happen in this example. Instead, the musicians by adopting appropriate roles within the ensemble and also limiting their contributions avoid this.

Conclusion

My analysis has identified that there is indeed a logical structure present in Free Improvisation but it is a group logic that is based on a series of considered (consciously or unconsciously) reactions and responses. Such a combination of logics must therefore to be cohesive, respond to common understandings. The graphic analysis seems to confirm that these common understandings exist.

Most interesting however and most unexpected was the way that the graphic analysis showed the development of a hierarchical structure within the group in relation to the roles that are adopted within the improvisation. This might be expected in a group of less similar instruments (something more akin to a jazz group perhaps). In this group however, with a non-standard instrumentation, involving only one traditional accompanying instrument and whose players were not necessarily from jazz backgrounds, one would expect that there would be more equality of role within the group. There is certainly an element of truth in this but a defined hierarchical structure was revealed within the group that was not so dissimilar to that of a jazz ensemble.⁷ Further research is needed to define whether this is an isolated incident or whether it is a common occurrence within groups of this nature.

Often within an improvisation two or more seemingly opposing areas can be happening simultaneously. In these cases the musicians making these two areas or subgroups are not necessarily making direct reactions to each other. Equally, two or more complementary areas could be being played simultaneously without these subgroups reacting to each other. Therefore, some method needs to be found of indicating this relationship. As it stands I have interpreted no direct reaction as a broad agreement, which seems to work in the majority of cases but it is not entirely satisfactory. In the event of a disagreement using the compromise outlined above, what follows must be interpreted as broad agreement. Even if one assumes that the musician is still in disagreement no method exist at this time to show when he comes back into agreement, unless he makes a direct reaction to another member of the group.

Hierarchical systems have been identified within the improvisations that I have looked at, however the two dimensional nature of the pen and paper approach means that relationships may be coloured by the way that the musicians are displayed on the page. Although I have ordered them roughly in terms of pitch, highest instrument first or in the case of those with jazz instrumentation in a standard way for these types of groups, in both types traditionally accompanying instruments are at the bottom of the page. If it were possible to move these around to see if the different visual layout has an effect on my conclusions this would be worthwhile. It might also be feasible to produce a three-dimensional model of the improvisation, which could more clearly represent musical space. In fact, it may be that several analytical models should be developed together so that results could be compared, thus eliminating many of the problems to be found in this one. I therefore believe that either this current method should be amended or that a related system should be developed that takes these problems into account.

This method of analysis only gives information that relates to process within the improvisation. It would be helpful to extend this method to one that could bring back in some information about the specific musical materials employed by the musicians. It would be profitable to see if particular kinds of musical material produce particular responses in musicians. Having decided that a visual map is the best way of displaying this kind of structural material it

⁷ As part of the original research the group Mujician, consisting of Paul Dunmall — saxophone, Keith Tippett — Piano, Paul Rogers — double bass and Tony Levin, was also examined in this way. As it conformed to the classic Jazz quartet a traditional hierarchy was expected and was indeed found.

would seem that this information would be best placed within such a system. Again, this paper and pen method is inflexible in this respect as it would be advantageous to evolve a system in which many layers of information could be put into an analysis and then stripped away one by one, so that a complete picture of an improvisation could then be seen. Such a system would seem to be best achieved through the use of computer visualisation and my current research reflects this.

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