In September 2011 Richard Craig (Flutes), Daniel Padden (Percussion, Sound Objects, Electronics) and Alex South (Clarinets) performed excerpts from Cornelius Cardew’s Treatise (1963-67) in Glasgow’s City Halls. Cardew was a political as well as an aesthetic revolutionary, and if our performance of Treatise demonstrated the latter, the former was confirmed by the screening of Luke Fowler’s 2006 film Pilgrimage From Scattered Points which took place at the same event. Treatise is a graphic score of epic proportions (193 pages in length), inspired by Wittgenstein’s Tractatus Logico-Philosophicus and similarly ambitious in its aim of freeing classical musicians from their often self-imposed constraints. In it a set of sixty-seven visual elements (including numerals and symbols of musical notation) are subjected to various transformative processes, creating a continuous visuo-musical narrative akin to a novel or symphony in its dramatic scope. In this short article we reflect on the nature of graphic scores in general and Cardew’s Treatise in particular, examining the many contradictions which it seems to embody and suggesting possible resolutions from the point of view of performing musicians.
Approaching Cardew’s Treatise

As performers approaching Treatise today, we cannot help but be aware of, and are obliged to take into account, Cardew’s own extensive writings, which make manifest a clear ‘external contradiction’ in his attitude to the work. These writings include a number of texts collected in the Treatise Handbook (1971), published four years after Treatise and containing a number of remarks aimed at guiding the interpretation of the score. The very publication of the Handbook raises some questions, as its introduction makes clear that Cardew had been keen initially to make public the Treatise unadorned with performance notes or other guidelines. But far more problematic is the fierce repudiation of Treatise which Cardew delivered as a talk to a symposium on musical notation during his Maist Peking period in the early 1970s. In the course of Cardew’s self-criticism he refers to the Treatise as ‘contradictory and incoherent, like the words of a liar who has lost all hope of deceiving his audience’, and as exemplifying a notational disease found in avant-garde music, a disease which has had harmful effects on the development of musical thinking. In accordance with his ideological (and practical) commitment to communism, Cardew centres his attack on the origins of this disease in a society in which the degenerate bourgeoisie stands in opposition to the subjugated working class, and in what might be seen as a kind of atonement for his own avant-garde past began to compose works he considered suitable for performance at communist party congresses and the like. To understand Cardew’s political context would take us far from our aims in this article, but we are nonetheless interested in Cardew’s specific comments about the disease manifested in Treatise, that ‘contradictory artefact’.

In fact, we will take this phrase as a starting point for our performer’s eye analysis of the piece, for beyond Cardew’s own attitude towards Treatise there are a number of other tensions and seeming contradictions embodied in the work. The first of these is centred on the relation between a musical score and the sounds which make up its performance, and is encapsulated by Cardew’s comment in the Treatise Handbook that “[t]he sound should be a picture of the score, not vice-versa”. This apparently gnomic utterance – how can a sound be a picture? – only makes sense against the backdrop of the philosopher Ludwig Wittgenstein’s Tractatus Logico-Philosophicus, and the knowledge that Cardew had been inspired to write his Treatise by his initial encounter with the opening sentence of Wittgenstein’s work: “The world is everything that is the case”.

In Wittgenstein’s Tractatus, a ‘picture’ or representational theory of language is proposed, according to which true linguistic propositions map correctly onto states of affairs in the world through a sharing of the same logical form or structure. The truth of a proposition may be only be established by studying whether its logical form matches that of the state of affairs it purports to describe. Meaningful statements are limited to those whose truth can be established in this way: propositions about ethics, aesthetics, and metaphysics are, strictly speaking, nonsensical: in his famous conclusion Wittgenstein tells us that “What we cannot speak about we must pass over in silence”. “As a musician reading musical scores, we encounter numerous variations of the symbols and their syntax depending on the style of music, but the score’s function is essentially the same: it provides a map for musicians with which to navigate their way through a work, with an audience alongside. In its purest sense, a score provides glimpses of the overarching structure of a work and information on our location en route, it signals meeting points and exposes symmetries/asymmetries; it gives us the destination, as well as velocities, depths and heights; it constitutes a struggle between sound and structures, with an ornate system of symbols and directions according to epoch and style. There is of course one crucial element which is not so easy to imbue in a musical score: how do musicians negotiate with the object (a score) to reveal and communicate the ‘aura’, or artistic worth, of a piece of live music? The dynamic of performance is elusive and unquantifiable, but the composer can however manipulate how the object (the score) presents itself, allowing musicians artistic freedoms in emotive values, technical execution, tempo and even instrumentation.”

The parallels between Wittgenstein’s Tractatus and Cardew’s Treatise go deep: both philosopher and composer claim their work to be an exhaustive investigation into its respective field, that is, the meaningful use of language and the employment of graphic notation in music, and both assert that these fields are founded on atomic elements (elementary propositions, visual elements such as lines and circles). There are also occasions within Treatise where Cardew has sought to find a visuo-musical expression of Wittgenstein’s propositions, for example the final pages of the work, with their blank staves, are a clear reference to Wittgenstein’s conclusion. Further, the completion of both works seems to have led to some kind of crisis for philosopher and composer alike: Wittgenstein ceased writing about philosophical issues and became a school teacher, Cardew turned away from composition for professional musicians and formed the Scratch Orchestra. Later in life, just as we have seen that Cardew repudiated his Treatise and turned towards the composition of works suitable for appreciation by a mass audience, Wittgenstein recognised ‘grave mistakes’ in his Tractatus, and returned to philosophy with a radical new approach.

Coming back to Treatise, and Cardew’s assertion that “[t]he sound should be a picture of the score”, we can now recognize that this claim both instantiates a Wittgensteinian representational theory of meaning, and suggests a radical inversion of the usual relationship between score and sound, according to which a musical score is taken as an abstract representation in a symbolic language (that is, a Wittgensteinian picture) of the sounding notes. Here we should note that this inversion is by no means entailed by the mere act of constructing a graphic score. One could easily, after all, envisage a graphic score in which certain geometrical shapes and their permutations and colourings were assigned meanings familiar to performers of conventional scores, such as ‘a middle C lasting three beats’, ‘fortissimo’, and so on. Again, a composer might find pictorial symbols more directly evocative of timbre, or more efficient a means than conventional notation in persuading a performer to improvise around a pitch set, for example. In these plausible cases we can maintain a conventional view of composition: a composer hears sounds, and through notation communicates the sounds, either to performers who are able to create a concrete realization of the sounds, or to readers who can recreate the sounds in their mind’s ear.

But in Cardew’s Treatise there is a radical inversion: no longer does the conventional view hold, no longer is there an idea of the sound which inspires the composer to produce a written score. Rather, there is simply an idea: as Cardew puts it, “A composer who hears sounds will try to find a notation for sounds. One who has ideas will find one that expresses his ideas, leaving their interpretation free, in confidence that his ideas have been accurately and concisely notated”. Thus we are led to an extremely formalistic view of Cardew’s score: it is a collection of marks which represent ideas, or a certain logical structure, which may be interpreted in any number of ways. As an answer to our question – how can a sound be a picture? – we are led to the view that the sounds made by the performing musicians in the course of a successful performance must be taken as representations of the score, in virtue of sharing the same logical form. In short, the radical inversion of sound and score may be taken to amount to a radical inversion of aesthetic value. The score itself establishes its primacy, and in doing so it becomes an aesthetic object in its own right, pervaded with the aura proper to aesthetic objects.

This interpretation of the relationship between score and performance, although endorsed by Cardew’s own writings, may seem far-fetched unless we bring out a further aspect crucial to an understanding of the score of Treatise: quite simply, it is visually a stunningly beautiful object. Even to the visually untutored musician it seems to be the product of a highly skilled artist working to create a coherent and satisfying narrative in visual form: as Brian Dennis puts it, “as a graphic work whose subject matter is music, it is second to none”.

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The visual beauty of the score, however, gives rise to a further tension within the work, for in attracting the aesthetic interest of the performer it plays a very different role during performance to that played by conventional scores. The role of a conventional score is arguably to provide an account in a well-understood symbolic language of the sounding music that is to be produced by the performer. It may do this in at least two ways: in providing (a) symbols which represent sounds—which are to be heard—and their qualities (pitch, duration, dynamic, timbre, etc.) and (b) instructions for performers to carry out certain sound-producing or sound-modifying actions (such as the use of certain fingerings or particular kinds of bowing, etc.). If this account is roughly correct, it would seem that the strictly visual aspect of the score is irrelevant to a successful performance of the work, just as (given various provisions regarding size, legibility, etc.) the font in which an English sentence is printed does not affect the comprehension of its meaning by a reader. Moreover, to the extent to which the visual appearance of a musical score can be ignored, we might say that the score itself is self-efficacy, it withdraws itself from our attention: we tend to be carried beyond the score to the meaning of its symbols (which act as signposts).

This has a parallel in ordinary language: when we successfully read a text our attention is usually not on the visual appearance of the letters and words on the page, but on the events or information which the author intends to convey to us.

In contrast, the graphic score, and Cardew’s Tractatus above all, grabs the eye and holds it. In rehearsing and performing this work, the performer is always aware of the beautiful object present before her on the music stand. And hence the tension: for the performer—the reader of the score—has to perform, to have her instrument, to produce sounds, music. Surely the presence of an object demanding visual appreciation can only get in the way of her task?

This transformation of the score, from a symbolic representation of musical sounds into a visual aesthetic object, is precisely the neurological disease diagnosed by Cardew in his own Tractatus. In Stockhausen’s Vermedium, Cardew writes that for the avant-garde, “notation seems to have become a mapping of growth using an absolutely unjustifiable preeminence over the music”. He proceeds to attack “the idea that a musical score can have some kind of aesthetic identity of its own, quite apart from its realisation in sound, in other words that the score is a visual artwork”, and in particular, the score of Tractatus is criticised for coming to serve as a barrier to communication between performers and audience. He claims that although called on to improvise, the score fails to make contact with objective reality (because, he says, it consists of a contradictory blend of logical and mathematical and physical transformations applied to visual elements, combined with mere visual ‘diversions’), and hence its improvisations are bound to fail.

So here we return to our starting point: the contradiction manifested in Cardew’s attitude towards Tractatus, which is now seen to depend upon the inner tension caused by the notion that the score has become an aesthetic object with its own identity independent of its performances. How are we to resolve this?

This complex account leads us to a number of musicological and metaphysical questions: for instance, are the logical, mathematical and physical processes exhibited in the score really contradictory, really disconnected from objective reality? Can any musical score, even a graphical one, have priority over a performance of the score? Does the logical structure of Cardew’s Tractatus follow that of Wittgenstein’s Tractatus in any systematic or meaningful way? How much weight should we give to a musicological analysis of a work of music which was made with such specific ideological commitments?

As performing musicians, however, we cannot possibly attempt to provide even a sketch to the answers: we simply have to find a way to get on with the rehearsals, with preparing the performance, whilst hoping that what is done is not inherently artistically flawed. And in this instance we took sustenance from the fact that at the time of the composition of Tractatus, Cardew was fully engaged in its writing and performance, and was clearly deeply changed as a musician by his experience of the improvising he was doing for these performances. Indeed, at this time he joined the improvising group AMM, an event he later described as a turning point “both in the composition of Treatise and in everything I have thought about music up to now.”

Such considerations may be logically inconclusive, but nonetheless are sufficiently weighty for the musician concerned with praxis. However, there is a more formal way of resolving the inner tension between score as aesthetic object and score as representation of sounding music, which is to consider the role played by the aesthetic object as a stimulus or catalyst to improvisation. The improvising performer treats graphic scores and conventional scores very differently. Certain aspects (perhaps different in each performance) may only stand out, become significant, in performance conditions. Unlike the conventional score, it is perhaps essential that the graphic score is not self-efficacy, does not withdraw itself from one’s consciousness. This reading is consistent with treating Tractatus, not as the ideologically suspect graphic music ‘proper’, but rather as something closer to simple graphic notation, the role of which Cardew tells us is to inspire musicians, to help them improvise. Finally, we may note that seven years after the publication of Stockhausen’s Vermedium, the composer himself had evidently mellowed in his view towards Tractatus, as he was planning to take part in a reunion performance with AMM—a performance which sadly never took place on account of Cardew’s untimely death in a hit and run accident in 1981.

“In approaching the score for the first time, the myriad of symbolic associations and the virtually limitless ways of realizing a graphic score need to be distilled in order to have a resonance with those participating. In essence the object is approached as a ‘clean slate’ and provides a base upon which to site meeting points, trajectories and classifications, formulated spontaneously among us. Although we have already mentioned that the hierarchies of tradition are not a priority; ironically, similar structures take their place, some implicit, others explicitly formulated between musicians yet deliberately fluid. These structures can be applied to individual performances, applied as agreements of how to interpret durations and shapes, or used to catalyse new phases or directions. Exceptions to role are expected and encouraged. It is clear from this that musicians are in a sense occupying the role of the conceptualist and in doing so are conceptualising and implementing what the work is and how it will be transmitted from the structure outlined in the score. In saying this, there is still a place for the composer, whose intentions are refracted through the graphic score, together with his or her tacit acceptance that a performance will never be or aspire to be the absolute interpretation. Thus the work lives on ever open to fresh reconstitution, evolving resolution and commodification.”

Freedom and Improvisation

Having achieved a satisfactory resolution of the initial contradictions apparent to us as potential performers of Tractatus through a view of the score as a stimulus to improvisation, we rapidly encountered further tensions centred on the practice of improvisation itself. An outer contradiction is the age-old problem for musicians of the authority of the score (representing the composer) vs. the freedom of the performer. As interpreters of a conventional score, performers have more or less freedom according to the nature of the score and the historical epoch of the composition. What is acceptable, indeed mandated, in a score by J.S. Bach (for example, the addition of ornamentation and choice of dynamics), is very definitely beyond the pale in a score by Pierre Boulez (or even Beethoven). Such freedom that remains in a score from the classical period, which may include details of articulation or phrasing, is in fact generally subject to unromanticated constraints of standard practice performance. Nonetheless, it is still fair to say that in general terms the degrees of freedom of the “classical” performer, always limited, became further diminished during the course of the twentieth century, until a counter-reaction set in with the music of John Cage, Luciano Berio, George Benjamin, Wolf, and others. Owing much to the sound-art movement and musique concrete, and also partly inspired by the contemporary evolution of free jazz, such composers experimented with permitting the performer much more freedom of expression—including the choice of note pitches, durations, timbre and amplitude—and Cardew can be seen as continuing in this line of development of such “indeterminate” scores.

“On the part of the composer this represented a huge shift of responsibility: those composers creating a graphic score assume that musicians are willing to be confronted with the conceptual, causal, and philosophical enquiry that ensues in order to form a musical statement, a process which in the classical tradition is usually instigated and completed by the composer.”

In such cases, however, there are inevitably some constraints placed on the freedom of the performers: without such constraints the work itself would risk losing its identity. In Tractatus the constraints are few indeed—instrumentation, number of performers, duration of performance, rules of interpretation of the graphic elements are all left unspecified—but nonetheless Cardew was still to insist that “[t]he score must govern the music. It must have authority, and not merely
be an arbitrary jumping-off point for improvisation, with no internal consistency. It is, unsurprisingly, given that the composition had cost him four years of compositional effort – that he wanted to avoid marathon free jazz jam sessions. To count as such, a performance of Treatise must, even though it may include any sounds under the sun, be controlled by the signs of the score, must still aim at a realization of the logic structure expressed in the code of its graphic elements: the sounds must be a picture of the score. This is the outer contradiction, which in fact is easily resolved by the performers, simply by adopting a consistent set of rules for the interpretation of the score. As an example, let us examine p.30 of Treatise (see Figure Below). On this page, the central thick black horizontal line was represented in performance by a looped recording of a record player needle in contact with the revolving inner (ungrooved) section of a record. This recording was stopped and restarted at the point that the line comes to an abrupt halt.

The four staves mixing down into one above the central line were assigned to a four-track tape recorder, the staves below made the responsibility of the flautist and clarinettist. The clarinettist performed the point events (small black circles) as pitched notes, with pitch related to distance from the central line, reading rectangles around the circles as modifiers of timbre (e.g. colour trills or flutter tonguing). The ‘backwards note’ at the right-hand end of the lower stave served as a sign for an orientating moment in which flute and clarinet were to play together, the resulting interaction flinging the clarinettist up into the upper stave to prepare for the next page.

Such an account could be given for each page of the performance. These interpretations were set-tied on in the course of rehearsals – playful experimental sessions in which different rules were tried out, rejected or modified, and finally agreed upon. Yet it is clear that for a successful, or satisfying, or in some sense authentic or genuine performance of Treatise, something more is required than simple agreement on rules of interpretation. Elucidating this would be in part to elucidate the set of aesthetic criteria that each player brought to the rehearsals: the criteria according to which any particular rendition was judged to succeed or fail. But also, of course, having such rules of interpretation still left many decisions open to the performer to be made in the course of the performance: in other words, each performance remains an improvisation.

And this brings us to an inner contradiction, which might be seen as being an area of tension for any performance involving so-called free improvisation. This is to do with the role of musical memorises, or habits, in improvisation. In playing Treatise Cardew hopes that that performers avoid their sedimented musical habits: “The danger in this kind of work is that many readers of the score will simply relate the musical memories they have already acquired to the notation in front of them, and the result will be merely a gulash”. The thought is that such a gulash could be an unsatisfactory mixture of different styles, a stew of undigested scales, melodic fragments and rhythmic patterns. Yet in attempting to avoid this it would seem that one danger would be over-interpreting and over-constraining: in short, pre-composition. And such preparation would be a long way short of the path to the ocean of spontaneity” which Cardew declares that he hoped his Treatise could become. But the lure of spontaneity also holds its dangers: in giving way to unconscious flow, in allowing ourselves to be vessels for the spirit of inspiration, performers necessarily rely on already pre-acquired and embodied motor skills, perhaps returning us to the gulash. Nonetheless, performers cannot create ex nihilo, generating music from the pure spontaneity within us. Although sometimes it seems that Cardew believes this: for example he writes that the ideal performers of Treatise would be ‘musical innocents’, ax on the other hand he recognizes that this is impossible: for he also writes that his hope for performances of Treatise is that “each musician will give of his own music – he will give it as his response to my music, which is the score itself, and further, that a player may be guided “by his personal experience of music-making”.

“A performance of a graphic score will always contain rogue elements, gestures and human ‘error’. There are topologies which are unmapped or undecided, containing perhaps some obscure symbol which evaded description, or a cascade of provocative shapes which defy a verbal description. Within these we find ourselves engaging in the process with an intensity similar to that of improvisation: absorbing and filtering, instantly sieving through what has gone before and making a sensitive riposte. Occurring often and not synchronously with others; such elements are fissures in the terrain which have to be negotiated, often by a leap of faith.”

Given that we none of us are musical innocents, and that we cannot help but be influenced by our own musical histories, what resolution can we reach? The key, we believe, lies in the magic which takes place during rehearsals, where as experimental musicians we test out a range of aural possibilities, and allow ourselves to be guided just as much by the resulting sound as by the score. In describing the approach of AMM, Cardew writes “We are searching for sounds and for responses that attach to them, rather than thinking them up, preparing them and producing them. The search is conducted in the medium of sound and the musician himself is at the heart of the experiment”. If the alchemy is successful, what results is not the transformation of lead into gold, but something much more mysterious, that is, the generation of a musical organism: a living polymorphic entity which absorbs our individual wills and transcends our individual powers. In ideal performances, individual components of this organism may be unaware of the contributions which they are making to the total sound. Such contributions are solicited by the evolving and dynamic sound environment, and are constrained not only by the score, that visual aesthetic object existing in front of each player, and by the set of pre-agreed interpretative rules, but by what we might call the rules of engagement, the modus operandi, the bodily schemata of this newly-formed musical organism. Such an organism has been generated in the heat of the crucible of rehearsals of Treatise: its senses, its powers of locomotion, its gestures and thoughts – all are exquisitely formed to permit it to exist in the world of Treatise. In an ideal performance, what is disclosed to us as performers is nothing less than a new mode of existing, which the audience is invited to experience. And what we hope is that this new mode of existence represents the dynamic logical structure created by the composer of Treatise.
Johnny Rodger

STICKING THE BOOTH IN WHEN THE CITY IS DOWN

Notes towards a critique of the graphic tendency in social and urban theory

The use of maps and charts to plot social space and behaviour in the city has a long pedigree. Many people are instinctively uncomfortable with the necessarily reductive nature of such graphic presentations of city life. – What are we to make of the images shown recently on the BBC news (http://www.bbc.co.uk/news/uk-15716607) mapping the provenance of ‘almost 50%’ of those arrested for taking part in the recent riots in Manchester as coming from areas (marked out in red of course) categorised as belonging to the 5% of most impoverished areas in England? Are facts established in that exercise, and what are they exactly? And to what end are they established?

Some social theorists, take De Certeau for example, are uncompromising in their categorisation of the impulse to map as inhumane and authoritarian – he says of maps that they ‘colonise space’, that their reductions involve ‘erasure of individual itineraries’ and that ultimately they represent ‘a totalizing stage’ whereby the map ‘remains alone on the stage’. Is nothing good to come of them then, except their own self-fulfilling and necessarily narrow moral scope? Surely that depends on how the data is gathered, in what context the map is constructed, how the material is interpreted, and with what aims in mind the research and construction of the map is undertaken? Four urban maps are examined here as case studies, each with their own set of very particular aims: one to disprove the existence of numbers of poor people, one to show how a new way of urban living could be constructed across the country, one to show what happens to different sets of people when the city expands in size rapidly, and one which sets out to examine how people orientate themselves in the city and how they could do that better.

“It would be a mistake to reduce Cardew’s music to a singular musical ambition, and the labyrinthine nature of his work only allows us to render an outline here, however, there is the sense that the title Treatise points towards an elucidation on the part of the musician and their practice, a Great Learning in fact, in which failure reveals an antagonistic yet fundamental source of inspiration. Echoes of Cardew’s words and contradictions are useful to a point, but eventually have to be put aside. If we are to realize any truth or authenticity in the score of Treatise it has to be validated by our own convictions and informed judgements, which can heed Cardew, but not recreate the cultural environment where he found himself. Our task is to re-situate a dialect in a way that pertains to our own time, and our apprenticeship with Treatise is a means of gathering the debris that remains.”