

§3(i) 'A unified musical time'¹

The Life Absolute from which has sprung all that is felt, seen, and perceived, and into which all again merges in time, is a silent, motionless and eternal life which among the Sufis is called *Zât*. Every motion that springs forth from this silent life is a vibration and a creator of vibrations. Within one vibration are created many vibrations; as motion causes motion so the silent life becomes active in a certain part, and creates every moment more and more activity, losing thereby the peace of the original silent life. It is the grade of activity of these vibrations that accounts for the various planes of existence. These planes are imagined to differ from one another, but in reality they cannot be entirely detached and made separate from one another. The activity of vibrations makes them grosser, and thus the earth is born of the heavens.²

This statement by Hazrat Inayat Khan, whose writings set up a strong sympathetic resonance in Stockhausen's musical mind when he encountered them in the early 1970s, could stand as an abstract of this whole part of the present book (and might therefore be worth rereading a couple of times before going further). Despite its language we would do well to hesitate before filing it under 'Woolly mysticism'. It was no Sufi mystic but the unimpeachably rational-minded philosopher A N Whitehead, after all, who asserted:

The misconception which has haunted philosophic literature through the ages, is the notion of independent existence. There is no such mode of existence. Every entity is only to be understood in terms of the way in which it is interwoven with the rest of the Universe.³

Khan in fact expresses a basic truth, not just of many ancient religions (Buddhism springs to mind) but of modern physics too. We cannot conceive of the universe we inhabit other than as matter in motion. All we perceive reaches us in the form of vibrations, its nature ultimately depending on its 'grade of activity' or, if we prefer, rate of oscillation. It would be mistaken to imagine a continuous scale, or that this rate need only be altered for something we perceive with one sense to be converted into something able to be experienced through another: matters are evidently not so simple. But everything of whose nature we can speak with any confidence – from the tiniest particle science has been able to discover to the universe itself – vibrates cyclically. Nor, on the plane with which we are concerned here, the acoustic, is the notion of a continuum without material reality, as we shall discover.

The largest cycle we can speculate about, the interval between 'big bang' and 'big crunch', Stockhausen borrows an acoustical term to describe as 'the fundamental of the universe'.⁴ In his note to **YLEM**, his miniature musical representation of such a process, we find: 'Theory of the oscillating universe: every 80,000,000,000 years the universe explodes, unfolds, and draws together again.'⁵ Stockhausen's metaphor invites us to think of all smaller cycles as 'partials' of this 'fundamental'. These might include the different rates at which the various constituents of our own galaxy revolve; our own sun, for example, which takes 200 million years to be carried around it. The orbits of the planets around the sun vary between 248 earth years for Pluto and 88 days for Mercury. The terrestrial year of our own revolution is marked by cycles associated with the moon's movement around us and the earth's on its axis. And so on, even unto the subatomic level.

Along the way, so to speak, in our frankly unscientific scenario, we pass through the range of vibrations capable of being heard. About which some basic, perfectly scientific information:

As an objective and measurable phenomenon, sound is produced and transmitted by the vibration of matter at its molecular level. For human beings as presently constituted, vibrations perceptible as sounds extend from a low frequency of about 16 vibrations per second to a high of about 25,000. These sound vibrations come from a material source which must be sufficiently elastic to vibrate to and fro, and they are transmitted by pressure waves affecting the molecules of a transmitting medium.⁶

Air is most commonly that medium, of course. Sound travels through it (like light, at a constant speed), after leaving its appropriately stimulated 'material source', like ripples caused by a pebble cast into a pool, but in three dimensions instead of two. Crucial to my argument here is one consequence of sound's origin in minute changes in air pressure. The nature of all the sounds we hear is decisively influenced by the *frequency* of the waves carrying them, that is by the *time* factor.

Though such basic considerations are hardly thought relevant by your ordinary composer even today, they provided the background to Stockhausen's copious theoretical writings of the 1950s. The most celebrated of his articles from that time is probably *...wie die Zeit vergeht...* (*...how time passes ...*, 1956), epitomized by its bald opening assertion: 'Music consists of order-relationships in time.'⁷ Here, among other fruits of his investigations into the basic nature of sound both in the electronic studio and in Meyer-Eppler's lecture room, he introduces his notion of (in the title of a subsequent essay in which he develops his thinking further) 'The Unity of Musical Time'. Merely to perceive the principle on which this unity is based is to gain insight into Stockhausen's approach to musical organization, and the remainder of this section is given over to examining his idea in what I take to be, for us at least, its two main aspects.

The first is that the vibrations available to the composer make up a continuum whose three 'time-areas' (as Stockhausen's article terms them⁸) correspond to the various areas of his activity, whether he is conscious of the fact or not. Of these, the range specified in our last quotation – the frequencies of individual sounds: c.16 to c.25,000 cycles per second (Hertz or Hz.) – relates only to the 'highest' (fastest). For traditional musical purposes, it turns out to be rather more limited. 20,000 – 25,000 Hz. is the province of certain animals other than the human, including bats and dogs (hence echolocation and dog whistles inaudible to man). The upward limit of human hearing, the highest frequency to which the hair-cells in the cochlea are responsive, varies between individuals and with age. Healthy young adult ears can detect frequencies upward of 16,000 Hz. and even up to 20,000 Hz. and beyond, while older ones cannot usually pick up anything in excess of 10,000 Hz. The fundamental frequency of the highest note on the piano (and thus of the highest sound routinely prescribed by the traditional composer) is 4,186 Hz. Much above this, Stockhausen tells us, 'we perceive only brilliance'⁹ rather than actual notes, though perception of definite pitch can result from sounds of up to around 6,000 Hz., above which such ability becomes seriously disorientated. This, then (6,000 Hz. is the figure accepted in his articles), is the upper threshold of the first of Stockhausen's time-areas, which I intend to call the Sphere of Pitch. It is the realm of "sounds" and their "colours",¹⁰ in his definition, to appreciate which we need to recall (p.xxx) that a note is characterized not only by its pitch (frequency of vibration) but also by its timbre, i.e. the quality (determined by its overtone-structure) that enables us to distinguish between the same note played on two different instruments. Compositionally, this may be thought of as the realm of melody and harmony, respectively the 'horizontal' and 'vertical' organization of the musical raw material that "sounds" and their "colours" represent.

Just as its upward limit cannot be rigidly set, it is not possible to be dogmatic about how far this Sphere of Pitch extends downward: it will vary with circumstances. The *lowest* piano note has 27.5 Hz. as its fundamental frequency. Below about 20 Hz. it becomes possible to

make out separate 'woofs', as demonstrated by the lowest organ notes, whose fundamentals are in this region. Certainly below about 16 Hz., the figure mentioned in our quotation and the one most commonly cited, a sustained tone tends to be perceived no longer as an extremely low pitch but as an extremely rapid pulse. By 8 Hz. we have made a more or less decisive transition to a Sphere of Duration, extending from such time periods of a fraction of a second (8 Hz = $\frac{1}{8}$ second) to ones of up to about eight seconds. Stockhausen describes this as the domain of 'individually audible pulses within given time intervals',¹¹ in which the composer has jurisdiction over metre (the scheme of regular periods underlying a given passage) and hence rhythm (the beats within such a scheme that are actually sounded).

Slowing down further we pass through a second 'transitional region where it is difficult to know what the sound really is',¹² as Stockhausen describes:

At about eight seconds our ability to distinguish durational relationships gradually breaks down. With values of greater length we are no longer able to remember the exact lengths of durations or perceive their proportions as accurately as we can those that lie between ca. $\frac{1}{8}$ and ca. 8 seconds.¹³

With notes much over eight seconds, then, we pass to a Sphere of Form, the time-area within which the composer is concerned with organizing 'the time relationships of longer events',¹⁴ from the phrase or paragraph all the way to 'the more architectural aspects of music',¹⁵ the entire movement or work.

The point to be grasped about our three spheres is that they arise from a single phenomenon experienced at different speeds, rather as ice, water and steam might be said to arise from changes of temperature. And to borrow Khan's words, these spheres, 'these planes are imagined to differ from one another, but in reality they cannot be entirely detached and made separate from one another.' In Stockhausen's later (1961) article *The unity of musical time* (in fact published in English as *The concept of unity in electronic music*) this is demonstrated, with reference to the realization of **KONTAKTE**, when he describes in some detail a 'continuous overlapping' between the Pitch and Duration Spheres.¹⁶ While there is no need to do the same here, it is worth pausing for a moment over one of the proofs he gives of correspondence between the different realms. 'Tone colour [timbre] is to a fundamental as rhythm is to a metre', he writes.¹⁷ Meaning? Well, as we found in §1(iv) (p.xxx), regular periodicity in our Sphere of Pitch (that of 'sounds and their colours', remember) gives rise to a 'tone', i.e. a pitch whose fundamental is clearly identifiable; whereas deviation from periodicity will result in a timbre of indefinite pitch (more or less 'noisy'). In the slower Sphere of Duration, Stockhausen points out, this state of affairs has an exact equivalence in the relationship of rhythm, which may be more or less aperiodic, to 'pure' (periodic) metre. (From this point of view, he goes on to imply, it is quite understandable that European art music, wedded as it has long been to regular rhythm, should have found no place for the timbre equivalent of rhythmic irregularity: noise sounds.)

If the details of Stockhausen's argument quickly get too technical to be of concern to the mere listener, the utility and importance, not to say fascination, of the essential 'unity of musical time' to a composer who recognizes it, and above all to one on the sort of science-inspired musical mission described in §1(iii), are less difficult to appreciate. We need only reflect that the fact of such a unity makes possible that interplay between *form* ('architectural aspects'), *figure* (here not just precise *Gestalten* but any configuration of individual sounds in time) and *timbre* which, despite my wish to save it for this point in the book, could not be prevented from surfacing in earlier sections (p.xxx). A possibility, Stockhausen contends, implying something quite unprecedented:

A conception of music appeared in the middle of this century which had not existed before. We can now pass from one realm of perception, that of melody, figure, motif, formula or whatever you want to call it, into another realm, which is timbre – and recognize that the one can be the other just depending on the speed. If we compress a whole Beethoven symphony into two seconds then we get a sound – just a sound lasting two seconds which has a very particular character. And this character depends on the *form* of the whole symphony, which has been composed by Beethoven (even if the timbre itself is the result of our compression of it in time).

In one sense, any sound is form, the form depending on how fast or slow the sound is. What we normally call *form* is in the *slow* time of perception; what we call *figure* is in the *medium* time of perception; what we call *timbre* is in the *fast* time of perception. Once we know this we can switch between realms of perception: from form into figure, from figure into timbre, and from timbre back into form. And at the same time in a given composition, we can have several layers: one layer of pure timbre not yet either form or figure; another layer of figure on the way to becoming timbre by acceleration; and so on.¹⁸

The American composer Michael Manion points to another possibility whose elegance makes us aware that we are here dealing not with some intellectual abstraction, but with nothing less than what Webern called ‘the conquest of the tonal field’¹⁹ but now on a basis of unity beyond that composer’s dreams: ‘For example: if a rhythm can be sped up to form a timbre, then the resulting timbre can be used to perform the original rhythm.’²⁰

Stockhausen’s momentous finding that (as he summarized it in still another article) ‘all properties of sound procedure are to be extracted from the structure in time’²¹ became one of the main pillars of his composing from the moment he made it in 1955. Maconie records examples of its exploitation from projects as different as **KLAVIERSTÜCK X** and **TUNNEL-SPIRAL**,²² but in truth it would be impossible to think of a work that does not consciously draw on it. The description of **MUSIK IM BAUCH** given in §1(vi) (p.xxx) concentrated on how the piece co-ordinates the various ‘realms of perception’, and gave some idea of the play it makes with the fact that their territories overlap. (There was much mention there of ‘texture’, which might be described as inhabiting the no man’s land between figure and timbre.) An especially striking instance of passage from the slow to the medium realm (until a point is reached where form becomes figure) will be encountered when we come to look at **TRANS**, though this whole business is no less apt to surface in the other two works due to be dealt with in §4(iii) (see especially **MIXTUR**, the Moment *TRANSLATION* – p.xxx). In fine, nothing could be closer to Stockhausen’s essence as a composer than this conception – profoundly beautiful in itself, inexhaustible in its ramifications – of his musical material.

It is of course in the electronic studio, where the opportunities for continuous manipulation are that much greater, that such switching between realms takes on greatest significance. **KONTAKTE** is in one of its aspects an essay on it, and in §1(v) we examined a severe case of it in **HYMNEN**. The passage in question involved the *Marseillaise*, and it was to explore the ground opened up by such processes of transformation in conjunction with his own readily- recognizable *Gestalten* that Stockhausen returned to electronic tape music in the mid-1970s, after a gap of almost a decade.

The result, **SIRIUS**, is probably the most thoroughgoing demonstration to its date that ‘any sound is form’ (significantly, the quotation from which that assertion comes derives from a lecture on the work). As we have seen (p.xxx), the *timbres* used throughout the main body of the work were synthesized from four of the **TIERKREIS** Formulas translated, we may now

say, from the medium to the fast realm of perception (in other words speeded up). The *figures* which these Formulas constitute pass during the work through every stage of growth and disintegration, and every state of integrity from unrecognizable distortion to shimmering perfection. And then the *form* of **SIRIUS** unfolds in terms of cycles of these *Gestalten*, which, while they may be so accelerated as to be perceptible as pure timbre, may equally be attenuated beyond recognition, so that *CAPRICORN* extends in one version over eight minutes (its pitches, that is, are heard as single Points, disposed over this duration according to the time-proportions of the original melody), thus serving, as with the same melody's marimba expansion in the recorded **MUSIK IM BAUCH** (p.xxx), a purely formal purpose.

No wonder Stockhausen says that in **SIRIUS** 'everything is structure'.²³ If the principle the work embodies, that of organizational structure being driven by time (speed), can be grasped enough that this assertion can be seen not to contradict my own (p.xxx) that the work is all *transformation*, that may be sufficient. Structure, time, transformation – in Stockhausen's musical theory and practice, these three are ways of looking at the same reality.

There is a second important aspect of his idea of a 'unified time domain',²⁴ that I said we might discuss. Actually, it is implicit in what has already been said, if not itself another way of saying it. I refer to the fact that the four basic dimensions or parameters of music – pitch, duration (rhythm), dynamics, timbre – are themselves related under the auspices of time (speed), to the point of their being acoustically interdependent.

The ultimate dependence on the time factor of sounds' pitch (speed of vibration), duration (simply length), and timbre (as the equivalent of what in a slower time of perception would be called rhythmic structure) has I hope been sufficiently established. But what of dynamics (intensity), the *loudness* of sounds, which in §1(ii) (p.63) we defined in terms of amplitude, the *size* (height) of the carrying waves? True, the space dimension must be important, but in *The Unity of Musical Time* Stockhausen concludes that here too time is in the end decisive:

It seemed to me that the differences in intensity among sounds ultimately derive from the latter property: when pulsations of equal value follow one another in closer temporal succession, the over-all intensity increases.²⁵

To make this notion a little more concrete, it seems common sense that the speed at which a sound is produced must decisively influence its intensity when we think that if we want to beat a drum louder we hit it *harder*, setting it vibrating *faster*.

Such abstruse matters are again relevant to our understanding of Stockhausen's approach to composing less in themselves than for what they point toward, which is the interconnectedness, mutual dependence indeed, of the musical parameters. True enough, we have heard him talk about the necessity of keeping them 'separately accessible' when constructing the tape of **SIRIUS** (p.xxx), but that was a matter of practicality. In Cott he is at pains to demonstrate that in truth 'these parameters are only theoretical parameters',²⁶ in the sense that these categories too, like Khan's planes of existence, 'in reality (...) cannot be entirely detached and made separate from one another'.

Everything in this section has been to show that none of the other basic parameters of sound is to be accounted for without reference to the concept of *duration*. Equally *timbre*, as Boulez put it, exists as 'a complex function of pitch, duration and amplitude',²⁷ a state of affairs exploited by Stockhausen in the electronic studio, where he discovered that by influencing the three other sound-properties, 'the same timbre can be obtained in many different ways'.²⁸ Again, 'everything can be interpreted as being *dynamics*',²⁹ including pitch, which is not quite the exclusive matter of frequency it has been convenient to present it as here. As one textbook explains:

Frequency and pitch are closely related but aren't synonymous. A sound of constant frequency, if increased in loudness, appears to change pitch (if it's high, it goes up, if low, down).³⁰

In summary, although Stockhausen from the beginning pursued a more determinedly 'parametric' approach than any composer in history, it must be doubted whether anyone else has been as conscious of the fact that, as he wrote in *The Unity of Musical Time*, 'we perceive a sound-event as a homogeneous phenomenon rather than as a composite of four separate properties'.³¹

§3(ii) 'A new concord of material and form'

Although Stockhausen's theory of a unified musical time was not formulated until the mid-1950s, it accorded perfectly with the conception of musical ordering he had operated from very early. Specifically, it gave validation to the 'integral' side of integral serialism, that quest 'to bring all aspects of a composition under one organizing principle (series of proportions)' (Jerome Kohl¹).

Though it has often been maintained that pitch (melody) and rhythm must be considered more fundamental to music than dynamics or timbre, as undoubtedly they have been to the way it has developed, not least in our tradition, Stockhausen's serializing 'urge to treat all characteristics of tones equally' (p.65) can be seen as perfectly natural in the light of our foray into basic acoustics. One of the few rational criticisms of the 'total serial' approach, when it was a new one, disputed the logic of applying a single set of rules to aspects of music that are by nature quite different. Wörner cites Stockhausen himself pausing over the composer Wolfgang Fortner's objection that, in treating the various parameters, 'one could not count apples as pears',² and the frequent reference in early articles like *Situation des Handwerks* ('The State of the Craft', 1952³) to the necessity of dealing with the parameters on a basis of non-contradiction (*Widerspruchslosigkeit*) confirms his sensitivity to the issue of theoretical consistency. It was the unified time theory, according to which all musical fruits were held to derive from the one tree of time, that enabled him to lay such reservations aside. Indeed, his investigations must have convinced him more than ever of the insufficiency, the arbitrariness, of *not* seeking a 'unification of all the elements of a composition' (p.65), when their relatedness could be demonstrated to rest on acoustical realities.

We know from §1(iv) that such considerations made the electronic studio a favoured theatre for Stockhausen's composing. Only there would it be possible for him meaningfully to 'intervene compositionally among these complex connections'⁴ in the problematic area of timbre, so a crucial to attempt to exercise universal serial control over music's 'order relationships in time' (p.xxx). Paul Griffiths:

it was difficult to see how the technique could be logically extended to the domain of timbre unless there were to be some way of determining exactly what constituent frequencies each timbre was to contain. The question of timbre synthesis thus became extremely important.⁵

Although the question is one that has been touched on before (p.xxx), I want to return to it here, in the shape of the impulse-derived material of **KONTAKTE**, for the light it sheds on what, for Stockhausen, true musical unity entails. The reason for the choice becomes clear when I quote in full a passage from *The Unity of Musical Time*, raided at the end of §3(i) to clinch his argument about the consanguinity of the parameters. Even in his earlier electronic works, he says,

compositionally, in terms of the production and manipulation of sound, these individual sound-properties had to be dealt with separately. But, on the other hand, we perceive a sound-event as a homogeneous phenomenon rather than as a composite of four separate properties. At a relatively early stage of my work in electronic composition, I had already considered the possibility of equating this unity of perception with an analogous unity in composition itself. In the preparatory work for my composition **KONTAKTE**, I found, for the first time, ways to bring all properties under a single control. I deduced that all differences of acoustic perception can be traced to differences in the temporal structure of sound waves.⁶

The method of timbre synthesis used in **KONTAKTE**, a simple one in principle if hardly in practice, took as raw material, in place of the sine-waves of the earlier **STUDIEN**, clicks of electronically generated sound – ‘of short duration, indefinite pitch, and nondescript character’, in Harvey’s description⁷ – termed ‘impulses’. As the first step to making a timbre, a particular pattern of such acoustic ‘atoms’ was assembled on a tape loop.

What I first did was make different distances, measured in time – let’s say in inches on the tape – from one pulse to the next, then from the second to the third; let’s say this was a serial structure of different durations, or distances.⁸

Stockhausen next

let a loop run for several hours in one studio, and another loop for several hours in another studio, until thousands of metres of tape were full; then I would let it run forward at an extremely fast speed, which speeded it up in the ratio of 1:4 or 1:6, and do this again and again, till finally out of four hours I would get about eight seconds.⁹

We have already heard enough to predict that ‘the “colour” of the resulting sound would be determined by the variations of speed among the pulses of the original succession’,¹⁰ just as the timbres arrived at by compressing a Beethoven symphony movement in this way would be determined by the time-structure of that movement. So that if, in the simplest case, cited in Stockhausen’s conversations with Cott, a succession lasting one second were to be accelerated a thousandfold, the outcome would be a sound of particular timbre having a frequency of 1,000 Hz. (near the top of the trumpet’s range): ‘And one cycle of the 1,000 cycles per second was my original rhythm.’¹¹ ‘The secret of timbre composition’, he avers, ‘lies in the production of very specific cycles of rhythmic changes.’¹²

‘For most musicians’, as he wrote in *The Unity of Musical Time*, ‘these considerations may seem specifically related to acoustics rather than to music.’¹³ The traditional composer’s position was frankly described by Stravinsky: ‘Though I have worked all my life in sound, from an academic point of view I do not even know what sound is (I once tried to read Rayleigh’s *Theory of Sound* but was unable mathematically to follow its simplest explanations).’¹⁴ This could no longer be good enough, Stockhausen was convinced, for the composer operating in the changed conditions of the nuclear / electronic age: ‘He has had to expand his *métier*, and to study acoustics, in order to better the acquaintance with his material.’¹⁵ Not everyone agreed, needless to say, even among his peers. Hans Werner Henze, for instance, could write: ‘I have never been able to go along with all this acoustic research, this technological and electronic hunt for new sounds, which is undertaken in the new laboratories.’^{16N} We are finding how inadequate, not to say misconceived, such a criticism would have seemed to the composer of **KONTAKTE**. Not that the Varèsian thirst for unheard sonorities was ever alien

to Stockhausen – we know it was not, and certainly not in **KONTAKTE**. But it was only ever part of the story, never an end in itself, and thus less urgent to his agenda than the drive ‘to bring all properties under a single control’.

And there were other important goals of ‘all this acoustic research’ of which Henze’s complaint contains no hint. One might almost be called a matter of principle. The composer’s task – the etymology is one Stockhausen was always quick to emphasize – is to *put together*, while his whole resource is the musical time continuum. It is then inadequate if not illogical, Stockhausen argues, to operate ever more scrupulously in the two slower realms of perception, which is to say on the disposition of sounds in time, while the sounds themselves (equally, of course, the product of their ‘structure in time’), because the act of composition has not penetrated to the fast realm, are simply accepted as given. As he articulates it:

A musical composition is no more than a temporal ordering of sound events, just as each sound event in a composition is a temporal ordering of pulses. *It is only a question of the point at which composition begins*: in composing for instruments whose sounds are predetermined, a composer need not be concerned with these problems. On the other hand, in electronic music, one can either compose each sound directly in terms of its wave succession, or, finally, each individual sound wave may be determined in terms of its actual vibration, by an ordering of the succession of pulses.¹⁷ (Emphasis mine.)

A further quotation from Stockhausen’s writings of the 1950s presses home the point still further, while enlarging on that goal of his studio investigations identified, in yet another place,¹⁸ as ‘the most important of all’: formal unity. A working familiarity with the nature of sound, he writes,

will be indispensable to those composers who are not content to accept sound phenomena as given facts, but who, in opposition to the dictatorship of the material, attempt to drive their own formal conceptions as far as possible into the sounds in order to achieve a new concord of material and form: that of acoustical micro-structure and musical macro-structure. (...)

The existing instrumental sounds are pre-formed, dependent on the way instruments are built and played: they are ‘objects’. Did the composers of today build the piano, the violin or the trumpet? Did they determine how they should be played? What does an architect do if he has to build a bridge without supports, a skyscraper or an aircraft hangar? Does he still use adobe, wood and bricks? New forms demand reinforced concrete, glass, aluminium – aluminium, glass, reinforced concrete make possible new forms.

This gave rise to thoughts of giving up the pre-formed instrumental sounds, and of composing the sounds for a particular composition oneself, of combining them by artificial means according to the laws of this and no other composition. Composition goes one step further than before. The structure of a given composition and the structure of the material employed in it are derived from one single musical idea: material-structure and work-structure are one and the same thing.¹⁹

Stockhausen’s thinking on these matters began crystallizing in his correspondence with Karel Goeyvaerts and was bound up with the high hopes both men were pinning on the electronic future even as they were willing (or in Stockhausen’s case bringing) it into existence. The

search for unity dominated his first practical encounter with the problems of timbre synthesis in Schaeffer's Paris studio; as he wrote to his friend on 3 December 1952: 'I now wanted a structure, to be realized in an *Etude*, that was already worked into the micro-dimension[s] of a single sound, so that in every moment, however small, the overall principle of my idea would be present.'²⁰ The apotheosis of this principle may have been not **KONTAKTE** – in which, remarks Maconie,²¹ 'contradictions arise between the form and material' due to the new 'synthetic procedure' developed during the two and a half years between the drafting of the form and the completion of the realization – but the earlier **ELEKTRONISCHE STUDIEN**. Toop, elaborating his view of the second of the pair as 'a triumph of serial unity',²² writes: '**STUDIE II** had brought Stockhausen closer than ever to what seemed to be a perfect solution, namely the use of a single numerical series and its derivations to govern every conceivable aspect of a composition.'²³ Similarly Griffiths, after explaining how the same proportions used in building the sounds of **STUDIE I** from sine-tone frequencies inform various aspects of this material's subsequent organization within the piece, concludes: 'Nothing could better illustrate Stockhausen's will to achieve an image of perfect unity.'²⁴

Clearly that will, though able to be exercised with particular thoroughness in the studio, was not something Stockhausen was sanguine about turning on and off with its tape recorders and generators: this is not after all a discussion applicable only to electronic music. Right enough, it would remain as true as when he wrote it in 1958 – even the possibilities for sound transformation opened up by live electronics could not change it – that it was only in the studio that 'each sound is (...) the result of a compositional act'²⁵ in the very fullest sense, since only there could it be possible 'to compose each sound directly' by determining its micro-structure from scratch. (Insofar as the much later notion of the *modernes Orchester* (p.xxx) departed from this principle, it was by bringing work done in the studio, or at any rate beforehand, into the live context.) Stockhausen's works themselves, however, which in the event rarely dispensed entirely with 'the pre-formed instrumental sounds', and yet represent no retreat from the principle at issue, compel a less narrow view of this whole question. What then becomes clear is that his concerns with, on the one hand, the requirement (again one is able to go back all the way to the time of the **KONKRETE ETÜDE** for a phrase) 'that the sound should be the result of an artistic intention',²⁶ and, on the other, with ways of establishing a relationship between the 'micro' and 'macro' levels of his works to make them express the 'unity of musical time' – what becomes clear is that these concerns occupied him outside the studio no less than in it.

In exploring this contention further, as we should, first things first: sound material. Right from the start, that is even in **KREUZSPIEL**, whose ensemble (see Worklist, p.xxx) would alone have been sufficient to brand the piece as outlandish in 1951, Stockhausen's attitude to his music's sound resources, like his attitude to everything else in it, was guided by 'the ideal of the work as unique and characteristic' (p.xxx). In the past, he points out, 'it used to be taken for granted that one could compose in the most various styles (personal styles and historical styles) using the same instruments.'²⁷ Contrast the thinking brought to Stockhausen's meticulous fabrication of the timbre-scape in which a work such as **MIKROPHONIE II** is played out:

One of the most important reasons for pursuing such methods of timbre composition lies (...) in the desire to compose *a unique and unmistakable sound world* for a work, and no longer to maintain the old antithesis that, in composition the What doesn't matter so much – that is for example, the material (in this case, choir and organ sounds) – but that it is only the How – *how* one composes with such sounds – that is important.²⁸

The details of his work-catalogue verify that the creation of a thoroughly distinctive sound-world for each work was indeed another of those features (to be set alongside those mentioned in §1(viii)) that give his output a kind of paradoxical consistency. The resources of each work involving instruments are meticulously designed, the choice of percussion, for instance, receiving unprecedented attention:

Since 1952, and SPIEL for orchestra, many of my scores have even included parts for cymbals with specific pitches. And then, for example, in my GRUPPEN for three orchestras I had decided to use cowbells, which by their nature are fixed in pitch. When I went to the factory where they made them, I was confronted by the fact that I could have bells of any pitch. So I had to choose which I wanted for my piece. I then made a special little scale for each of my orchestras, three times four of these *Almglocken*, which then served for the whole of the piece. When a composer works in such a careful way, with even such instruments being tied to certain pitches, the almost automatic outcome is a very distinctive sound world for that piece. This is complicated and makes work much more difficult than conventional orchestration: the instruments may be harder to find, making it likely that the work will be performed less often. But it creates a harmonic and melodic atmosphere peculiar to that work.²⁹

Obviously, the more elaborate the forces employed in his music, the more readily Stockhausen was able to mitigate 'the dictatorship of the material'. The solo instrumental works are far from standing outside the present discussion, however. One thinks of the measures taken to 'pre-structure' material in a case like **KLAVIERSTÜCK X**, with its seven distinct categories determined by (among other things) the intervals, number of pitches (etc.) that the chords and clusters of these 'characters'³⁰ (as he calls them) comprise. Even the works for a solo monophonic instrument, not excluding those designated as 'for *any* melody instrument', show him doing all he can to maintain the principle 'that the sound should be the result of an artistic intention' in more than the ordinary way. Each version of such works was conceived, typically in collaboration with the player for whom it was initially intended, with a view to arriving at a range of 'quite particular sounds and playing techniques'³¹ exploiting the capacities of the instrument in question but at the same time unique to the work.

The relevance such procedures have to our theme of the 'concord of material and form' becomes clearer as we pass from sound-material itself to its role in Stockhausen's works. That this role is, whatever else, a functional one is suggested by examples already introduced. The otherwise curious choice of forces in **KREUZSPIEL** arose not from any desire for novelty, but primarily in order to render manifest the formal conception ('crossplay'). The 'characters' of **KLAVIERSTÜCK X**, material-types (each 'a complete package of properties, characteristics'³²) formulated at the outset of composition with the sort of care otherwise paid to the synthesis of electronic timbres or the selection of instruments, likewise become players in the work's formal drama (or, as Stockhausen's note prefers, its 'process of mediation between non-organization and organization'³³). Such a practice might seem to relate to Cage's prepared piano (cp. the American's use of 'gamuts' – p.xxx), though in a 1953 article Stockhausen also cites Webern's use of a comparable technique, in the violin part of the first of the Op.7 pieces, whereby instrumental timbre 'assumes the function of clarifying form'.³⁴

A straightforward, if paradoxical, example of a carefully considered relationship between sound-material and form is represented by **DER JAHRESLAUF**. There, we found (p.xxx), the qualities of the gagaku instruments Stockhausen had committed himself to using, specifically the various durations they are capable of sustaining, were integral to the formal conception,

with its time-strata of widely differing speeds (representing millennia, centuries, decades, years). This makes the work a particularly clear example of the approach that, in Jerome Kohl's observation, 'led Stockhausen to differentiate between the necessity in electronic music to compose the timbres, and a similar but reversed process in instrumental music where the choice of timbres should determine form'.³⁵ (If it seems a no less clear case of 'dictatorship of the material', we need only compare the carefully-customized use in one work of these particular instruments from a distant culture with the automatic business of the traditional composer settling down to write another piano trio or wind quintet, to realize how thoroughly that dictatorship has been subverted.)

The live electronic works have one foot in the former of Kohl's categories, in that here the composer is able to influence electronically the 'given facts' of the instrumental (etc.) sounds he uses; he cannot 'compose the timbres', but he can drastically affect them. Here too, on the other hand, he must work with the grain of his resources. Rejoining Stockhausen at the point we left him earlier:

In a work like **MIKROPHONIE II**, the What is inseparable from the How: I would never have composed *how* I did, if the What had not already possessed completely specific and, for this work, suitable properties, which led to definite types of the How.

One must, for example, compose very definite types of structures when using ring modulators: superimpositions that are as simple as possible, many held notes, layers that do not move too fast and in which all the components are clearly audible, because the ring modulation creates very dense symmetrical spectra from simple sound processes, and this can easily lead to a preponderance of noise or to sound articulation which is too stereotyped.³⁶

If the temptation is to identify material with sound-material in the narrow sense of sound *resources*, we have found evidence to show that note-material is no less significant for Stockhausen's efforts to co-ordinate 'micro' and 'macro' elements in his works. A key notion here is Maconie's 'crystalline ideal', by which, once again, 'every aspect of a work's form, from the smallest detail to the overall shape, ought to be derivable from one basic serial configuration' (p.xxx). The purest representations of the ideal, as the quoted observations on **STUDIE I** might suggest, are no doubt offered by some of the very early pieces. The most comprehensive, however, are surely the more elaborate Formula works. This has already been adequately demonstrated, I hope, not least in the course of describing the most elaborate example of all: the composition of **LICHT** as an almighty extrapolation from the compendious wealth of musical information contained on the 'microfilm' of its Superformula.

The metaphor of magnification, used by Stockhausen himself in connection with **MANTRA**, brings into focus one view of this constant theme of his work – the theme, that is, of macro- and microform, ultimately reflecting his understanding of 'the most basic principles of the cosmic forces and the balance between them' (p.xxx). We might spend the rest of this section, though, peering down the other end of the telescope at a few of those passages in which he bombards the listener with the *whole* material of a piece in the shortest space. This, at any rate, is his preferred tactic, though a variant is that brief event about a third of the way through **HARLEKIN** which I described (p.xxx) as 'a sort of compressed review of the musical process *up to this point*'.

That the formal significance of such supercharged events can vary according to their placing is well demonstrated by two major piano projects. **KLAVIERSTÜCK X**, which as we lately heard describes a 'process of mediation between non-organization and organization', evolves

from what Stockhausen calls ‘an initial homogeneous state of advanced non-organization (undifferentiation)’.³⁷ In other words, in what Herbert Henck terms the piece’s ‘beginning phase’³⁸ (while assuming it to have been composed last), Stockhausen ‘trails’ the whole process he is about to present, though in a compressed form designed to level out the distinctions and minimize the characteristics he then proceeds to extract from the selfsame material as it ‘unfolds into increasingly numerous and concentrated [in the sense of ‘crystallized’] shapes’.³⁹ This opening (to 2’50” in Kontarsky’s recording – Sony S2K 53346 / Disc 2, Track [1]) is perhaps to be construed as a latterday ‘Representation of chaos’, out of which life will evolve in all its diversity, while clearly at the same time reinventing another ‘classical’ idea, that of the ‘exposition’ of traditional sonata-form analysis.

A comparable compression comes toward the end of **MANTRA** itself: a lightning-fast, almost jazzy, again ‘levelled out’ résumé, ‘in which the entire pitch content of the remainder of the [whole] work is compressed into a couple of minutes’.⁴⁰ (Stockhausen 16, Track [23].) A recapitulation of a kind, then, though Toop is perhaps nearer the mark with the description ‘cadenza-like’,⁴¹ given that the work actually closes amid distant echoes of the stark presentation of the ‘mantra’ heard at the outset. Or near the outset. Pertinently enough, the *very* beginning of the work telescopes the mantra’s central pitches, and thus the germ of the entire 65-minute piece, into a summons of just four chords. The ‘cosmic’ implications of these features, indeed of the work as a whole, do not this time need speculating upon; ‘**MANTRA**’, Stockhausen explicitly avows, ‘is a miniature of the way the galaxy is composed’.⁴²

As so often with this kind of principle in Stockhausen, one could easily devote whole pages to examples from the canon. **MIKROPHONIE I**, for instance, has its supercharged event in the Moment *TUTTI 157* (Stockhausen 9, Track [19]): ‘In it *all* Moments of the work are concentrated, simultaneously and in succession (*Reservoir*)’,⁴³ he tells us. The term might equally be applied to the opening of **STOP**, which again, as we shall see when we come to inspect it at close quarters in **§4(iiib)**, exposes its whole material in one big bang. **LUCIFERs TANZ** presents an interesting case of concentration on one parameter:

There’s a *crescendo* at the beginning [Stockhausen 34C, first minute or so of Track [1]] which is a sort of attention-lead, but at the same time shows already the entire rhythmic subdivision of the whole of **LUCIFER’S DANCE**, with all the tempo changes. It’s like a model of **LUCIFER’S DANCE** at the beginning, and then it starts.⁴⁴

As I say, one could go on. We must instead press forward in our attempt to gain a ‘macro’ perspective on the principles informing Stockhausen’s ‘relatively harmonious system’ (p.xxx) at large.

§3(iii) ‘A hidden power of cohesion’

The time has come, in fact, to look rather more closely than hitherto at the history of *the* organizing principle of Stockhausen’s composing. We have heard (p.xxx) about the ‘single idea’ that underlies the ‘integral organization’ of a work of his, and found that at back of a given composition’s particular structural scheme – which is the form that idea will at some point usually assume – in turn lies a more general structural conception, or principle, or ‘way of thinking’ (p.70), which for convenience may be reduced to a single word: serialism.

Though practice may (here as so often) be another matter, the essence of the serial approach, as we heard Stockhausen suggest, is straightforward enough. It operates, we

heard him explain, on the basis of scales established within the extremes bounding whatever areas of musical organization are being dealt with. The steps of such scales will be *perceptually* equal, just as the resulting values will be accorded equal status within the composition. Needless to say, not everything can be present, let alone participating to the same extent, at all times. Overall, though, a serial composition by its nature, according to Stockhausen's formulations, aims at 'equality of right' (p.70) for all its elements:

What we call serial music is based on a serial way of thinking. Every element that participates in a form at a given moment must have its own time and space to develop. You don't suppress or make hierarchic forms in which certain elements are automatically subdued forever, as in the tonal system.¹

Hence the claim for this as a specifically new structural conception, superseding an old one finally run out of steam: 'something that's come into our consciousness' (p.xxx) during the course of the twentieth century.

For a simple encapsulation of the 'serial way of thinking' we need only quote Stockhausen's note to **ORIGINALE**: 'One turns into another: contrasts are mediated. Black is a degree of white: scale of values of grey.'² In the process of mediation, as Karl Wörner puts it, 'black and white will have lost their antithetical character'.³ Contrast, for Stockhausen, is always *mere* contrast, or what we earlier heard him call 'the most primitive kind of form' (p.xxx). It would be wrong to conclude from this that the serial structuring of his works precludes the juxtaposition of opposites. A piece such as **KLAVIERSTÜCK X** seizes on proximities of extremes (of dynamics, density of activity, etc.) presented by its permutational form-scheme, often to spectacular effect. But the point about such moments, where black and white find themselves placed in stark confrontation, is that they are 'mediated' within the work as a whole, rather than being, as in a tonal work founded on principles of antithesis, central to its way of proceeding.

'Serial music is based on a serial way of thinking', we have just heard. Before going further we might do worse than pause over some of the benefits of that way of thinking to one with Stockhausen's command of its possibilities. As one commentator suggests

It is important to note that Stockhausen's serial composing is not only a matter of writing music, but contains a very important theoretical component: thinking out the conceptual antitheses, setting up gradual scales, and creating the specific series are just as important as the actual composing. The composing of Stockhausen is a 'rationalization of the technique and a reflection on the material at the same time', as Dieter Schnebel remarked in 1961.⁴

Robin Maconie offers another perspective on how such an outlook all but compels the composer, as Stockhausen put it himself, 'to compose the act of composing'.⁵

Serialism is often represented as a cheap substitute for creative thought. It's not true. Serialism is the only rational way of finding out all the possibilities inherent in a given set of variables. It means that a composer is no longer the prisoner of his limited intuitions, but is obliged to come to terms with all sorts of expressive options that he would otherwise never have thought of in his wildest imaginings. But it is more than that too. Serialism also means that the quality of your music depends on the quality of the variables you start with, meaning your ability to make musical distinctions. In turn, that forces you to examine exactly what is meant by distinctions. That way you learn some very surprising things...⁶

We can proceed from this by trying to build up at least some idea of what serial composing entails. The starting point has already been identified. Stockhausen:

In order to have a serial sequence of individual values – whether it's pitch, timbre, duration, the size of objects, the colour of eyes, whatever – we need at the base to have a scale with equal steps.⁷

In many areas, as a consequence, the serial composer will also need an equivalent of Le Corbusier's *Modular* (p.xxx), which its creator described as providing 'a working tool, a precision instrument [affording] the facility of a sure measure'.⁸ Hence the role given in Stockhausen's composing, from the opening beats of **KREUZSPIEL** on (p.5), to number and numerical proportioning.

Such concerns are unlikely to occur to the casual listener, for whom music is one thing, numbers another, and any connection hard to discern. In music theory, on the other hand, the relationship is as old as the hills, or at any rate as Pythagoras (6th century BC), of whose convictions concerning the nature of music Donald Grout writes:

In the teachings of Pythagoras and his followers, music and arithmetic were not separate; as the understanding of numbers was thought to be the key to the understanding of the whole spiritual and physical universe, so the system of musical sounds and rhythms, being ordered by numbers, was conceived as exemplifying the harmony of the cosmos and corresponding to it.⁹

'All is number.' Pythagoras' celebrated dictum flourished anew in medieval times, along with the specific link with music, included as one of the four mathematical disciplines (with astronomy, geometry and arithmetic) making up the *Quadrivium*, the higher of the two divisions of a course in the seven Liberal Arts at one of the great universities of the time. The belief that 'the book of nature is written in the language of mathematics' was still being expressed by Galileo in the 17th century, and by composers such as the mighty Orlando Gibbons: 'It is proportion that beautifies everything, this whole universe consists of it, and music is measured in it.'¹⁰ One must wonder, too, whether there was anything in the Pythagorean conception described by Grout that Johann Sebastian Bach would not have signed up to.

If our modern understanding of the universe compels us to take Pythagoras à la carte, it does not show him to have been wrong to identify in numbers a sort of template for the natural world. The atomic constitution of the materials of which all things are made, to take an obvious example, may be quantified (two hydrogen, one oxygen or whatever). In a sense – a sense concrete enough to provide a key to how they may be replicated – numbers are indeed what things *are*. As for the way things behave, one need only mention the celebrated example of Fibonacci numbers ordering plant growth to give a glimpse of numerical patterning as it may be said to operate throughout nature. Modern science, in fact, would probably have little difficulty with the Pythagorean view that, in Arthur Koestler's paraphrase, 'all things have form, all things *are* form; and all forms can be defined by numbers'.¹¹

The casual listener's scepticism about the relevance of this to musical appreciation is likely to remain untouched, I concede. What is quite certain is that even in its most unselfconscious making, music can hardly avoid manifesting relationships susceptible to analysis in terms of numerical proportions. To recognize this, a composer (here Reginald Smith Brindle, from a chapter accessibly laying out much evidence unable to be touched on here) need certainly be

no Pythagorean himself:

I am no mathematician, and find figures tedious, but I recognize that in music there is more than a mythical magic of numbers. Mathematics is the basis of sound.¹²

The listener cannot be unaffected by this fact, only ignorant of it; as the great philosopher-mathematician Leibniz famously declared: 'Music is the pleasure the human soul experiences from counting without being aware that it is counting.'¹³

The significance of this here is that it accords with Stockhausen own stated view: 'music is mathematics, the mathematics of listening, mathematics for the ears.'¹⁴ We have to be a little circumspect here, however, and it would be rash to conclude too much from this one conversational statement. In a 1985 seminar,¹⁵ for example, we find him saying that 'the part played in music by mathematics is after all minimal' before going on to express doubt about the value of attempting to translate complex mathematical notions and processes into meaningful musical forms. This touches on a trend most famously represented by Iannis Xenakis (though Stockhausen names no names), who drew directly on set theory, Markovian chains and the like to make some of his pieces.

For Stockhausen it was never a question of musical mathematics or (except in the general sense of his and Leibniz' remarks above) mathematical music. Where in the same seminar he does admit to finding compositional value in mathematical procedures, it is in the role they may be given in manipulating the 'individual values' of his earlier statement. Having once devised serial scales in various parameters, and chosen one's formal procedure (a permutational scheme such as the **KREUZSPIEL** example tabulated on p.5, let us say), 'numbers simply stand in for values in the various regions of musical perception'.¹⁶

Putting aside both mathematics proper and the 'mythical magic of numbers', it is evident that quantification is an essential weapon in the serial composer's armoury, given the need to (a) establish precise scales of elements which may then be (b) subjected to various kinds of manipulation. The very fact that the interval between two notes depends on the *ratio* of their frequencies could not be more significant to the composer interested in maximizing conscious control of his materials. A ratio is a ratio is a ratio, whether it is pitch frequency or any other musical resource that is being considered, and Stockhausen's extension of the serial principle after the war depended greatly on the fact. In his earliest works, he reminds us,

a series defined the proportional relationships between the magnitudes, so that every individual magnitude had to be exactly measured, and fixed by a discrete value in each dimension (one pitch, one duration, one loudness).¹⁷

This recalls his reference to the series, in **§1(vi)**, as being at bottom nothing but 'a set of proportions' (p.xxx). Such a sequence could lead, as in **§3(ii)** we found it was made to lead in **STUDIE II**, to 'the use of a single numerical series and its derivations to govern every conceivable aspect of a composition' (p.xxx). To cite just two further examples, for those wishing to investigate such procedures more closely, Richard Toop's rather mind-boggling analysis of **KLAVIERSTÜCK VIII** sets out 'to show how most local and formal details of the piece are derived from a single 6x6 serial square and its permutations',¹⁸ while Henck's monograph performs a similar operation on **STÜCK X**, with its ultimate derivation from a simple series of values (7-1-3-2-5-6-4).¹⁹

Relevant here is a passage quoted from already (p.62), in which Stockhausen refers to **KONTRA-PUNKTE** as

a series of metamorphoses and renewals both deeply hidden and extremely apparent – tending to no visible end. Never is the same thing heard twice. Yet one has the clear feeling that an immutable and extremely homogeneous continuity is never abandoned. There is *a hidden power of cohesion, a relatedness among the proportions*: a structure. Not similar shapes in a changing light. Rather this: different shapes in a constant, all-permeating light.²⁰

We are by now better placed to understand the terms of this distinction than when we first encountered these last couple of sentences in **§1(ii)**. It contrasts traditional practice, founded on the variation of always recognizable figures ('similar shapes'), with that of his own early works, based on perpetual ('kaleidoscopic') renewal of figure illuminated, we may now say, by 'relatedness among the proportions' of a structure built from the 'constant, all-permeating light' of 'a single numerical series and its derivations'.

Do we yet care? Because the problem, for the ordinary listener attempting actually to perceive what is happening in this music, remains that of our **Introduction**. Even after its 'continuity' has become 'extremely apparent' (through repeated listening), the 'relatedness' claimed to underlie it remains as 'deeply hidden' (indeed 'extremely secret', as the official translation has it²¹) as before. Leibniz' remark is small comfort; nor was Stockhausen, speaking at the ICA in 1971, inclined to offer anything more specific:

Always new objects in the same light, that light being a series of proportions which constantly gives birth to new phenomena, musical events, providing a unifying factor underlying all the different events that occur. And one shouldn't be trapped too much by the events but try to feel, to discover, that underlying proportioning principle, the genetic principle that gives birth to all these different musical events.²²

I would need more than this to allay my scepticism about the extent to which the deep structures of Stockhausen's works of the 1950s are able to be perceived, at any rate by you or I. At all events, the notion of a 'genetic principle' is easier to grasp when encoded in a Formula in the later works (it happens that Stockhausen was speaking just now with **MANTRA** in mind). The change reflected deliberate policy, being a sign of Stockhausen's evident wish to bring his procedures a little closer to the surface. The question of why they had been quite so well buried persists, though I think the purpose of complex abstract schemes is partly explained by our view of them as a kind of bridge of reflection crossing to inspiration ('without them the composition would simply not exist', p.10). And after all, and in spite of Stockhausen's warning just now, as I argued in the **Introduction** I think we can afford to be sanguine. Once we are able to *feel* the cohesion of his music of the 1950s, we are unlikely to enquire whether our impression results from an unconscious sensing (à la Leibniz) of some underlying 'genetic principle', or is simply due to the cumulative effect of their compelling individual 'events'. Eventually we may just listen, as to the *Emperor* Concerto.

Still, the question is intriguing, even if the question is only why a composer should go to so much *trouble*, rather than simply sitting down at the piano and getting on with things. Richard Toop deserves the credit for bringing into sharpest focus one important aspect of Stockhausen's original attachment to the serial ideal pertinent here.

Stockhausen's first published accounts of his early works describe them in purely material terms; one could be forgiven for thinking that they existed only as the exemplification of an abstract conceptual system. But his

correspondence at that time to composers like Goeyvaerts and Pousseur reveals a much deeper, and profoundly religious motivation. For Stockhausen, total serialization was not just a technique, but a theological strategy – the means by which music could become an acoustic metaphor for the Divine Perfection, an audible representation of a universe in which all elements are constantly and equally present, but in ever changing configurations.²³

Elsewhere, in explaining this echo of what he calls ‘the medieval penchant for praising God through numbers’,²⁴ Toop puts his finger on why the ‘sure measure’ of number would have been indispensable to such a strategy:

the aim of total serialization, as conceived by Goeyvaerts and Stockhausen (though not by Boulez) was to attempt a musical image of Divine Perfection: the more complete and consistent the organization, the nearer it was supposed to come to the divine model.²⁵

This ties in nicely, of course, with Stockhausen’s notions of serialism as a spiritual as well as democratic attitude to the world (p.70) and of the early Pointillist works as ‘cosmic music’ (p.122). His profound identification with the ideals of Hesse’s *Glass Bead Game* is surely relevant too, bearing in mind the game’s embodiment of ‘the principles of a new language, a language of symbols and formulas, in which mathematics and music played an equal part’.²⁶

Before we pass to the subsequent history of this ideal, the composer himself may be quoted giving one answer to the puzzle of his early preference for ‘*hidden* [/secret] cohesion’:

I have been brought up in an environment where the objectivity of man was a goal, a high goal. And I lived in a village where you can find a medieval cathedral of the gothic style, and there are paintings which are hidden far away from the eye of a person who is in church because they are too high, hidden in the corners of the ceiling which is sometimes sixty, seventy feet high. But this was a part of my consciousness, that the most beautiful things are sometimes very hard to see or hear.²⁷

Toop’s exegesis raises an obvious question. It sheds considerable illumination on the early period to which it refers, but would hardly seem applicable to, say, the late 1960s. What had happened, that by 1968 a written text could stand in place of such ‘complete and consistent’ organization? We already have the basis of an answer, having noted in §1(iv) Stockhausen’s willingness (alternatively, his need) to incorporate qualitative alongside quantitative criteria as part of the trend to ‘serial expansionism’ (p.xxx) that succeeded the idealistic initial phase of his composing. To Cott in 1971:

since the end of the 1950s, I’ve no longer applied the serial technique [only] to the *quantitative* differences of things – of inches in duration or decibels in dynamics – but [also] to the *qualitative*. I give a value to what I perceive as a unified impression of a certain sound event.²⁸

From the last sentence here it looks as though he is alluding to the breakthrough made in **KONTAKTE** (p.xxx), which would certainly be consistent with his reference to the *end* of the 1950s. It was in 1955, however, that he made this statement (p.xxx) based on his findings in the electronic studio over the previous 18 months: ‘I have encountered important musical phenomena which are non-quantifiable. They are no less real, recognizable, conceivable, or palpable for that.’²⁹ He was thinking specifically of the ‘infinitely subtle “irrational” nuances’, etc. which he was having to acknowledge and find ways of incorporating (and notating). But it

was not only such phenomena as the ‘outness’ of ensemble playing written into **ZEITMAßE** that were forcing him to recognize that not everything could be dealt with in terms of ‘discrete values’. For instance, ‘the balance between tones and noises is not at all a numerical one’,³⁰ he found, and achieving such a balance in **KONTAKTE** became a matter on which empirical judgement had to be brought to bear. Again, the notion of ‘statistical formal criteria’ (p.xxx) recognized that certain complex events may involve a degree of interchangeability, making it practical to determine them from the required impression down, rather than the ‘individual magnitude’ up. As we know, it was Stockhausen’s researches under Meyer-Eppler (p.xxx) that stimulated him to reappraise his thinking in this area, and something Maconie says about one of the lessons learned (relevant to **GESANG DER JÜNGLICHE**) could stand for many a finding recruited to his composing around this time and later: ‘The determining factors in interpreting speech sounds were not absolute and precise (...) but relative and approximate.’³¹ ‘Relativity has entered the field of music as it has all other fields’, as we found (p.xxx). Though numbers might be allocated to them, in actually defining the degrees of such ‘important musical phenomena’ (p.xxx) as intelligibility, perfection, change, surprise, and the like, numbers would no longer be enough.

It should be clear that Stockhausen’s broadening of his initial, exclusively quantitative conception of serialism did not reflect any loss of the faith (religious or other) that underpinned it, so much as recognize the insufficiency of an ‘acoustic metaphor for the Divine Perfection’ which failed to include the many things not so easily reduced to ‘purely material terms’. The further he went, the more convinced he became that no feature of musical organization need remain, as he came to think of it, ‘unmediated’. (‘Already **KONTAKTE** was composed with 24 different musical parameters.’³²) I make no apology for recalling Toop’s summary of the process (p.xxx), for we now have the benefit of a new perspective on the development to which he draws attention:

Far from trying to repudiate the serialism of his early works Stockhausen set out to amplify it, to generalize it, to bring ever new elements within its domain. Serialism becomes not only a basis for organization, but above all for *integration* – the means by which apparent opposites are reconciled and mediated between (...).³³

As this will to integration and mediation might suggest, it was the ‘spiritual and democratic attitude to the world’ that he saw inherent in the serial principle, and not some number fetish, that really lay at the heart of his composing, so that this remained as much a ‘theological strategy’ as before.

His tactics, we know, changed gradually but radically as the vanishing point of musical determination in his composing, May 1968, was approached. In the process, it might seem, the role of ‘sure measure’ diminished until being finally, in the plus-minus and text pieces, written out of his music’s script. It would be more accurate, however, to describe it as having been increasingly restricted to the ‘macro’ level of organization (‘whereas the small scale aspects can follow aleatoric principles’ – p.xxx), in line with the trend to ever-greater ‘openness’ charted in §1(v). The same trend, it’s perfectly true, had consequences even for the durations of a work’s sectional divisions. By the time of two scores of the mid-1960s which we will be looking at in detail in §4(iii), **MIXTUR** and **STOP**, these were being specified in terms of their lengths *relative to one another*. The principle of structural *proportioning* thus survived, typically (as in these two cases) operated through the Fibonacci series

0 – 1 – 1 – 2 – 3 – 5 – 8 – 13 – 21 – 34 – 55 – 89 – 144 – (etc.)

which might be called the 'sure measure' *par excellence* (it features, in fact, in Le Corbusier's *Modular*). Each term in this sequence is the sum of the previous two, and as it goes on, adjacent values approximate ever closer to the so-called Golden Section (or Golden Mean) ratio (1:1.618). Crucially in this context, this produces 'steps' which, given that, as Stockhausen says, 'our perceptions are logarithmic, not arithmetic',³⁴ meet the serial requirement of being *perceptually* equal.

If the scope of detailed prescription is undoubtedly much reduced in the more skeletal scores typical of Stockhausen's methods in the 1960s and early '70s, we should not be misled. His intentions in a work like **STOP** led to a type of treatment very different from that discussed earlier in connection with electronic **STUDIEN** and **KLAVIERSTÜCKE**, where a single series of values might have ramifications for every conceivable aspect of a work's construction. But **STOP** itself, like every score containing an element of Process Planning, has careful calculation in its freedom, as again we shall see in **§4(iiib)**. More to the point, it demonstrates the important fact that even when Stockhausen chose to leave the organization of his scores less 'complete' than at the height of his determinational fervour, it remained no less 'consistent' in its adherence to serial principles. Even the text pieces, devoid altogether of notation, did not leave those principles behind, as we saw in **§2 (p.xxx)**.

Following his return to fully-determined notation after 1970, these same principles continued to accompany Stockhausen's every step. We need only recall our look at the **LICHT** Superformula, which showed it to be a serial construction through and through. His work's colonizing of the visual dimension, like its longer-standing exploitation of physical space, was conducted on serial lines. This is hardly to be wondered at when we hear that, for one of his early apartments, Stockhausen even made up some 'serial' curtains³⁵ – an idea he was able to develop rather more thoroughly when he came to design his own house and garden in 1961.

This being so, it is not difficult to understand his response to the widespread critical commonplace which would identify serialism with a certain type of abstract-sounding music produced during a relatively brief period after the last war. As he complains to Cott: 'Most American composers identify serialism with historical time. And this is really childish.'³⁶ He elaborated on this at Darmstadt in 1974:

Few people understand what serial music is. Even my own composition students can be amazed when I explain to them the simplest things about it. If writers about music speak today of a 'post-serial' phase, they mean no more than that music of recent years sounds different from that of the 'fifties, and since their only conception of the music of the 'fifties is of its having been 'serial music', then today's music must, they assume, be 'post-serial'. Is that not dreadfully banal? Anyone who has understood the essence of the serial mode of composition knows that with it something has come into our consciousness which cannot be revoked: the achievement of an equality of all elements in a composition, which yet recognizes the natural principle of differentiation. (...) What had once been hierarchical thought in all areas of music has been expanded into serial thinking, which will remain decisive for many centuries.³⁷

(Even today, it has to be said, and certainly not only in America, discussion of the subject of serialism, even by those in the field, frequently fails to measure up to Stockhausen's conception as outlined in this section.)

Any attempt to understand how Stockhausen's serial practice actually operates will necessarily involve detailed examination of particular works. While some effort has been

made to discuss aspects of the serial organization of the works dealt with in **§4(iii)**, anything more ambitious in this line would contradict the intentions of this book, going against my contention that such technical matters ultimately need not concern us. Among ready-made examples of such attempts I would direct the curious reader to Herbert Henck's analysis of **KLAVIERSTÜCK X**, actually subtitled 'A Contribution Toward Understanding Serial Technique'; to Richard Toop's hardly less minute examination of **KLAVIERSTÜCK VIII**, likewise mentioned earlier; and to Jerome Kohl's *Serial And Non-serial Techniques In The Music Of Karlheinz Stockhausen, 1962-68*, dealing with a period when serialism seemed to many to have gone by the board in Stockhausen's composing and treating at length the planning and realization of **MIXTUR**, **TELEMUSIK** and **KURZWELLEN**. (**Bibliography** for details.)

Having tried to at least glimpse the essence of the principle of serialism as understood and practised by Stockhausen, there is therefore nothing else to be said here, beyond one final point I want to make. It is not entirely new, but that is partly why I wish to make it, for we are now in a better position to understand the central conclusion arrived at in **§2**. It is his consistent adherence to 'the serial mode of composition', specifically through the role given to devices of mediation and integration in his models designed to reflect 'the reality of the cosmos', that provides Stockhausen's ultimate refutation of Cage; as one final gloss may be cited to underline:

Serialism tries to go beyond collage, beyond the incoherent multiplicity of things. It tries to find unity without destroying the individual elements, and that means to interconnect, to – yes, to try to balance out the different aspects of sound.³⁸

§3(iv) 'A new dimension for musical experience'

Stockhausen's re-evaluation of the very materials of music, the theoretical reflection that, from the beginning, ran parallel with his composing itself, quickly led him to other conclusions, besides those discussed in **§3(i)**, concerning the all-important time factor. An important theme of his deliberations was also the title of his 1955 analysis of a part of Webern's *String Quartet: Structure and Experiential Time*. By 'experiential time' he meant something akin to the 'psychological time' that Stravinsky, in his *Poetics of Music* lectures, contrasted with 'ontological time' as recorded by the clock.¹ It is a matter of common experience that 'time flies when you're having fun' or otherwise intensely engaged, while the same length of time measured by the clock can seem interminable in other circumstances (watching a pot, say, or if your football team is 1–0 up in injury time). In his article, influenced by the investigations in information theory under Meyer-Eppler, Stockhausen suggests that the ability to 'mould' experiential time by careful control of the speed, density, and 'surprisingness' of musical events paraded before the ear is a secret of the interesting composer's success. He refers to the counter-productive effect of introducing *too much* unpredictability, which as we saw in **§1(iii)** (p.95–6) was the great danger inherent in the Pointillist requirement for 'constant renewal' at all costs. He concludes:

If we realize, at the end of a piece of music – quite irrespective of how long it lasted, whether it was played fast or slowly and whether there were very many or very few notes – that we have 'lost all sense of time', then we have in fact been experiencing time most strongly.²

This paradox would appear to relate to his developing conception of the 'lyric' ideal: the timelessness sought in his music from even the early Point pieces with their notion of a

'perpetual present' (p.90), through a meditative work such as **STIMMUNG** ('time is suspended'; p.xxx) to the 'out of time' 'cadenzas' of **LICHT** (recall, for example, our look at **LUZIFERs TANZ**, p.xxx).

We are used to regarding Stravinsky's 'ontological time' as the real thing and his 'psychological time' as a mildly curious distortion. In going against this view Stockhausen invokes not some mystical belief system, but the changed understanding that modern science has brought to the universe whose realities his works aspire to reflect:

The whole conception which views form as always frozen and the work of art as merely a particular frozen contour is, I believe, no more than a very special, deterministic conception, which the appropriation of relativity to all fields has challenged by making us aware of time as, instead, fluid: of the fact that there is actually no such thing as time in the abstract (something existing objectively, which things occupy) but that time is instead manifested in things, which are continuously undergoing change.³

Such radical thinking (for a composer, certainly) led Stockhausen to conceive of his own forms not as proceeding according to a fixed temporal schedule, as with the music of the past, but rather as themselves processes, obeying the time of their various elements. On numerous occasions he cited a parallel for this in the findings of a kindred explorer from another discipline. In 1971, for example:

There is a very important observation made not so long ago by Viktor von Weizsäcker, a German biologist who started in medicine, which says that the traditional concept is that things are in time, whereas the new concept is that time is in the things. This is quite different from the traditional concept of an objective, astronomical time represented by our clock, which measures everything according to the same units, and is the same for everything. Instead, the new concept tells me as a musician that every sound has its own time. This is new in musical composition, to think in terms of an individual time-event, which then takes its own time to be put together with other sounds.⁴

A few obvious considerations serve to expand on this. In the same lecture, he characterizes this alternative to 'objective astronomical time' by using the phrase 'organic biological time',⁵ reminding us that every natural event, from the expansion and contraction of the universe to the blink of an eye, requires a certain amount of time – 'its own time': the lifecycle of a tree is not that of the mayfly. It is a fact that certain organisms have their own inner 'clock' which keeps running to time despite the most severe disruption. An exchange with Jonathan Cott:

JC If you take a fiddler crab from the ocean and place it in a sealed box and remove it to the Midwest, it goes through the same diurnal periodic rhythmic movements, as if the sea were still there, inside itself.

KS Yes. That's what they are.⁶

Then there is the fact that 'things, which are continuously undergoing change' may proceed at different rates at different points in their cycles. As Kepler's Second Law of Motion tells us, the velocity of a planet tracing its ellipse around the sun is not uniform, varying according to the stage of the journey it happens to have reached. This introduces a rather different point, that circumstances (in this case gravity) alter cases, but hardly a contradiction, simply confirming that any natural process has its own morphology, an unfolding history.

The relevance of this simple circumstance to Stockhausen's work with sound seems to have been a matter of almost daily reflection from the days of his analysis for Schaeffer of one recorded sound after another, each with its own particular acoustic 'envelope' of attack and decay characteristics. 'In this way I became gradually aware of the inner structure and evolution of sound',^{7N} he said of that experience.

The notion that 'time is in the things' can seem esoteric enough, until we begin to attribute to it musical consequences met with in earlier sections. Recall, for example, the instruction 'as fast as possible' in the 1950s **KLAVIERSTÜCKE** (p.xxx). Since, whatever else, 'they should be articulated clearly', all notes to which it applies have their own (relative) time written into them insofar as the lower (hence more reverberant) or more difficult to get around they happen to be, the more time they will require. It must have been partly the necessity of giving certain sounds and processes the time they demand that led Stockhausen gradually to increase his timescale. His experience of listening to 'plane engines while crossing America had convinced him that the richness of complex sounds may be properly explored only when they are allowed to continue for far longer than the simpler notes of 'normal' music. Somewhat in the same spirit – though in this case touching on the good old musical and literary problem of pace – he tells how, after completing the last several minutes of **KONTAKTE** he played back the entire tape only to be struck that this ending unfolded rather too rapidly.⁸ To his horror, and that of his assistants (the passage represented more than six weeks' work), he realized it would have to be done again with all durations 'scaled up'.⁹ Nor, apparently, was this the only time that 'I had to change my schemes and metronomic *tempi* and my chronometric timing, because the sounds demanded *their own time*.'¹⁰ (Emphasis mine.)

One further implication of the fact that 'time is in the things' has yet to be mentioned, though the workings of our own bodies make it difficult to miss: simply that, within a single organism or natural system, many processes may be found unfolding simultaneously. The most significant consequence of Stockhausen's attempts to make his works reflect this has been – strange as it may initially seem – his exploitation of physical space for musical purposes, and this I want to turn to look at now.

Both phenomena – simultaneity and spatial composition – must be counted as essential innovations of the 20th century. Calculated physical separation of sound sources is not itself so new, of course, having for instance been employed to antiphonal ends (alternation or echo effects) in some church music (notably for St. Mark's, Venice) of the 16th and 17th century, to purely dramatic ones in instances exemplified by the offstage trumpet in Beethoven's *Fidelio*. It had been used, that is, as a source of sonorous contrast and special effects, though in the former use having profound consequences for musical texture (to speak only of texture) itself: in the polychoral motets of Giovanni Gabrieli 'this contrast became a basic factor in the *concertato* medium of the Baroque period.'¹¹ In reviewing these and other developments in the opening section of his 1958 article *Musik Im Raum* (*Music In Space*) Stockhausen is at pains to distinguish them from his own interest, which he insists arose in the first place from structural necessity.

To begin to appreciate his explanation of this, we might pause over the homogeneity of time, as well as of space, hitherto accepted as one of western music's givens. However complex or genuinely polyphonic a traditional piece may be, everything in it happens – freakish occurrences aside – so to say *in the same time*. Earlier uses of space did nothing to affect this state of affairs, any more than such special cases influenced the evolving preference for homogeneity of *sound* – the preference, as the idea of the public concert took over, for the smoothly balanced ensemble pressed into the smallest space comfort would allow and planted centre-front of the listener.

Stockhausen, for once, began by finding in these orthodoxies little to object to. On the contrary: 'The first pieces of electronic music and of "Pointillist music" in general were extremely homogeneous in their sound-mixtures and form.'¹² Soon, though, as we again saw in §1(iii) (p.96), there arose the wish 'to articulate longer periods of time', answered by allowing events in a given parameter to escape the merry-go-round of perpetual renewal and remain constant for a while. Except that to do this – 'to let one sound-characteristic predominate over all others for some time' – and to do no more, 'would have radically contradicted the spirit which gave birth to the idea of equal valuation for all sound-characteristics' in the first place.¹³ The dilemma, that of enabling whatever had to remain constant also to be dynamic, to evolve, could only be addressed by invoking a fifth dimension, 'an "entirely different" sound-property which would hardly be in a position to dominate over the sound-characteristics associated with time'.¹⁴

The solution, that is to say,

was to distribute in space, among different groups of loudspeakers or instruments, variously long time-phases of this kind of homogeneous sound-structure. (...) It became possible to articulate longer Pointillist structures by having them wander in space, by moving them from one place to another.¹⁵

Such are the 'purely musical grounds'¹⁶ given prominence in *Music In Space*. We gain another angle on them if we think of Groups demanding 'their own time' as Points did not (Groups had tempo rather than mere duration). Indeed it seems easier to understand the necessity of the step taken in **GRUPPEN**, with its three orchestras, if we think of the work as transferring to a larger scale the challenge addressed in more easily manageable form in the contemporaneous **ZEITMAß**: 'The problem of our century: *different tempi at the same time*'.¹⁷ Certainly it would be wrong to identify musical space-exploration too exclusively with serial exigencies. Like the other, this musical 'problem of our century' surfaced first within our Third Stream. Already in 1939 Varèse, if he could do nothing about it, was looking to electronics to provide 'a sense of sound projection in space by means of the emission of sound in any part or in as many parts of the hall as may be required by the score'.¹⁸

Only by placing it in the context of his serial conception of music, however, is it possible to give proper weight to the significance space would assume in Stockhausen's own composing. Because it makes no obvious contribution to *language*, the subject has tended to receive hardly more attention in general discussions of modern music than of traditional, as though it affects nothing fundamental. The index to Grout's standard *History of Western Music*, with its entries for '*Musique concrete*', 'Pointillism' and 'Indeterminacy', but none for 'Spatial composition', could not be more telling. And yet, from the mid-1950s, as his article puts it with reference to **GESANG DER JÜNGLICHE**, Stockhausen for one worked with no less an ambition than 'to form the direction and movement of sound in space, and to make them accessible as *a new dimension for musical experience*'.¹⁹ This statement, whose importance can hardly be overstressed if we are to correct this omission ourselves, may be taken two ways, allowing us to draw our usual distinction between the significance of a matter to Stockhausen as a composer on the one hand, to us as ordinary listeners on the other.

'Locality', *Music In Space* was written to show, has the potential to be 'a fifth parameter with the same rights as the others'²⁰ rather than merely in the sense that any aspect of music may be treated as a parameter in a serial work. This calls for examination. While not sufficient for Stockhausen in his rather technical exposition, it is probably enough for us, if we need convincing of space's legitimacy as a fundamental property of sounds, to think of a simple note which, despite constant pitch, duration, loudness, and timbre characteristics, will

nonetheless be perceived to change if it moves around during its course or is repeated from a different point in space. This is unarguable. However, did we not hear Stockhausen insist earlier that 'music consists of order-relationships in time' (p.xxx), or to put it another way, that 'all properties of sound procedure are to extracted from the structure in time' (p.xxx)? Since by the time these statements were made, space was firmly installed on Stockhausen's serial agenda, the confusion must be apparent only, but how to see beneath it?

To check our bearings: if space is to be considered a genuine property of sound at all, is it not, as at the beginning Stockhausen accepted it as being, 'an "entirely different" sound-property' (p.xxx), and not to be ranked with the usual, fully paid-up parameters? Boulez would seem to have kept to this view, in the 1960s describing space as 'a fifth dimension, which is not, strictly speaking, an intrinsic function of the sound phenomenon, but rather its *index of distribution*',²¹ thereby recognizing both its 'right' to play a part in composition, and its special position in relation to the four accepted parameters. We begin to glimpse Stockhausen's own view, albeit obliquely, in remarks to Cott, where he is again discussing von Weizsäcker's ideas:

Traditionally, he says, it's been thought that things exist *in* time. People have had an abstract concept of time as if it were something in itself. But time only occurs if there's a being; and *by* being it manifests time. As something becomes a form it occupies a certain space (...).²²

That this applies to the waveforms on which sound depends, as much as to any 'being' in the proper sense, became evident during our discussion in §3(i) about the acoustical interdependence of the parameters. In order to define any sound comprehensively, Stockhausen points out, 'acousticians speak of "sound-spectra" and describe these by means of a series of factors in a space-time diagram.'²³ Less to the theoretical point, perhaps, though still relevant to the issue of parameter-interdependence, is his explanation, again to Cott, that when we perceive sounds moving around an auditorium in one of his electronic works, we are experiencing a type of acoustical illusion actually made possible by *time*:

You know that space impression is just a question of time delay, of phasing. (...) Sound can move from the left to the right though nothing that produced the sound physically has moved in that direction. As I said, this is a question of a sound being more or less out of phase with itself, within microtime units, very small time units.²⁴

This question of theoretical legitimacy is not, needless to say, one over which I think we need lose sleep. Of more interest is the fact that, by the time of his *Music in space* article, it had ceased to be the issue for Stockhausen himself, who was already concentrating on the practical compositional implications. The article's purpose was not to justify the addition of space to the serial roster, so much as to detail how this had been accomplished in works (**GESANG DER JÜNGLIGE** and **GRUPPEN**) by then already brought to performance.

To the question of how the deed of serializing space *was* accomplished, the short answer is, by analogy with the other parameters. The criteria detailed in *Music in space* depend on the division of the area around the listener from which sound is to issue – an area whose extent will vary, as other resources will vary in range, from one case to another – as a sort of scale, making it possible to represent 'intervals' by changes of location as surely as by changes of pitch (etc.). To quote Stockhausen's description of his methods in **GESANG**:

I had five speakers surrounding the audience. And the sound moved from one speaker to the next, sometimes in circles around the public, or made diagonal

connections moving from speaker three to five, let's say. The speed of the sound, by which one sound jumps from one speaker to another, now became as important as pitch once was. And I began to think in intervals of space, just as I think in intervals of pitch or durations.²⁵ From which side, by how many loudspeakers at once, whether with rotation to left or right, whether motionless or moving – *how* the sounds and sound-groups should be projected into space; all this is decisive for the comprehension of this work.²⁶

It is obvious that all these things would demand a theoretically rigorous approach. Equally apparent from these statements, though, is that as space came to be exploited, Stockhausen would not be slow to seize on the *non*-theoretical possibilities he could see opening up. A similar description relating to **GRUPPEN**, continuing his account quoted in §1(iv) (p.xxx) of how the spatial nature of the work resulted directly from the need to present 'different tempi at the same time', brings some of them right to the forefront.

Once I had the idea of separating the three groups – each consists of thirty-six or thirty-seven musicians – I began to think in terms of alternations of sound movements: triangular rotation – one, two, three ... one, two three – with *accelerando-ritardando*; then alternations between two groups; and moments when one group would add only short sound events to the continuous alternation of the other two groups. I also thought in terms of moving timbres: there's one spot that led to something I hadn't expected myself – a chord is moving from orchestra to orchestra with almost exactly the same instruments (horns and trombones) and what changes isn't the pitches but rather the sound in space. Each orchestra, one after another, makes a *crescendo* and a *decrescendo*; at the moment when one starts fading out, the next orchestra begins to fade in, producing these very strong waves of revolving timbres.^{27N}

Space would thenceforth be a permanent item on Stockhausen's agenda: 'the direction and position of sound-sources is a precisely considered parameter in my compositions', as he declared in 1967.²⁸ At moments such as the one he has just described (compare Cardew on the **CARRÉ** Inserts – p.xxx), it could even head his musical priorities. In line with what we have come to expect of his methods, a different topography would tend to be employed in each work in which space was a major preoccupation. Hence **GESANG** (circle of loudspeakers around the listener); **GRUPPEN** (the three orchestras in a horseshoe around front and sides); **KONTAKTE** (again a circle of speakers, but with 'flood sounds' over the audience, as well as spiral and other movements); **CARRÉ** (four orchestra-choirs enclosing the public in the square of the French title); and even **MOMENTE**, included in the composer's list of achievements in this field on account of its '*wide-screen* stereophonic deployment of the four choral groups and the thirteen instrumentalists in front of the listeners'.²⁹ Later, in Robin Maconie's reading, came a sequence of more specialized projects:

TRANS is the first of a series of works examining particular aspects of musical space. Here it is the longitudinal dimension, the aural equivalent of the sight-line of traditional perspective, with its suggestion of overlapping planes at increasing distances. Later, in **INORI**, he redefines the lateral dimension, left to right; in **MUSIK IM BAUCH** he articulates a space of lines and circles around a centre, and in **SIRIUS** the emphasis is reversed, to focus outward instead of inward, and the musical action takes place at an imaginary periphery.³⁰

We have heard how spatial composition can serve the purpose of clarifying what we hear by allowing different things (and it is not only *tempo*) to happen at the same time while yet remaining distinct and therefore comprehensible. In this and other ways it opens up 'a new

dimension for musical experience' for the listener as for the composer. It can enrich the whole experience of listening to music, most strikingly by locating us right among its sounds, enabling us to live it more intensely – to the point, Stockhausen would say, of our becoming physically immersed in the sound-world of one of his works. In doing so, he would also contend, a work making careful use of space – more specifically, of spatial *movement* – engages the sense of hearing itself in ways the traditional concert did not think to attempt.

Musical space has been fixed in the western tradition, for as long as musicians gave up running through the woods for sitting on chairs on a stage. The function of space has been neutralized in our western music. Some conductors, for the sake of instrumental effect, make changes in the positions of players in an orchestra, for instance putting the celli at the left side instead of the right, but such changes have no real revealing function: it's still fixed, it doesn't move, all it serves to clarify is the music being a static object in space. (...) In the concert hall we always have the same perspective, the one seat as a point of reference (...). But the moment we have the means to move sound with any given speed in a given auditorium, or even in a given space outdoors, there is no longer any reason for a fixed spatial perspective for music. In fact, that is the end of it, with the introduction of relativity into the composition of movement and speed of sound in space, as well as of the other parameters of music. And this movement in space of music becomes as important as the composition of its melodic lines, meaning changes in pitch, and as its rhythmic characteristics, meaning changes in durations. If I have a sound of constant spectrum, and the sound moves in a curve, then the movement gives the sound a particular character compared to another sound which moves just in a straight line. Whether a sound moves clockwise or counter-clockwise, is at the left back and right front, or any other combination, these are all configurations in space which are as meaningful as intervals in melody or harmony. So from the time these means of moving sound have been available, I have been speaking of and composing and finding a notation for space melodies, to indicate movement up or down in space, or describe a particular configuration in a given space, at a certain speed.³¹

Besides speed and direction, there is of course another spatial property of sounds our hearing equips us to detect, and this too assumes significance in certain of Stockhausen's works. *Distance*, asserts *Music In Space* in the course of a demonstration far too technical to be rehearsed here, 'can make no claims to be an individual composition-parameter', its determination being 'described by data of timbre and tone-level [i.e. loudness]'.³² Rather it is *direction* that is able to justify such claims, the article adds before going on to discuss the criteria by which its serial organization might logically be governed. 'It is only under very limited conditions sensible to treat the distance away of a sound as an individual parameter.'³³ This proved no bar to Stockhausen's recourse, in several subsequent works, to what he termed 'multi-layered spatiality',³⁴ as for example his simulation in **KONTAKTE** of a series of 'sound curtains'³⁵ which may be drawn aside to reveal receding acoustic perspectives (p.180). It should not surprise us to hear that such a notion again involves questions of perception not contemplated by the traditional composer.

Imagine, for example, that someone is whispering very softly in your ear, while a thunderstorm or a rocket taking off is going on ten miles away. You are still aware that the whisper is very soft, but it's close, whereas the rocket is very loud, but far away.³⁶

It is evident that the medium appropriate to presenting such phenomena as music will itself be untraditional, and sure enough multi-layered spatial composition is one of the *Four Criteria of Electronic Music* in Stockhausen's lecture of that title.³⁷ The concept is not without application in an orchestral work such as **TRANS**, however, as Maconie's earlier description suggested, and we shall have occasion to experience it in action when we come to examine the piece in §4(iic).

We return here to our survey of space more generally in Stockhausen's composing. Although it is rarely unutilized, the prominence of the 'new dimension' in the works of the 1960s tended to vary considerably according to his priorities. Of its importance in **HYMNEN**, Johannes Fritsch goes so far as to say that the work 'makes sense only in the concert hall. The reduction to LP is no more than a piano reduction.'³⁸ Space is inevitably a consideration in all the tape works from **GESANG DER JÜNGLINGE** on, though as Jerome Kohl points out, the fact that **TELEMUSIK** was realized during a visit to Japan, and thus without access to his custom-built 'rotation table' (p.xxx), means it manages without the effects of moving sounds exploited in **KONTAKTE**.³⁹ Space's role in **STOP** is limited to the stipulation that 'the six groups should be spatially as far apart from one another as possible'⁴⁰ (within the limit imposed by their having to follow a single conductor), in **MIXTUR** to a certain *optional* distribution of forces around the audience. In other live electronic pieces, spatial projection of sound-events is envisaged as being transformed spontaneously, along with their other characteristics, in the course of a performance. In the score of **POLE**, for instance, the two parts are supplemented by graph-like systems ordering the movement of sound, via a network of loudspeakers, about the listener. One other project dating from this time is also worth mentioning, even though, despite reaching an advanced stage, it failed ultimately to see the light of day. This was the New York Philharmonic commission **PROJEKTION** (1967), which according to Michael Kurtz was to feature a live orchestra synchronizing with two pre-recorded versions of itself projected on film.⁴¹

A development associated with the second half of this decade relates to Stockhausen's remarks about the possibility of sounds moving around spelling the end for the 'fixed spatial perspective'. The end was not quite yet, and an 'inward-focusing'⁴² piece such as **ADIEU**, concerned with homogeneity of sound to the complete exclusion of the spatial dimension, could still be written in 1966. Around the same time, however, Stockhausen was making preparations for the focus of his next Darmstadt project, which became

ENSEMBLE: Process-planning for 12 composer-player duos, spread out in a large hall (...) without fixed seating, with 12 sound paths diagonally crossing each other in space between the loudspeakers; mobile audience.⁴³

There followed **MUSIK FÜR EIN HAUS**, in which the listener was encouraged to roam at will from room to room, and thus from music to music. In both works, to quote Kurtz, Stockhausen 'was no longer concerned with performing single pieces of music on a stage, but with a total event in which the auditorium was permeated by sounds in motion.'⁴⁴ In 1971, after a series of more or less structured 'environmental' events, came the *locus classicus* of the genre, **STERNKLANG**, whose five widely-separated groups take the listener outdoors, ideally 'during the warm summer weather, under a clear starry sky, preferably at a time of full moon'.⁴⁵ Another outdoor project showed that a text piece could make use of space not just in the way mentioned earlier (spatial projection over loudspeakers, 'performed' live). For the ideal interpretation of **UNBEGRENZT**, from **AUS DEN SIEBEN TAGEN** –

UNLIMITED

play a sound

with the certainty
that you have an infinite amount of time and space

– may be a literal one, as in the extraordinary outdoor performance Stockhausen describes to Cott, which had the players making use of rooves and even the adjacent forest.⁴⁶

Musical topography assumed unprecedented significance, of course, in the Osaka *Kugelauditorium* built for Expo '70. Stockhausen's designs incorporated a 'sound-mill' (described in Cott, pp.45–6) enabling him to project sounds, 'live', around the spherical sound-space in any configuration, as quickly as he was able to move his hand ('up to about five revolutions per second'⁴⁷). The auditorium itself, a sphere 28 metres in diameter, was fitted with 50 loudspeakers in seven horizontal circles around, above and even below the listener. The audience, seated on cushions, occupied a sound-transparent platform somewhat below halfway, it proving impossible to meet Stockhausen's wish of placing them on the equator itself. In its essentials, nevertheless, the project went a long way to realizing dreams harboured since the late 1950s:

To sit inside the sound, to be surrounded by the sound, to be able to follow and experience the movement of the sounds, their speeds and forms in which they move: all this actually creates a completely new situation for musical experience. 'Musical space travel' has finally achieved a three-dimensional spatiality with this auditorium, in contrast to all my previous performances with their *one* horizontal ring of loudspeakers around the audience.⁴⁸

At the same time, he describes the whole event as 'an enormous learning experience',⁴⁹ which Maconie may be right to identify as having triggered a fresh wave of interest in the particular matter of moving sounds around the listener. In any event, though the conditions of Osaka could not be reproduced, many of its lessons were soon to be applied in the major exercise of **SIRIUS**. The tape was realized using a new, motorized rotation table capable of speeds – up to around 24 rotations per second – that would have sent the original version, built in 1959 for **KONTAKTE**, into orbit.^{50N} More generally, as Maconie writes of a work he says 'shows Stockhausen in a new contrapuntal guise':

One is made aware how important a component of the music the spatial dimension has become, both to allow the different parts to be clearly distinguished, and to give the music (and the listener) room to breathe.⁵¹

'In the future, music will become space-music', Stockhausen said, adding that 'to me it is in large part already so.'⁵² Before his prophecy comes to pass, it goes without saying, a conception of concert-hall design dedicated almost exclusively to serving the music of the past would need to undergo fundamental change: Osaka remains a one-off. When music began to be written for which church and royal chamber were no longer suitable, he pointed out,⁵³ the challenge of providing new concert halls did not go unanswered. In our own age a comparable need for halls adequate to the new challenge of presenting 'three-dimensional space-music'⁵⁴ has arisen – but where are they? Posterity will judge whether we were really right to indulge Karajan's search for the optimal Brahms sound rather than engage the future-facing visions of a Stockhausen.

The prevailing realities did not prevent Stockhausen either from articulating clear principles affecting every aspect of *Raummusik*,^{55N} or from realizing them as fully as possible in the conception and presentation of his own works. Space is an essential element of the later performance practice discussed in §1(vii) (p.xxx), being explicit in his definition of a concert of his as a 'spatial and temporal process', implicit in the clauses referring to performers'

independence of a conductor. The whole business of Stockhausen's increased interest in the visual side of his works' presentation post-1970, in fact, may be best understood as an attempt to 'light' the new musical vistas that space opened out.

LICHT is a spatial as much as a temporal composition, it would be no exaggeration to say, and at every moment, not just in those parts where the new dimension is an unmistakable central feature. A list of these would include **MICHAELs-ABSCHIED** after **DONNERSTAG**, with its rooftop trumpeters, and **LUZIFERs-GRUSS**, similarly scattering brass calls to the four corners. And two recreations of eastern ceremonies brought back from Stockhausen's travels (space-music lives, of course, in such distant traditions): **LUZIFERs-ABSCHIED**, whose clattering, encircling monks transfer the 'fantastic space music' of an Omizutori water rite to a Franciscan Good Friday (or **SAMSTAG**) (p.xxx); and the candle-bearing maidens singing their way *through* the audience at the start of Act 2 of **MONTAG (MÄDCHENPROZESSION)** (p.xxx). The part of **LICHT** most conspicuously concerned with space, however, is the second act of **DIENSTAG**, whose electronic music (**OKTOPHONIE**), placing the listener in a cube of loudspeakers, is the nearest thing to an attempt to re-create the spatial saturation of the Osaka hall. 'In this music, vertical and diagonal movements are composed for the first time, in addition to the horizontal movements of the earlier 4-channel or 8-channel electronic music.'⁵⁶ So strong is the spatial element here that, in order for these movements to be followed, given that they take place in a polyphony of no fewer than eight layers, the other parameters must be made to serve it.

In order to be able to hear such movements – especially simultaneously – the musical *rhythm* must be drastically slowed down; the *pitch* changes must take place much less often and only in smaller steps or with *glissandi*, so that they can be followed; the composition of *dynamics* serves the audibility of the individual layers – i.e. it is dependent on the timbres of the layers and the tempo of their movements; and the *timbre* composition primarily serves the elucidation of these movements.⁵⁷

I should explain what lies behind my suggestion that **LICHT** manifests the spatial dimension even when it is not a priority, let alone so pivotal as here. At the heart of Stockhausen's endeavours in the spatial field was always his pioneering commitment to the quite new art of sound-diffusion (or -projection), which he insisted is still in its infancy but which in the era of **LICHT** and beyond he was able to practice at previously unattainable levels of sophistication. The art is perhaps best summarized as that of using electronic technology to present music – whether or not conceived in spatial terms – in a way optimal for a given venue. Though bound to be compromised by existing conditions, his practice of it aspired to the ideal of 'uniform distribution of sound'⁵⁸ throughout the space, up to the full 360° and not forgetting the vertical plane above and below the listener – in short, the ideal envisaged for if only incompletely realized in the Osaka auditorium. He elaborates on the principle with particular reference to the soloists' version of **MICHAELs REISE**, which he has just been describing as a piece to which sound-projection is so integral that 'the impact of listening would be lost' if it were to be dispensed with.

The goal that I pursue, on the other hand, is that of general diffusion of sound, wherever it is perceptible, as far as the sides and the far end of an environment. I want each person to hear the music from the inside, as if he were to find himself in the middle of the orchestra.

No, let me correct myself: rather than from the inside, where a neighbouring instrument sounds more loudly than one at a distance, it would be advisable to hover in flight above the orchestra.⁵⁹

Elsewhere he specifies another key desideratum: 'There should practically be for every sound a different area where this sound lives and also enough space where it can travel.'⁶⁰ In practice this means a microphone assigned to each performer, and an appropriately large number of loudspeakers. (The latter, incidentally, being devices which, while acknowledging them as 'the crux' of sound-projection in its present state, Stockhausen regarded as inescapably limited, envisaging sound being relayed in the future not via membranes but through some such medium as ionised air.⁶¹)

It must be obvious that all this has nothing in common with amplification for sheer volume, familiar from rock concerts or even those of a Phillip Glass. Often, to the contrary, it is a question of bringing out fine acoustic subtleties (overtones, for example) which normally would not be heard by the audience at all. Always the aim is to produce a 'carefully calculated acoustic image'⁶² appropriate to the music and the space in which the listener receives it. This being largely an interpretative matter, Stockhausen proposed a new profession of sound-director (*Klangregisseur*) having responsibility for the overall acoustic. Such a figure would be a musician before a sound-engineer, collaborating with the conductor where one is called for, actively monitoring rehearsal and helping guide performance whether one is or not. The model is of course Stockhausen himself and his relationship with the performers he chose to work with.

These are only some of a whole panoply of such conditions implied by the later scores, and which Stockhausen came to regard as appropriate to his older works also (and indeed not irrelevant to much other music besides). **ZYKLUS**, for example, originally as pure a 'platform' work as it is possible to imagine, he came to want us to hear as the performer hears it from the centre of his surrounding ring of percussion.⁶³ The principles of sound-projection are adaptable, too, equally to the school hall and the sports stadium, and I had the experience of observing him going about his business in essentially the same way in each. A larger venue, although the perennial problems of balance are likely to be at their trickiest there, may essentially demand only a larger network of 'speakers, though whatever the setup anyone going along to a Stockhausen concert to hear sounds 'revolving like mad',⁶⁴ as in experiments in Osaka, is likely to be disappointed. In cases like the 'purely orchestral' (in reality, discretely miked) **INORI**, or the 1950s piano pieces he took to amplifying after performances in Osaka, we may hardly be aware of the presence of loudspeakers at all. All the same, Toop observes of the pauses into which the often cataclysmic events of **KLAVIERSTÜCK X** subside: 'A version of the work with sound-projection allows these resonances to do physically what they should always have done metaphorically: to hang in the air.'⁶⁵

§(3v) The composer and the world

We turn next to examine some of the wider implications of Stockhausen's understanding of 'vibration and rhythm (...) what everybody has in common'.¹ This may seem an odd quotation to introduce his views on the significance of music in human affairs, until it is realized that those views, which could hardly be more at odds with those prevailing in the contemporary musical and wider world, sprang from a conviction that sounds exert a direct and special influence on the human organism itself. He is of course not alone in this, though in modern times we have to go to non-western traditions to find his position at all widely shared. Shortly after the statement at the head of this part of the book ('The Life Absolute' etc.), Hazrat Inayat Khan goes on to say:

Man is not only formed of vibrations, but he lives and moves in them; they surround him as the fish is surrounded by water, and he contains them within him as the tank contains water. His different moods, inclinations, affairs, successes and failures, and all conditions of life depend upon a certain activity of vibrations, whether these be thoughts, emotions or feelings...²

We needn't speculate as to whether Stockhausen would endorse this particular assertion, for he has done so in the following terms:

People always think they're in the world, but they never realize they are the world. They are identical with what they see and hear, whether they like it or not. The sounds that I hear are me. I become the sound, otherwise I'd never hear it. The air that I inhale is me because this air is my life, that's what I am. I'm a machine in so far as I'm ventilating and burning oxygen. Of course, I'm not all the air, and not all the air is me, but the air that comes into me is me. The sounds that come into me are me, and the same with all the electric waves and thoughts that come into me.³

The tone of these remarks from 1972 is far removed from that of the ultra-rational theoretical articles of the 1950s – indeed it could still be the sufi Khan speaking. The basic proposition, however, that sound affects the body – ‘otherwise we would never hear it’ – is hardly to be challenged. It can do so without our so much as being aware of it, as we read in *The New Grove*:

That one does not hear anything, or receive the sensation of tone, does not mean that sound is not entering the body. Sound of about 10k Hz. can cause nausea and can interact with the α -rhythm of the brain; sound above 20k Hz. can produce severe nausea.⁴

Indeed, as Stockhausen puts it: ‘Sounds can do anything. They can kill.’⁵ His 1972 Liège project **ALPHABET** had the more benign purpose of showing ‘what sound vibrations really are, and what they do to matter, which also means what they do to us, to the human being’,⁶ through a series of demonstrations affecting fish and human subjects along with materials such as dough, powder (to form Chladni configurations), and the more predictable shattering wineglass.

The human body, itself ‘formed of vibrations’, acts as a receiver of vibrations from outside itself. If that much is unarguable, Stockhausen goes further by insisting that the particular constitution of our physical organism gives us a responsiveness to sound vibrations far beyond that possessed by the most fragile glass:

Sound waves, musical waves, correspond to our bodily rhythms. Light waves are much faster; they do not belong to the same category as the cruder substance of our bodies. Of course we are made from finer stuff too, brain waves for example, which are as fast as light waves; and faster waves still, obviously. But the body is best set in oscillation by acoustic waves.⁷

The power of sounds organized as music is not itself controversial, being a matter of experience too familiar for us to think worth analyzing. We did not bat an eyelid when, in **§2**, Stockhausen was quoted as saying: ‘When a certain kind of music is played somewhere I must go away, because I know it will affect and transform me: it will pull me downward.’⁸ But the language here, especially the word ‘transform’, discloses his certainty that music can affect us more profoundly and lastingly than we imagine; that it is uniquely equipped to

infiltrate our being and thereby influence our cast of mind, well-being, behaviour, and so on. At least as much as what we eat, he suggests, we are what we hear. In engaging wholeheartedly with music, he said on another occasion:

Whether we know it or not we are always modulated, to a certain extent we become the music, and we will never be the same after hearing a certain piece of music.⁹

This is developed in Cott:

I say that if people really listen to music they become the music. The music 'forms' them because, first, there are acoustical waves which, on a physiological level, touch human beings, and then they're transformed into electric waves – they modulate the person. And that's why I say a person will never be the same after having listened to a piece, no matter what the brain records as the reaction of the body. Even if the reactions are violently against it, that shows that the system has been shaken up very much.¹⁰

Needless to say, some of this would seem equally applicable to other things we experience, not least in the other arts, whose products may usually be traced to a wish, avowed or not, to 'modulate the person' engaging with them. In interview after interview, however, Stockhausen was at pains to make clear he meant more than that 'this movie / play / book changed my life', which would essentially be an intellectual effect, instead advancing music's claim to special status by arguing that

sounds are spiritual nourishment whose profound impact by far exceeds anything similar because they electrically modulate the entire person down to their very atoms by way of forms of vibration.¹¹

Naturally, not all sounds, or all music, will do as well as any other: some will kill, or at least 'pull me downward'. Hence, of course, Stockhausen's career-long insistence on scrupulous attention to the details of musical organization, where possible all the way down to the 'atomic' level of the structure of individual sounds.

All in all, Stockhausen's view of the nature and function of music shows him once again, for all the modernity and indeed futurism of his practice, in closer sympathy with the understanding shared by many ancient and, say, eastern cultures than with anything likely to be encountered in the modern west. 'The Greek doctrine of ethos', to exemplify this by a well-known case, 'was founded on the conviction that music affects character [the basic sense, in fact, of the word *ēthos*] and that different kinds of music affect it in different ways.'¹² Moreover:

Music, in this view, was not only a passive image of the orderly system of the universe; it was also a force that could affect the universe – hence the attribution of miracles to the legendary musicians of mythology.¹³

Like the Greeks and other ancient cultures, or for that matter those in whose hands rests what survives of the Indian mantric tradition, Stockhausen believed that music possesses (to quote from the text, taken from Satprem's Aurobindo book, used as the programme note to **MANTRA**) 'initiatory power'.¹⁴ Used aright, it can heal mind and body. More, it can be used to sharpen and deepen perception, and not only auditory perception. It can serve to put people in tune not just with themselves and with others, but with whatever forces account for

and secretly inspire our puny individual selves. In his note to the revised **PUNKTE**, Stockhausen conjures up a vision of the work's ideal audience:

I see an auditorium with people who have become sensitive enough, to be conscious of the connection between each Point in the music and their individual existences: of the particles of their person and of their person in the cosmos. Who let the vibrations of the music penetrate into the furthest atom of their unconscious layers and thus use the music in order to understand themselves more deeply, themselves and their significance in the whole. People, who through this music become music themselves.¹⁵

This makes it easier to understand why all Stockhausen's views about the practice of music assume it to be a spiritual activity (in the widest sense), and only incidentally (if at all) a form of entertainment. As inevitable as his admiration of master practitioners in traditions such as the Indian or Balinese, therefore, are his frequent scathing condemnations of their counterparts in the west – of which a flavour:

The attitude of the most 'important', that is the most famous, interpreters of our time – the best-known conductors, instrumentalists, singers – is to assume that the music they play has been written in order that they might show off their talents, and themselves, to the public. That is a complete distortion. Those who happen to possess a talent to play or sing well ought to be aware that they are relatively unimportant. They should be trained again, to serve music and to serve progress. As I have said, the most famous ones do not do this, they refuse to do it, preferring to live from the fame of dead composers.¹⁶

(Harsh on a Daniel Barenboim, of course, but there others on whom such an attack scores a palpable hit.) Criticism of star performers by a composer is itself scarcely a new phenomenon. The same cannot be said of an aspect of modern musical life which, on the same occasion, he diagnosed as a chronic symptom of our cultural sickness:

A state of affairs has arisen which is unprecedented in our whole tradition. Earlier, right up to the beginning of our own century, there had always been *only* modern music. It's true there had been a few awakenings, around the middle of the previous century, of performing music of the past, but these had been exceptional.¹⁷

His point is not that the former amnesia was itself desirable, but that our unwillingness to countenance the new (and latterly our growing eagerness to retrieve the forgotten past) have led us, within the course of a single century, to the opposite, unhealthier extreme. We now spend so much of our time in the museum we have built that we fail to notice it has turned into something else:

This seems to be enough. People seem to have closed the windows and the doors and said O.K., this is enough. But. *This is a graveyard.*¹⁸

He points unhesitatingly to the seat of the malaise:

The problem is the completely commercialized western and American attitude towards music, as something you can make like an automobile, as a toy for the people. Nobody thinks any more about the spiritual atmosphere that music must live in.¹⁹

It would be difficult for anyone without a vested interest to deny the point. That commercial considerations rule, in every area of public musical life, has grown more evident with every year that has passed since this statement was made in 1970. Why do concert programmes get safer and safer? Why do most new pieces have to obey certain rules – not too long, not too many rehearsals needed, nothing fancy in the way of resources, nothing in the musical language to frighten the horses – to get commissioned? Why, harking back to §3(iv), must the very rare new concert hall be designed with the past (the 19th century above all) in mind? The answer is the same to each question and a thousand others along the same lines. The economic ‘realities’ dictate it; in music administration too, who isn't a Thatcherite now?

When Stockhausen deplored the beancounter's concept of culture, which sees music as just another stall on the market, it is plain he did so from a position far removed from that occupied at various times by contemporaries, many of them sometime colleagues, such as Pousseur, Cardew, Henze, Nono, Globokar, Wolff, and Rzewski. While sharing the view of these composers that the condition of modern musical life is indicative of a decadent society (his language as well as theirs), his objections rest, as we have found, on grounds which they, from the radical left, would hardly recognize. He was in fact pretty much completely unsympathetic to political art, whether as politics or art.^{20N} This is no doubt partly to be explained by his experience (though Henze, for one, shared it) of the Nazi frying pan, which left him extremely wary of fire thereafter.

I would never let myself become a horse for one group of people and serve their exclusive interests. I learnt during the war and after it that specific ideology would bring trouble and hatred and destruction.²¹

Socialist and National Socialist art propaganda are suspiciously alike. Neither I nor my music have anything to do with politics.²²

Unlike several of those just named, then, he never had space in his pocket for a certain celebrated little volume, red in colour, even when it was most fashionable to do so. To hear him expand on why, in a 1973 discussion, is to gain further insight into his convictions about the proper role of the arts, music specifically, in society.

Maoism, the great idol for many intellectuals. This is like thinking that the best that has happened to Germany was Hitler, because he built *Autobahnen* and factories and did away with the capitalist ‘Plutocrats’. That is what many people think makes Maoism so great. Because the people had famine, the people had nothing, they were suppressed. Mao builds roads and factories, he gives work and food. But what *for*? What do they want to *do* with all this? If they have enough atom bombs, if they have enough factories, if they have enough streets, if everybody has food: what *for*? That is the main question. What new concept do they bring to the rest of the world? I mean a concept of what man is living for. (...) Tell me please: what do the contemporary Chinese bring to the rest of mankind up to now? I have read the Red Book of Mao, word by word. Tell me, what fruit does it bring? As a new concept, a new goal to live for? Well, first of all it is a goal that we should all have enough food. Well, that is clear, I say the same. Christ has said the same. (...) If we have enough food, if we have these primitive things of physical satisfaction, what then? Well, from China does not come a single note of new music which is interesting, up to now. What I saw is a very bombastic imitation of cheap western style music. What I see coming from China is awful painting: painting which is mainly concerned, again, with the physical things such as building machines, making harvest and fighting the

enemy. What else? (...) 'Social Realism'! The art expresses ideals of the Now, but it does not express where man is going.²³

This is as clear as could be, if open to misrepresentation. Understandable, for example, is that Cornelius Cardew, in his Maoist phase and thus as an adherent of the doctrine 'he who is not part of the solution must be part of the problem', should have produced a polemic against his old mentor under the magnificent title *Stockhausen Serves Imperialism!* Splendid as this sounds as propaganda, it surely goes a little far as political analysis. A more objective conclusion would be that Stockhausen's condemnation of Chinese 'communism' (more accurately, Mao Tse-tung Thought) could easily be adapted to reflect his views on western capitalism, and that his real target is materialism itself, however and wherever practised. Though this emerged clearly enough in his statement above, repudiating any and every 'specific ideology', it is worth quoting the programme note, again evoking his own early experiences, with which he regaled the good patrons of the New York Philharmonic in 1971.

I am an artist who, as the phrase goes, has 'arrived'. It is said that I belong to the Establishment and my position, therefore, is on the *right*. How stupid! Does it mean nothing that when I was so young that I could hardly talk, my mother was taken away from our home and later murdered on government order because she was a superfluous consumer of food in wartime? That my father, after six years in the army, died the so-called 'hero's death'? That as a child I was beaten by all kinds of strangers, that as a sixteen-year-old in a front-line field hospital I was a daily witness of inhuman cruelties, of the miserable deaths of thousands with ghastly wounds, with phosphorous burns, with broken bodies? That I saw boys of my own age, old men, civilians and so-called deserters strung up on telegraph wires? That for years I cowered in bomb shelters, inhaling the stink of thirty, forty thousand corpses in civilian cities that had been flattened to the ground? That for five years more I was a common labourer, a factory worker, a potato thief, a coal-filcher, and thereafter worked nightly as a bar pianist for black marketeers and occupation troops? That since the 'great' war I have watched the revolting reconstruction and greed of the 'economic miracle', the great forgetting, the fear of the atom bomb, the expulsions, the tortures, the oppression in the lesser wars of other countries – and that I am impotent against all this? Arrived? Established? *Where?*²⁴

This should be enough to put us on our guard against another widely expressed view, namely that as a composer Stockhausen is, to quote one commentator, 'singularly dissociated from this world'.²⁵ His viewpoint may be a lofty one, but it does not lead him to take a passive view of human affairs, as witness this exchange in Cott:

JC Do you think people would go to war if they had a high enough spiritual consciousness?

KS I think they would – if you had to go to war to get rid of a state like the German state under Hitler. I give my support to someone like Aurobindo who sent his brothers to Europe in order for them to learn how to make bombs to blow up bridges and trains of the English occupation army in India. He could have talked until he died, and nothing would have changed. Aurobindo was strongly opposed to Gandhi who was against the English entering the war, after Chamberlain had been so weak with Hitler.²⁶

The problem, from the composer's point of view, is that he is indeed 'impotent against all this', and public gestures can't change the fact. As the note to the New York audience goes on: 'The other day I read reports of torturing in Vietnam. Should I go to America and make

music for the Americans? What good will it do if I cancel?'²⁷ The best he can do, he suggests, is present them with **HYMNEN**, 'another project for the integration of all races, all religions, all nations', knowing in advance that it will be 'shoved aside as a stupid, naive utopia'.²⁸

What emerges from all this is surely clear enough to the sympathetic observer. As the terms of his criticism of Maoism tend to suggest, Stockhausen's outlook may be seen as *existential* in the important sense (though only in this sense) of his judging human behaviour in terms of his question 'what *for?*'; and *evolutionary*, in that it concerns itself above all with 'where man is going' in the long run of his developing history. Knowing of his attempt to make his work mirror 'the reality of the cosmos' (p.xxx), we can scarcely be surprised if he refuses to reduce that reality to a set of narrowly socio-political aims. 'Our concept must be so broad', he once declared, 'that we see ourselves and the whole world from above, allowing old systems to run down without replacing them by something new claiming exclusivity.'²⁹ On more than one occasion he introduced a Nietzschean twist into his pronouncements on the contemporary artist's rightful purpose, as here:

Modern art ought to indicate at every turn the progressive events in the evolution of our planet, even while taking account of our perceptive faculties, on the levels of hearing, feelings, and thought. The task of the artist is to announce the coming of a new man, in so far as he is a creative spirit facing the future.³⁰

Talk by Cardew of an art expressing 'the ideology of a revolutionary class'³¹ would seem hardly less utopian, in its very different way, but that is not Stockhausen's objection to it. What he would immediately dissent from is the idea – not by any means confined to communist ideologues, of course – that it is the composer's duty to cultivate a style somehow immediately accessible to all. He gave his own opinion to Theodor Adorno:

To my mind there is no music that is for everyone; neither can there be. Just as some types of musical production are nothing to me, neither can my music be for everyone.³²

Even were it possible to please all of the people all of the time, it is plain that he would have regarded setting out to do so as a dereliction of the composer's real responsibility. This is not to suggest he was not prepared to meet the listener halfway. Though I don't believe he ever acknowledged as much, there was perhaps some element of pragmatism in his works' gradual increase in surface accessibility, accelerated after 1970 by his consistent use of recognizable figures, visual complements to listening, and so on. One need only compare the visual and textual 'signing' of formal phases in works like **KATHINKAs GESANG** and **LUZIFERs TANZ** with the more opaque use of markers in much earlier works, to suspect there must have been a conscious move in this direction. What he always set his face against was writing down to popular taste, which he regard as an exact inversion of music's original and true purpose.

The decisive question today for anyone who makes music is, in my opinion, whether this planet with its inhabitants is a place of pleasure where people entertain one another in an enjoyable way – for instance, with music – or whether this planet is a school. I am convinced it is a school, containing a great number of classes for people at all levels of consciousness – from the most naive child to beings with a supernatural degree of enlightenment – all of whom are alive at the same time. (...) You must (...) decide for yourself whether music is used as a means of drawing humanity upwards into higher realms, or

whether it merely serves as a way of agreeably passing time. On that choice depends the level of music and its inner structure.³³

Just as this returns us to ground covered in our **Introduction**, so its continuation provides us with still another way of understanding the ‘unhearable complexities’ (p.10) which puzzled us then.

If new music is intended to draw people upwards, its development simply cannot be too complex. If, to begin with, only a few people, or even no one at all, can hear everything contained in this new music, that doesn’t matter. Such music has after all been created to enable people to develop into higher beings.³⁴

The contrast with Cardew, whose attack makes reference to ‘such surface phenomena as avant-garde music’,³⁵ could hardly be starker. As our arch-representative of the political composer concludes (and many he would have regarded as political enemies would concur): ‘The artist serves the community, not vice versa.’³⁶ To Stockhausen, it grows clear, neither applies. Instead, he viewed the composer, as he often said, as ideally a receiver / transmitter, connecting the listener with ‘higher realms’, broadcasting not his own personality but his understanding of ‘the reality of the cosmos’. His view was of ‘music as a vehicle, and the composer as the mediator (...), the spokesman for a world to come’,³⁷ or, as he described himself more prosaically elsewhere, ‘the postman who brings the mail without knowing what is in the letters’.³⁸ The theme is developed in an interview response rising to a ringing justification of his entire activity:

Q You once said music in the post-war period was not an expression of human feeling, but a re-creation of cosmic order. There was an orientation away from mankind.

KS Well, it is true. When I discover something that is mysterious for me, new for me, and when I very carefully try to formulate it in sound, then it is certainly not the human side of myself which is touched. It is very strange to me. And I feel there is something that I don’t know; I don’t even know how to formulate it and to translate it into the instrumental world, whether in the electronic studio or with traditional instruments is secondary. The music which is composed by me and rehearsed many times and perfected in a lot of rehearsals very slowly creates feelings that I haven’t had before. But it is not the expression of *my* feelings. So then I have new feelings. New music creates new feelings. It gives us completely different experiences that we haven’t had before. That’s why it is so important – it expands us.³⁹

As for ‘music as a vehicle’, he once said:

The task for musicians is to contribute towards re-establishment of the link between humanity and these higher things, and perhaps even with the centre of the universe, by devising – through sound – projects and models for a future world, for our own future...⁴⁰

As earlier quotation of his introduction to a New York performance suggested, it is clear that **HYMNEN**, with its ultimate establishment of ‘the Utopian realm of Hymunion in Harmondia’, in the face of ‘the knife and mutual exploitation and hatred’ (p.xxx) in a place like modern New York, was envisaged as just such a sound-model. In the course of describing this process – a matter, be it emphasized, first of musical technique (‘intermodulation’, etc – p.xxx), only thereafter of a more or less explicit ‘programme’ – the NYPO programme note again addresses his audience directly:

America – land of refugees, of exiles, of the melting pot: this music is made to measure for you. You could become a model for the whole world, *if you would live as this music prophesies* – if you would set a good example.⁴¹ (Emphasis mine.)

His very use of the word utopian in connection with this work, taken with his earlier remarks about how such projects are likely to be received, shows Stockhausen only too keenly aware of the gulf between his convictions and things as they stand. Utopian his prospectus certainly was. We need only consider the common denominator of all his oft-elaborated ideas on music education, concert-hall design, broadcasting, and so on: the proposition that musical activity be balanced as ‘*at least 50% production of new music (...) and 50% historical orientation and study through performances of traditional music.*’ In a progressive society the proportion should even be 75% new and 25% old music.⁴² From the present position such goals seem distant indeed.

One final aspect of Stockhausen’s understanding of the power and purpose of music concerns us, and invites our response, as individual listeners. Implicit throughout, like everything in this section it refers back to his belief in the unique capacity of music to affect us ‘down to [our] very atoms by way of forms of vibration’.

I have in mind his frequently expressed view of music as a powerful instrument of personal development, or as Beethoven put it ‘a higher Revelation than all their wisdom and philosophy’.⁴³ ‘Music is the most subtle medium of spiritual and intellectual self-education’,⁴⁴ Stockhausen was convinced: ‘the medium which most deeply moves the person and which can bring the finest vibrations in him to sympathetic oscillation.’⁴⁵

Only a very few people *know* that *every single one of us* basically needs music as a means of self-healing. People usually drink coffee to regain vitality. Just a few are clever enough to know exactly what music provides inner refreshment and a feeling of dancing along. Only a few people know that certain pieces by Stockhausen make their ideas come ten times faster. Such listeners use music therapeutically so as to gain vitality, become more creative, and so as to be able to talk about interrelationships they would otherwise be completely unaware of. They thus make use of music as a preferred source of spiritual nourishment.⁴⁶

From which follows his conviction that, as has also said:

Great power is given to us musicians: our notes can kindle in other men the fires of longing to rise above themselves. Let us not abuse this power! It is not simply that the individual musician will vibrate in the height of heights; what matters is that the field of vibration around him will become so strong, so supercharged, that anyone entering this field will vibrate in sympathy.⁴⁷

This leads us to what may be his definitive statement of what the composer is ‘for’:

I think the only function and meaning for a true artist is that of receiving something in terms of sound visions and then creating something which hasn’t existed before and cannot simply be justified or explained by what’s happened before – by what others have composed, by what history has provided.⁴⁸

And this, in turn, rather nicely to our look at how, in Stockhausen’s case, this act of translation is managed ...

§3(vi) Stockhausen's composing process and his creative personality

Any attempt to assemble a faithful image of Stockhausen as a creative artist must I believe take note of from two basic facts which, together with his spiritually-determined outlook, go a long way towards defining the complex figure we are dealing with.

The first is simply the influence of his material origins as someone growing up in a particular part of Germany during a very special time in the country's history. Despite having transcended his beginnings in every conceivable way, he remained to a surprising degree their product, and to hear him – I stress *hear* – reminiscing about his early years, or simply conversing with a Cologne native, was to be struck by the fact. His house-cum-centre of operations, built to his own conspicuously modern (indeed serial) design at the height of his international travels in the 1960s, lies almost in the very neighbourhood in which he passed most of his childhood. The circumstance may be 'a phenomenon',¹ as he described it, but is tempting to see also as symbolic. That his choice, made at a time when the world was his oyster, would have been partly determined by his continuing Cologne commitments, notably at WDR and the *Musikhochschule*, serves only to reinforce the point about his strong local attachment. The fact is that, in the midst of his peregrinations and adventures, and notwithstanding his cosmic outlook, the root of his life remained in German – indeed, specifically North-Rhine Westphalian – soil until the end. He looked German, thought first in his native language for all his command of several others, and ordered his affairs with model Teutonic efficiency. His manner, perhaps even his very gait and bearing, were to be accounted for by his origins. As for the time in which his attitudes began to be shaped, it is perhaps revealing that he seemed to view politics almost exclusively in terms of *exploitation*.

As well as a German, Stockhausen was – statement of the glaringly obvious number two, though again worth pausing over – a composer through and through. As a young man his creative urge found its outlet in poems, short stories, and one larger work of literature, his literary hero Hermann Hesse, no less, encouraging him to believe he had the makings of a proper poet.² It is not difficult to imagine him making a mark, for that matter, in pretty much any field he chose. Still, it is somehow impossible to conceive of him as anything other than what he so quickly made himself. 'That's my life',³ he said; 'my greatest pleasure is to sit for ten or twelve hours and compose, or work in the studio. It's marvellous.'⁴ From the moment his course was set, right through to the end almost 60 years later, everything fed the origination, production, and dissemination of his works. This is true not only in that his whole life was arranged around his composing, but also in the sense that all life's experiences became grist to its mill.

It seems to me in general that one of the most essential talents of a musically creative person – perhaps musical talent itself even consists in it – is the ability to translate any idea whatever into music. One might see or read something, and thereupon get the idea of what kind of music one might make. (...) Ideas do not always come from reflection on musical problems. I can equally well be stimulated by the work of an architect. I may have some experience, make some journey, see some landscape, and suddenly discover certain relationships which immediately give me a musical conception.⁵

Scientific disciplines became a particularly rich source of inspiration, as indeed we have found. Kurtz quotes a fellow-participant in Meyer-Eppler's courses recalling how 'Stockhausen always pricked up his ears when he believed there was something he could use in his music: he followed the proceedings from a composer's point of view.'⁶ The composer himself was quite open about the influence such apparently unpromising studies had on developments covered in §1(iv) (p.xxx), for example:

I simply transposed everything I learned into the field of music and for the first time composed sounds which have statistical characteristics in the given field with defined limits.⁷

Sometimes a chance experience, like the extensive air travel mentioned more than once in connection with **CARRÉ**, found its way into a work (or at least into a work's composition). 'In **GRUPPEN**, for example, whole envelopes of rhythmic blocks are exact lines of mountains that I saw in Paspels in Switzerland right in front of my little window.'⁸ A more accessible (because audible) example arose out of a visit to the famous waterfalls in Yosemite Valley, California. Staring through one of these at a vein of rock until his eyes had ceased to focus, he had the impression that the line of the rock had begun to rise, which led him to create a comparable illusion for the Fourth Region of **HYMNEN**, in long passages of *glissandi* that seem to descend continuously – without getting any lower. (The effect is best heard during Stockhausen Edition CD10B, Track 51.^{9N}) A less particular inspiration, touched on by him a little earlier, takes on special interest in the light of our discussion in **§3(iii)**:

Even as a student I counted the windows every time I went along a street in Cologne: how many to the left, to the right, how many on top, how many below, whether there was the same number of windows, whether they were the same size and how they were arranged.

It is like a sixth sense of mine and it always makes me measure architecture because of course I know that a temple, in all its dimensions, reflects the profound secret of a harmony that is mathematically sound, and that good music is the same. That's why it fascinates me.¹⁰

This is just one aspect of his observation of many different cultures, surviving and modern, in the course of which, it is safe to say, music never left his mind. His account of a Japanese tea ceremony he witnessed may be unique in its concentration on what he calls the 'beautiful music' of the ritual.¹¹

It is in this light that Stockhausen's supposed 'wrong analysis' of Webern's serial praxis (p.xx) is best understood, giving a different look to Boulez's criticism: 'He did it to help him formulate his own ideas.' The fact is that since the very beginning (starting, as Blumröder points out, with his Bartók graduation thesis¹²) his writings took on exactly that function. Relevant here is a remark made in another case in which he was accused of finding in another's music what was not there to be found. It comes from a footnote added to his analysis of a work by Nono, which that composer had complained was 'incorrect and misleading':

The reader must therefore not take my reflections and analyses as being demonstrations of Nono's composition but rather of my own [i.e. **GESANG DER JÜNGLINGE**] – *demonstrated on the work of another composer*.¹³ (Emphasis mine.)

Again, aspects of the theory set forth in the article *...how time passes...* have been rubbished by more than one specialist acoustician. 'Even to the extent that these criticisms are valid, however', as the *Musical Quarterly's* reviewer recognized, 'they fail to undermine the specifically compositional value of the theory.'¹⁴

On the subject of Stockhausen's attitude to Webern, incidentally, we are now in a position to appreciate an otherwise enigmatic fragment from his 1965 **MOMENTE** note ('Self portrait'):

My reflection is altered by Webern's music.
Webern's music is transformed by my reflection.
My reflection is altered by my reflection on Webern's music.¹⁵

The numerous posts he held never threatened to distract Stockhausen from his true course, as conducting and administrative responsibilities at various times seemed to deflect Boulez from his. On the contrary his teaching, for example, became to some extent another testing ground for his own ideas, as in the cases of **PLUS-MINUS**, **STOP**, "**Atmen gibt das Leben...**", and also **INORI**, whose elaborate dynamic scales were a main topic of his 1974 Cologne composition class.¹⁶

'My life is composing', Stockhausen once said; 'and composing is my life.'¹⁷ The extent to which this was the case may have been to the detriment, at a crucial time, of his parental responsibilities,¹⁸ in which case we might call it Mozartian. To us, it has the advantage of pointing our direction, for our attempt to assess his extremely idiosyncratic creative personality may best advance by tracing in some detail the process by which his works themselves came into being. Bearing in mind Stravinsky's warning about its being 'impossible to observe the inner workings of this process from the outside (...) futile to follow its successive phases in someone else's work',¹⁹ I propose that in doing so we rely even more heavily than usual on Stockhausen's own testimony.

To set us going, though, another voice, David Tudor's, recalling a time when few were better placed to observe Stockhausen's custom:

All his works of those days were composed as theoretical forms, structures dealing with numbers, and whenever it came to making a score he had to translate his original material into musical form.²⁰

At the very time to which Tudor is referring, however, we find Stockhausen placing on record his conviction that 'the composer (...) for all his determining of details must hold fast to his aural conception of a complete, *pre-experienced* time-organism'.²¹ (Emphasis mine.) In case the terms of this leave room for any doubt about what he is saying, here he is a quarter of a century later, making it as clear as anyone could wish: 'All my music arises *in the first instance* from purely musical fantasy'²² (...) 'purely musical and intuitive invention'.²³ (Emphasis again mine.)

The creative process, as Stravinsky implies, is a complex and ultimately mysterious one. Stockhausen's case does nothing to go against this, as his various remarks on the subject, including more than one concerted attempt to convey what it involves, serve to emphasize. Clearly, however, the beast cannot be so elusive as to be reconcilable with both Tudor's and his own descriptions, for the contradiction between them is direct. What careful sifting of Stockhausen's statements and the other evidence in fact reveals, I will aim to show, is that Tudor is simply mistaken, his understandable misapprehension being the result of his close-up view of a larger pattern; and that the composer's assertions quoted in the previous paragraph in fact apply across the board, the odd exception aside, to the genesis of his works.

A potentially confusing aspect of the way Stockhausen's music has come about is that this has undergone a number of changes, corresponding to the phases of his development. This emerges from an interview given to his biographer Michael Kurtz, in which he explains how the major shifts recorded in §1 of the present book required him each time to revise his way of working. He began, he relates, in the traditional way we would expect, in student works like **DREI LIEDER** and the **SONATINE**: 'I heard everything directly, while I composed,

working partly by trying things out at the piano.’²⁴ (Less predictable is the element of intensity already present. As we heard (p.xxx), he reports elsewhere on the ‘overwhelming experience of inner sound visions’ that attended the rapid birth of the **LIEDER**.) With **KREUZSPIEL**, according to this interview, came a move to works entailing a high degree of systematization of the type Tudor saw being operated, initiating a period in which his imagination of a ‘generalized sound-atmosphere’ (*‘das Größte als Klangatmosphäre’*)²⁵ emerged as music on the page only after passing through a quasi-automatic system of organization designed to make the result follow the direction of a more or less abstract conception such as a crossing of registers.

In this type of composing one constructs for oneself a system, and the system calls the details forth. One formulates principles [*Gesetze* – also ‘rules’], and these generate form and shapes [*Gestalten*].²⁶

As such programmed disposition of notionally discrete Points gave way to thinking in which notes could assume greater ‘statistical’ freedom within the system, Stockhausen explains (citing **GESANG DER JÜNGLINGE** and the **KLAVIERSTÜCKE**), ‘free sound-fantasy, also in the shaping of the details, once again entered in’, not least in the form of ‘direct sound-visions’²⁷ demanding inclusion as Inserts.

The modular nature of Moment Form signalled another change, **MOMENTE** heralding what he described as ‘a completely new method of composing’.²⁸ His planning, based as we saw (p.xxx) on the principle of ‘maximum individuality of the different Moments’, prescribed the length of each, and within this the number and proportions of its subdivisions, and provided ‘parametric’ information about what the Moment was to contain: predominant dynamic, central pitch, ratio of sound to pause, instrumental to vocal sound, male to female voices, tone to noise, you name it. Before writing a note of the music of a given Moment, then, he had before him all these specifications, which he proceeded to absorb until he had them by heart, ‘like a cook the seasoning ingredients of a dish’.

Then, each time, I lay on the bed with eyes closed – for as long as it took, an hour, two hours, ... sometimes in an almost hallucinatory state – and attempted time and again to conceive within myself, by combining these values and properties, a sound-structure, a *Moment* – for example by beating internally the possible rhythmic permutations, testing them with my inner ear, and imagining the melodic series in all the possible combinations allowed for by the theoretical framework I had constructed for myself... Until sooner or later would emerge a best-possible solution, one that struck me as musically organic. I then went straight into the next room, where Mary Bauermeister was working on her pictures, and wrote down what I had heard inside me. Sometimes, losing a part of it, I would return to the other room, pacing up and down until it was there again, this unified sound-structure, which, out of the mental dice game I had been playing, had finally resolved itself, within my musical consciousness, into a definitive shape.²⁹

Leaving out any reference to his procedures in the later 1960s, Stockhausen rounds off his history by describing to Kurtz the (again) ‘quite different’ approach entailed by working with Formulas in **LICHT**:

I *reflect* hardly at all. I have my Basic Formula (*Grundformel*), which I have worked out very precisely, and the large form is then a projection of this Formula. This usually requires no more than a basic decision about which projection should be settled on to cover the total timespan of an act or scene.

Then it starts, I don't think twice about it. I write much more rapidly now than before; formal thinking and sound-vision – it has now all become one.³⁰

Another insight into his methods during this later period:

Since **MANTRA** I have hardly used a piano for composing, except now and then for chords which are too complicated. For the rest, I can hear very precisely.³¹

The composer's own account provides a useful basis for our efforts to understand the evolution of his works from initial impulse to final form. I repeat, however, that the process is not straightforward, and a proper appreciation of it becomes possible only when certain cross-currents – ingredients thickening the chronological plot, to thoroughly mash metaphors – are taken into consideration. Many of these are provided by the overriding compositional preoccupations this book has been largely concerned with. Each and every piece by Stockhausen has received some input from his current conception of (in the title of an early essay) 'the state of the craft'. To combine priorities among his technical concerns at a given moment, I suggested in **§1(iv)** (p.xxx), has usually been enough to set the wheels of his next opus rolling in a certain direction. 'My entire life', he once said in this connection, 'is a reservoir of possibilities which at any time I can avail myself of.'³² **GRUPPEN** is a prime instance of a work exemplifying a particular theory, that of the 'unity of musical time'. **MIXTUR** came about in large part as an exploration of a specific new technique of sound-production: ring modulation. Somewhat similarly, **MIKROPHONIE I** stemmed directly from the experiments in 'microphony' in the composer's garden. Etcetera. I don't believe there is a single work that doesn't set out to confront some theoretical or technical challenge, or several at once, the nature of which is bound have its influence on the composition process itself.

As to the point about the precision with which Stockhausen is able at the outset to 'hear' how a piece will sound, the Kurtz interview leaves no doubt that this will itself vary according to the nature of the conception and the resources needed to realize it. Not surprisingly, there will be considerable disparity in this regard between, at one extreme, a relatively straightforward piece for a solo instrument (**IN FREUNDSCHAFT**, for example), and at the other a process involving complex sound-masses, several time-layers, new sound-combinations, and so on. As he goes on to make clear, somewhere along this line the possibility of hearing 'very precisely' how a work will sound, at the outset, becomes unrealistic. Above all in the electronic studio, he says, 'one is able to discover and direct the sound only while one is working'.³³ Far from this concerning him, his view was that this willingness to make discoveries is one of the defining characteristics of new music.

New Music is not so much the outcome or audible result of the way modern composers think and feel (though it is that too) as a music that is uncanny, new, unknown, even to those who happen upon it or let it come about. Such New Music is found rather than invented – no one even suspects it in advance, so it does not express anything that was known or felt *previously*. Rather, once we have heard it, it *creates* a new way of thinking and feeling.³⁴

The plot thickens further when we stir in the complex interplay between intuition and systematization identified (p.xxx) as a consistent feature of his composing. From a 1975 interview:

Q Has the intuitive-mental dichotomy never caused you difficulties?

KS I have never perceived a dichotomy, since I have conceived quite naturally the large form intuitively, the micro-structure mentally.³⁵

Then there is the state of affairs revealed in this answer to Jonathan Cott:

JC When you start working on a piece, do you first think in terms of the smaller or larger aspects?

KS The method changes during the course of composition. Sometimes I start with the small and go to the large; other times I subdivide or derive the small from the large. It depends on what comes first in my imagination. If I don't relate to imagination at all, if the music I compose is just the result of certain combinatoric activities, then I'm amazed myself by what's coming out of it.³⁶

Not the least of the difficulties to be negotiated before moving to definite conclusions about Stockhausen's composing methods (and worry not, we are going to) stems from the fact that he has sometimes been prone, in conversational exposition of this or that example or type of work, to make assertions which, when set beside the rest of the evidence, turn out to have less than universal validity. A prime example comes from yet another interview answer, which looks to be at variance with the last, though of course it ties in very well with his earlier talk (p.xxx) about holding fast to 'a complete, pre-experienced time-organism':

Q Is the plan of a work, its architecture, already determined when you begin a composition?

KS Yes always. I have to wait until I see the whole work before me. I must see a piece's whole course and have settled its global structure before I can begin to compose.³⁷

The problem here is not just the 'always', though let us deal with that first, leaving for later the question, not as straightforward as it seems, of what is meant by beginning to compose. It is true that the 'global structure' of even so Polyvalent a work as **KLAVIERSTÜCK XI** (p.xxx) must have been settled at an early stage, though given the very high numbering of possible realizations it seems unlikely, and would in any event have been unnecessary in such a statistical structure (since 'you can permute or change the order of events without it really making any difference' – p.xxx), that the 'whole course' of each was foreseen in advance. The same applies in a different way to the more skeletal Process scores, and with no less force to their forerunner **PLUS-MINUS**, which introduced 'the idea of writing a piece having such powers of metamorphosis that I might come across it one day and hardly recognize it as my own'.³⁸ And the pure text pieces would seem to constitute an unequivocal exception to the 'architecture' being 'already determined' at the outset, since the form they acquire, far from being laid down by the composer, is left to be 'shaped at the moment of performance' (p.xxx), just as their very sound-world is left unspecified. The point is acknowledged in the Kurtz interview:

MK Did you hear anything, as you thought about **GOLDSTAUB** or **SETZ DIE SEGEL ZUR SONNE** [both **AUS DEN SIEBEN TAGEN**] ...?

KS No. That arose straight out of a Utopian music.³⁹

And yet, as we saw in §2 (p.xxx), Stockhausen seems at some point to have formed a pretty good idea, however 'global', of how each piece should best be 'shaped'.

It is only by a properly sympathetic reading of all Stockhausen's statements on this subject, measured and spontaneous alike, that we stand a chance of gaining height on this labyrinth of conditionality and apparent contradiction. Then, however, the larger pattern I posited

earlier comes distinctly into view, and will be found to be very widely applicable. I propose to discuss this in three phases, corresponding to the successive stages of some archetypal Stockhausenian composition process. First, though, we can glimpse the whole picture, through a pieced-together account of the early history of **TRANS**, which began with the composer witnessing a performance of the work – or something like the work – in a dream. (Numerals refer to the three phases referred to.)

[i] What I had dreamed was a mixture of visual and acoustic images which it would hardly be possible to describe in words. [ii] But now the European mind begins to work. I woke up and asked myself, how shall I do this?⁴⁰ The whole overall plan was made during the first week [of work], providing for the central notes, the durations, for how many orchestral groups would play, even for the number of beats per section. [iii] So with these few given characteristics, I heard the next section and composed it.⁴¹

[i] The origin of **TRANS** might seem too unusual to serve as our archetype, though it is far from unique: **HERBSTMUSIK**,⁴² **MUSIK IM BAUCH**,⁴³ even **ZEITMASZE**⁴⁴ from an earlier, more exclusively ‘rational’ period, all grew from dreamlike experiences. In fact, though, its inception was merely an extreme case of a phenomenon that would seem to have attended, in one form or another, most if not all of Stockhausen’s works.

The flash of intuition (...) which happens at some point, setting in motion an entire process of thoughts and craftsmanship, is *the primary factor*, and must, in my opinion, be constantly present for the creation of real music.⁴⁵ (Emphasis mine.)

Again and again we find him insisting on the primacy of such epiphanies, with the rest of the composing process being seen as an elaborate working out of their implications. Though the form this inner experience takes may vary widely from case to case, we do find a measure of consistency among the composer’s accounts not only on this point but on all the essentials. Thus the following refers to the early Point works, but applies equally to his composing ever after.

I wanted to make ‘star music’; I wanted to make an outer space music. And the organization was simply a process to realize this. So, the mental process came always second. There was, at the beginning of every new composition, an inner vision to discover a world which I had never experienced before. And it needed the kind of supra-personal state in which I was for a moment (...) before I dived back into this planetarian situation, where I thought, ‘How can I ever, with the means and with the notation and with the technique of this planet realize this?’ And then it becomes a translation. So I think, all my works are more or less translations into the possibilities of what I have learned here and what is available. Most of the time I have invented new notations, and I have always gathered new instruments or I build new instruments, to approach at least to some extent what I had innerly experienced.⁴⁶

The extraordinary nature of such ‘inner visions’, implicit here, emerges strongly elsewhere. A prime example is the note to **TELEMUSIK**, where culture shock made for particularly traumatic birth pangs.

During my first eight or nine days in Tokyo I could not sleep. I was pleased about this, since as I lay awake my head was constantly full of sound-visions, ideas, movement. After four sleepless nights and four days working in the

electronic music studio for eight or nine hours without anything usable to show for it (not only did I have to assimilate the new language, food, water, air and the yes–no confusion, but also a completely different system of technical management in the studio) a vision kept recurring with increasing frequency: it was what I was after: a vision of sounds, new technical processes, formal relationships, images of notations, of human relationships, etc. – everything at once and in a single network that was too entangled to be represented in one process: this was going to need a lot of my time.⁴⁷

As with the **TRANS** dream which ‘it would hardly be possible to describe in words’, one is struck by the amorphous, essentially incommunicable nature of the experience. A not dissimilar mingling of elements is again a feature of Stockhausen’s detailed recollection, given to Kurtz, of the genesis of **KREUZSPIEL**. He reports how he ‘innerly saw and heard the piece’ en route to visit his wife Doris in Hamburg, even as the couple with whom he had hitched a lift were carrying on their conversation, adding:

It is both hearing and seeing at once: you see a written score and hear the overall sound without being able to say what comes next or how it will look in detail. But you hear it as a whole, as a landscape or mountain is seen from a great distance, and that is what is most important.⁴⁸

This is amplified in a different interview with the same author.

KS The most essential factor is always an overall view. Right at the start you imagine sitting in a hall and listening to your own work. That often happens while you’re travelling, and you make notes and sketches. The entire piece is usually described in words.

MK Do you hear it sounding out?

KS Yes, but in more or less general terms. These are movements, forms entailing movement, and certain qualities of sound leading you to seek their realization... I then know either that I must spend several months in the studio or I can stay at home.⁴⁹

The reference to ‘notes and sketches’ being associated with this first of our phases (rather than the second) calls for comment. True, in this case he probably has in mind a more-or-less detailed aide-mémoire. But in recognizing the primacy of the ‘flash of intuition’ in Stockhausen’s composing, we must not neglect the possibility of such flashes owing something to the more generalized musical conceptualizing that provides its constant background. The **KREUZSPIEL** ‘vision’ itself did not spring out of nowhere, as is clear from his account, being stimulated by the welter of ‘compositional considerations and musical experiences’⁵⁰ he had been assimilating in the weeks since his eye-opening initial visit to Darmstadt. During the journey, these crystallized into the impression of a piece, in the kind of way we heard him describe, and when the couple stopped for coffee, he recalled:

I waited outside, sitting on a stone, took out some paper and made the first sketches for the whole form of **KREUZSPIEL**.⁵¹

It is obvious from his description that the dramatic breakthrough leading to **TELEMUSIK** was likewise prepared by a period (‘eight or nine days’) of coming to terms with unfamiliar creative challenges. As for our primary example, while there does not seem to have been any such direct stimulus to the dreamed vision of **TRANS**, examination of the record reveals that certain of its features – including the central idea of a hidden orchestra being heard ‘through’ one we see, which was indeed part of the dream and not a later rationalization – had

appeared at some point or other in his previous compositional thinking. (There is also the likelihood that another important element of the dream, the loom-like sounds he heard, would have been suggested by an actual recent experience – p.xxx.)

We have by now acquired some idea of the play of forces characterizing this initial phase, and some things are clearer than they were. Certainly the Tudor Fallacy can be dispensed with. Far from starting life as ‘theoretical forms’, the overwhelming majority of Stockhausen’s works may be said to have come about as a result of a glimpsed ‘global’ vision in which certain preoccupations drifting in his ‘reservoir of possibilities’ come into collision with the ‘uncanny, new, unknown’ in a transforming ‘flash of intuition’. Such a vision, however tantalizing, would typically include some impression of a work’s overall shape, if at this stage probably no more, for it is now that ‘the entire piece is usually described in words’. Whatever else, it will obviously incorporate ‘acoustic images’, even if these have to be disentangled, as with **TELEMUSIK**, from elements that are visual, verbal, or even concerned with such things as human relationships.

Only in the case of the text pieces, the whole purpose of which was to inspire sustained moments of intuition in the participants themselves *at the time of performance*, would such a first phase appear to have been absent. The only text Stockhausen speaks of as having ‘experienced as music’⁵² – curiously enough given his earlier reply to Kurtz’s mention of it (p.xxx) – is **GOLDSTAUB**. Even here he is referring simply to the effect on him of the experience, after living for four days in complete silence and under the other extraordinary conditions specified in the text (p.xxx), of playing isolated notes on the piano. There is an irony here, since the Seven Days of May 1968 were Stockhausen’s most disturbing and sustained experience of intuition, and given that they marked a turning point in his understanding of that phenomenon as it relates to music. Public remarks made three years later shed light on this.

In traditional music we are accustomed to say that a composer has only brief moments of intuition. (Let’s say he has an inspiration in a tram or during a walk, and then he worked out the so-called idea or sound-vision for the next few weeks.) One imagines such inspirations like a flash of lightning in the night. At this point, I would like to make it clear that I am searching to discover a technique for myself as composer and interpreter – and also for the other musicians who work with me – to consciously extend these lightning-like moments of intuition; a technique which can *actuate* intuition when I want to start working, so that I am not a victim, having to wait until it comes. It often used to come, namely, at the wrong moment, when I had no time, or just when someone else wanted to talk with me. I must find a technique through which the intuition can be started and stopped. And these moments of intuitive working must last longer, as long as I want. But then I have to find a completely new technique for making music. I cannot simply sit in front of a piece of paper with my pencil sharpened and my eraser ready, and then write down what my intuition administers to me, because the intuition has a very particular kind of speed, which is by no means congruent with the speed of writing.⁵³

The text pieces aside, then, we can assume the working out of each of Stockhausen’s works to have followed an experience, in ‘more or less general terms’, of the way it would actually sound. We should not assume from this that the rest is really mere transcription or that nothing important can now emerge or change. Reverting to the example of **KREUZSPIEL**, it seems reasonable to speculate that a form of the ‘easy, singable melody’ so integral to the piece would have been present, along with at least a version of ‘the whole form’ with its games of registral ‘crossplay’. But the interesting thing is that the work was initially thought of

as involving high and low singing voices, rather than the oboe and bass clarinet eventually settled on⁵⁴ – this may not have been such a fundamental change, but it shows how much leeway Stockhausen's original sound impression left him.

The point is made, I hope, about the precedence of the 'aural conception' over 'theoretical forms'. What, though, of a case such as **MOMENTE**? We heard Stockhausen go out of his way to make clear how, on this occasion, he deliberately set out to conjure music from calculations already prepared. Even here, though, we are forced to posit some kind of 'overall view', however imprecise, at an earlier stage, if only because the work's very characteristic sound resources were embodied in those calculations (which in reality, moreover, were less abstract than his description might suggest). As he confirms: 'I had certain material in mind while I was planning.'⁵⁵ Admittedly, this would not have amounted to an 'aural conception of a complete, pre-experienced time-organism' (p.xxx), which can only be said to have been arrived at for each individual Moment immediately prior to its setting down. What such a case in fact presents is an unusually strong shift to reliance on intuition in our third phase.

Passing on to our phase [ii]:

The essential is what inspiration tells you. That is followed by a fairly energetic process of construction so that you get everything under control, starting to plan like an architect and asking yourself: How shall I do this? Where are the parts and the limbs? How do I join them together? How do I organize my time, and what means do I need?⁵⁶

Opportunities to observe examples of such planning will arise when we come to concentrate on the three works singled out for scrutiny in **§4(iii)**, and only a few points need making here. We can take it that, except in a few special cases, and notwithstanding Stockhausen's talk earlier about sometimes proceeding from small to large, there is *always* an overall plan at the outset of detailed composition – indeed it is difficult to see how Stockhausen's thorough brand of global serial organization could be operated without one. The extent to which such a plan conditioned 'small scale aspects' varied from case to case, while the plan itself might be subject to alteration, and not only by the insertion of afterthoughts in the form of *Einschübe* (p.xxx).

But the checking and chiselling, once things are done, concern details, while the plan of an entire work is there, in front of me, right from the beginning of [work on] every large-scale work. A plan, which, above all, fixes for me all the proportions, the duration, dynamics, the sound quality, the ranges, the harmonies. Are you asking me if I always work this way? I would say yes, with the exception of three [student works]. On the other hand, from the time of **KREUZSPIEL** onwards, I've planned the structure of all my works, from the number of movements to the evolution of single parameters to the analysis of the particles of sound or group of sounds to be used.⁵⁷

In failing to except the text pieces from remarks about 'all my works', Stockhausen leaves open the possibility that, as Jerome Kohl speculates, 'a "form scheme" of some sort might have been developed' in connection with the **AUS DEN SIEBEN TAGEN** cycle as a whole.⁵⁸ The likelihood is against there having been planning of anything like the type the composer specifies, however, when it comes to individual texts – wouldn't such premeditation go against the grain of intuitive music anyway? The plus-minus and schematic scores (e.g. **STOP** and even the hybrid **YLEM**, a very detailed sort of text piece), on the other hand, cannot be called exceptions here. On the contrary, the more open a work's prescriptions, the

more decisive is this second phase of composition, the third phase becoming more a matter of *realization*.

Let us not be confused by problem cases or led astray by red herrings such as the composer's revelation that his **TELEMUSIK** dream included a glimpse of the work's 'general form plan'⁵⁹ (!). It is clear enough that Stockhausen's lifelong habit was to rationalize his flashes of intuition into 'the plan of an entire work' setting down in more or less detail everything with which it is to be concerned, be it an outline of global structure in the form of a succession of central pitches; scales to differentiate scalar degrees not only of the main parameters but also such things as indeterminacy or intelligibility; the co-ordination of temporal expansions of the Superformula in **LICHT**; or whatever else. And the common factor in all such determinations, whether we think of the early 'structures dealing with numbers' (p.xxx) or extrapolation of details from a more or less spontaneously created Formula ('I whistle and sing and then I construct them' – p.xxx), is needless to say their adherence to serial principles of organization.

The role of this 'process of construction', for which 'fairly energetic' is in most cases a considerable understatement, is equally evident from earlier findings, for it is clear that what Stockhausen is building here is his version of Joyce's 'bridge' (p.xx). If previously we had been vague about the nature of the part abstract values have played in his composing, the account given above of the method used in **MOMENTE** brought home the point pretty forcefully. Hearing it, could we fail to realize that the 'unhearable complexities' (p.xx) of his systems exist as the means by which powerful but generalized initial intuitions came to be invested with the structural coherence of works of art? Should any doubt remain:

I am not interested in serialism as such. It's just a technique which I have found, myself, to express the thoughts I have, or to organize the masses of images and sounds that come into my head.⁶⁰

We reach the threshold of our phase [iii] – the point, so to speak, at which David Tudor came in.

From **KREUZSPIEL** on, then, Stockhausen developed different approaches to, rather than abandoning, the principle established there: 'one constructs for oneself a system, and the system calls the details forth' (p.xxx). Matters are in practice less straightforward than this suggests, of course, and it would be naive to imagine that even during the days of strictest adherence to the ideal of 'complete and consistent' organization (p.xxx) the process ever came close to being automatic. Such 'Pavlovian thinking', as he once said himself, would clearly be 'unartistic'.⁶¹ Nearer the mark might be to see our third phase as continuing the first as much as being conditioned by the second, as our original **TRANS** prospectus ('I heard the next section and composed it' – p.xxx) indeed suggested. More helpful, then, to think of phase [iii] as the arena for a contest between musical imagination ('sound-vision') and formal calculation, or in other words – harking right back to Roger Smalley's phrase in our **Introduction** (p.xx) – 'a struggle to actualize conceptions'. Stockhausen:

And then comes the detail, and I start actually *writing*. There are many hours when I just sit there. My ideas about the sound must be reconciled with the sketches relating to dimensions and necessary constructional elements.⁶²

Stockhausen's determination (need?) to observe the letter as well as the spirit of self-imposed laws was doubtless greatest in his earliest period. The case of the short **KLAVIERSTÜCKE I**, composed in two days in with the help of 'a few quantities and proportions',⁶³ was not simply an exception but something of a freak. As the 1950s wore on,

we heard rather earlier (p.xxx), 'free sound-fantasy, also in the shaping of the details, once again entered in', but we should not be misled by that. An extract from an unused introductory note, published by Toop in his analysis of **STÜCK VIII**, reveals just how stubbornly he continued to resist having to concede defeat to his own rules.

It was while I was working on the eighth piece, which caused me a lot of harmonic difficulties, and which I had persisted with for over a week, that Boulez came to visit me. I had got to just before the end of the eighth piece and was searching and searching for a solution to the pitch distribution of the close. I showed him the passage, and he said, 'We'll soon get that – what are you after?' I explained the rules for this piece to him. He wrote down a suggestion. 'Yes, but that's no good, because...'. In the end he got impatient and said 'If you observe all the restrictions you have made, there's no solution. You'll have to give up at least one limitation.' I was quite shocked, because he was so sure there was no solution. Then he left, and I worked several days more at the same spot – and I found a solution, despite all the prohibitions that I had imposed on myself. It was a fantastic relief.⁶⁴

The last sentence prompts Toop to conclude:

one should not underestimate the degree to which a composer may become personally involved in the mastering of his craft. There is, quite simply, enormous satisfaction in setting oneself a difficult compositional problem and solving it.⁶⁵

Right from the formal and stylistic exercises of his student years in Cologne and Paris, Stockhausen seems indeed to have been stimulated rather than irritated by such challenges, whether imposed by himself or accepted (as with the primitive facilities of the early electronic studios, or the nature of the **JAHRESLAUF** commission (p.xxx)) from outside. One reason would seem to be that he viewed them not as *restrictions* of the creative impulse at all.

For it has always been an unwritten law that it is precisely within the limitations that a master proves himself. Every kind of strict channelization leads to an acceleration and intensification of the flow.⁶⁶

This point about the importance to the composer of strict rules having been established, it calls for immediate qualification. Limitation may paradoxically be liberating, but Stockhausen is far from saying that any old rules will do. This is made explicit in the course of a key statement already cited in a different context:

We are all more or less treading on ice, and as long as this is the case, the organization systems being put forward represent guiderails to prevent the composer from faltering. And one has to face the fact that there are as many systems as there are grains of sand, systems that can be dreamed up and set in motion as easily as clockwork. Their number is probably infinite, but certainly only a very few of them are acceptable systems, compatible with their means of expression, and applicable without self-contradiction to all the dimensions of music. Of these, still fewer are so perfectly prefigured that they yield beautiful and interesting music.⁶⁷

Not even at that early time, then, was Stockhausen willing to be enslaved by any compositional system, however 'perfectly prefigured', if it threatened to get in the way of creating 'beautiful and interesting music'. Richard Toop goes further:

For all the reputation he may have as a manufacturer of formidably all-embracing systems, it seems to me that if the works up to **KONTAKTE** prove any one thing it's his genius for compromise, for recognizing the exact point at which the conception threatens to swallow communication, and reacting accordingly.⁶⁸

That work itself did anything but disturb the pattern, as can be illustrated by drawing again on Toop's intensive researches in this area, based on close examination of the composer's sketches.

Heikenheimo [in his monograph dealing with the work's history – see **Bibliography**] frequently draws attention to the vast number of empirical changes that Stockhausen made to the original serial schemata during the realization of **KONTAKTE**. Changes of this kind are present even in the earliest pieces, but as the electronic works proceed, the alterations become ever more drastic. **KONTAKTE**, in effect, marks a parting of the ways: at times, the serial specifications are little more than a frame of reference, a basis for negotiation between the composer and his method. **KONTAKTE** is arguably the last of Stockhausen's tape pieces in which serial proportions intervene decisively at anything but the broad formal structural level. Paradoxically, the medium which was first embraced on account of its potential for rigorous organization now becomes – next to the Text- and Process-compositions – Stockhausen's free-est.⁶⁹

Kevin Volans hits the nail satisfyingly on the head when he concludes that the final plan for the same piece, the formscheme with its carefully constructed degrees of change, scales of duration, etc. does not represent the solution to the compositional problem, but rather, *poses it, in its final stage.*⁷⁰ (Emphasis mine.)

For good measure, let us have the considered view of Jerome Kohl, another close observer of the composer's compositional planning through the decades: 'It would seem that not a single work of Stockhausen's has ever been a "pure" realization of an original, abstract scheme.'⁷¹

So much, it is irresistible to interject, for Norman Lebrecht's 'rigid formulae' (p.xx)! We should beware, all the same, of pushing the point too far. Evidence for Toop's assertion about the freedom of planning in the later tape works is confirmed up to a point by what we found about the real-time improvisatory procedure adopted in the realization of **SIRIUS** (p.xxx), and by Stockhausen's own statement about its tape predecessor: 'The form of the work **HYMNEN** took shape only gradually during the course of the long work period.' But as he went on to add (and be it remarked that the same could be said of **SIRIUS** too): 'It knows informal as well as extremely strict formulations.'⁷² The fact is that in both works he set out with a firmly settled itinerary and schedule, but was more content than he would have been at an earlier period to leave day-to-day travel arrangements to the last moment, and thus to the possibility of serendipity.

In truth, Stockhausen always, or least from a very early date, recognized the competing claims of strict formulation and informality as equally necessary to his composing. He did so quite explicitly in the 1953 manifesto *The State of the Craft*,⁷³ from which the 'treading on ice' passage comes. Around the very same time, 'free passages' were clamouring for inclusion in **KONTRA-PUNKTE** (p.xxx), a work already completed according to his original specifications.

Even as his compositional confidence grew, worries over the fragility of the ice he was treading were being added to by a measure of dissatisfaction with the results his systems were producing. As he recalled much later, something had to give:

I could never hum or beat a rhythm of my own piece. So I said, this cannot go on; what comes comes. I would lie down in my working room and imagine anything – all of a sudden the tuba would go wild. And I said to myself you can't do that. And then another voice said why not? So I made sketches and let the tuba run wild, and the piano have all of a sudden a cadenza, and the E♭ clarinet the same.

So I broke open my own construction. And I was terribly ashamed, like a Catholic who has sinned terrifically! But all [the systems of] my pieces then became more or less broken by sins against my own rules and laws. And that is what I call intuition: the flashes of instantly heard events which you cannot fit into your system, because the system is not wide enough. This is where I learned that if I want to be truthful to myself then I have to allow these intuitive moments.

I had to learn how I could prepare a system for a given composition which is original enough not to allow in references to my other works (not to speak of clichés of other composers or of the past) and yet would be open to the daily sound events which I hear when I sleep, when I walk, when I drive in a car. I hear these things and note them. I carry with me certain events for years and don't know where I can get rid of [i.e. use] them in a given composition. And yet some day I will get rid of them because they are so fascinating. The fascination of sound visions; the fascination of being a very good engineer: these two things are the permanent problem of modern composition.⁷⁴

Or, as Maconie sums up this creative tug-of-war:

There are powerful opposing forces at work in the music: the one an overwhelming tendency to organize everything according to some master plan, the other an equally powerful readiness to change everything on a moment of impulse.⁷⁵

Resuming the threads of our attempt to reconstruct the archetypal pattern of Stockhausen's composing, it would seem that, in line with his growing openness to the 'sin' of intuition, things tended by and large to proceed more smoothly during phase [iii] as the years went by. Experiences such as **KLAVIERSTÜCK VIII** may have had their rewards, but limitations drawn quite so tightly as there did nothing to accelerate the flow of his writing. That said, it may be that the battle-toughness acquired in cracking such conundrums had as much to do with the subsequent increase in his productivity as any relaxation of rigour. At all events, in later years the real pause in the composing process was likely to occur between stages [i] and [ii], while waiting 'until I see the whole work before me', as this exchange with Rudolph Frisius supports:

- KS** And then there are always those celebrated questions: 'Why don't you start? Why are you still caught up in post, telephone calls or corrections?' And then I say: 'I still don't have the fundamental starting point. (...) I don't know yet what I'm aiming at (...)...'
- RF** And you must know all that before you can get going?

KS Yes, I must know what I'm aiming at. That's why I spent so long searching for **LUCIFER'S DREAM**. I lacked a fundamentally new process-idea, previously unknown to me. Once I'd found it, things went very quickly. When things have got that far, I have enormous pleasure in working and composing.⁷⁶

In saying he has no fundamental starting point at this stage, Stockhausen is of course referring to the composing as popularly understood: sitting down and writing music. His destination, to be sure, will already have been glimpsed, albeit through a glass, darkly, in the 'inner vision (...) at the beginning of every new composition' (p.xxx), but still the way forward is likely to remain uncertain. It becomes an interesting question where Stockhausen's composing actually began; in a sense, it could be said to have begun anew with each of our three phases, and faced with statements such as this last we sometimes have to take our bearings.

Having 'got that far', that is to say reached our phase [iii], progress may indeed be rapid, even in exceptional cases 'almost automatic', as Stockhausen reports of **TRANS** and **MANTRA**.⁷⁷ Then again, in cases as different as **MOMENTE** and **HYMNEN**, not to speak of **KLAVIERSTÜCK VIII**, it may be anything but. This may have to do with the nature of the process and / or the resources used, though there may also be an element simply of how well things go. In **TRANS**, as we know, 'with these few given characteristics, I heard the next section and I composed it' (p.xxx), which sounds like the **MOMENTE** method made more straightforward by the very different nature of the work, though one wonders whether the shortness of the deadline he was up against didn't simply send his creative engine into overdrive on this occasion. Be that as it may, we should always be on our guard against taking Stockhausen's talk of 'transcription' too literally.

What seems clear is that stage [iii] brings a return, a 'fundamentally new process-idea' having been thoroughly explored, to 'purely musical and intuitive invention' (p.xxx). 'Then fantasy flourishes again', Stockhausen himself put it, only now 'in the detail.'⁷⁸ To encourage this process he developed strategies which again put us in mind of the **MOMENTE** method:

There's nothing mystic about this. It is a technique, to wait until one hears; and if one hears, then translate it, find a way to notate it and then try to be moved oneself. And if one is not moved, one should wait. (...) And if I come to spots where I don't know a solution, then I have to go back to the *Nothing* and say, 'Now, what next please? I'm stuck.' And then I go away into the woods and cut a few branches, or I lay on the bed until I hear something or until I see something that forces me to change my method. It's a very slow process and constantly a dialectic vibrato between intuition and mental work.⁷⁹

If all else failed there was always prayer, if indeed this is not already covered here.⁸⁰ Also worth mentioning in passing is the trust he placed in the capacity of the mind to work on problems 'subconsciously during the hours of sleep'.⁸¹

When it comes to the exactitude with which he was able to hear his music at this final stage, we find that here again much will depend the nature of the work. It is significant that when we heard him say (p.xxx) 'I can hear very precisely' while writing, it was with reference to the fully determined scores from **MANTRA** on. Things were obviously otherwise with those scores in which little or nothing is provided in the way of material. A case such as **STOP**, which sets precise chords and scraps of melody in a context of less defined textures and unspecified instrumentation, would probably have taken on a degree of definition somewhere between the two. A score's level of detail may be taken as a reliable guide, and there can be no doubt

that all music cast in precise notation was fully present in Stockhausen's 'inner ear' before it was set down.

All this has served to establish, if nothing else, that Stockhausen did not make it up as he went along, or compose at the piano then think about instrumentation like a traditional composer, any more than his music really arose as mere translation from Tudor's 'theoretical forms, structures dealing with numbers'. Rather, generally speaking, notes put on the page corresponded to a musical conception which by that stage had been experienced in considerable detail in the ideal acoustic space of his aural imagination.

The move from sound-vision to painstaking transcription we have been tracing was once summed up by Stockhausen in vivid terms:

Anyone who has scored a bullseye has scored a bullseye, no matter when, how or where. And when one has scored a bullseye, the whole shooting booth is filled with ringing and all the lights go on for an instant. Everything else is practice, discipline, industry, patience.⁸²

To which one might add concentration, learned of necessity in the early Paris days (p.xx) and facilitated by the conditions he later created for himself. Anticipatory spells of heel-cooling apart, he was never been one of those composers of whom Morton Feldman complained that 'they're always on the *phone*'.⁸³ As he told Hugo Pits' group:

You won't find a TV set in this house. I almost never listen to the radio, and don't take a newspaper or magazines.⁸⁴

Further insight into such single-mindedness comes from another interview, with the musicologist Mya Tannenbaum:

MT Is it true, Maestro, that you write music to a fixed timetable, like someone who works in an office?

KS I work from ten in the morning to half-past one in the afternoon, from half-past three to half-past seven in the evening, and from half-past eight to midnight.

MT Do you work alone?

KS For six months a year I have a copyist available in the next room.⁸⁵

Which is not to say he composed 365 days a year. Apart from preparing and giving concerts, various publishing projects (scores, writings, recordings) took up a substantial proportion of his time, a significant slice being needed for the polishing of existing scores still awaiting publication. When engaged on such relatively routine tasks, he related:

There's an occasional interruption because of the telephone calls I allow. It's the job of Suzanne [Stephens], my companion and clarinettist, to choose among them. I accept only the calls that are absolutely necessary. I answer my children and the people who can't manage to solve problems connected with the performance of my works.⁸⁶

The outcome of this forbidding-sounding focus on the matter at hand was a composing *modus operandi* of formidable efficiency. 'He can *do* all that', I once heard another composer remark, and indeed his artisanship, as distinct from his taste or judgement, has never been questioned as far as I'm aware. The economy, aptness and general intellectual clarity of his notations, not least in the ground-breaking electronic and indeterminate scores, models for the future, are evidence enough of his mastery of the musical practicalities. Stockhausen found it an odd reflection on our sense of cultural priorities that there is no Nobel Prize for

music,⁸⁷ and the more one considers his contribution to this and so many areas (quite apart from the quality of the music), the more one understands his point.

Once begun – or more accurately, once our second phase reached an advanced stage – a work only very rarely failed to reach fruition. Notable exceptions were **MONOPHONIE** (1960) and **PROJEKTION** (1967), both orchestral commissions, and **VISION** (1969), a two-piano project having no connection with the later **DONNERSTAG** scene of that title. Almost all the earlier pieces had trouble getting past his self-critical ear, many reaching definitive form only after revision or re-composition, the most drastic example of the latter being **PUNKTE** (p.xxx). The slow rate of production possible in the electronic studios of the time led to **GESANG DER JÜNGLINGE**, **KONTAKTE** and **HYMNEN** being released with planned sections unrealized – though in none of these cases would one suspect it. Gradually, as we heard him say, the difficulties imposed by the prohibitive systems of the early works tended to recede, so that well before embarking on **LICHT** his scores' progress to definitive form had become a relatively painless one.

Irrespective of date,

each work must endure a time in which I go with it, following it up: being at performances, conducting it, playing, testing and constantly re-hearing it.⁸⁸

All the time noting modifications for incorporation in the published score.

I am probably the composer who takes longest to give his scores to the printers. On average I direct twenty or thirty performances first.⁸⁹

This custom might be said to amount almost to a fourth composing phase: after vision, planning, and fixing detail came actual hearing. This was possible already in rehearsals, of course, and indeed in many cases could even begin during stage [iii].

When I am writing a piece, the interpreter is [sometimes] present. In all the solo works, right from the beginning, I've never written anything except the piano pieces without someone else in mind. Even there, though I'm a pianist myself, I consulted many pianists.⁹⁰

It was no casual decision that led him to build even the mighty edifice of **LICHT** on daily contact of this type with the expert players of his intimate circle. In this arrangement, operated throughout what might be called the Suzanne Stephens era (from 1974) and approximating to his ideal, a score remained open to suggestions in matters of detail up to the première and indeed beyond. From a 1987 interview:

Whenever I have written a score, and begin to work with the interpreters, then the score fills with red, blue, green, yellow markings. Sometimes I have to rewrite parts of the score, copy them again. For three and a half months I have worked now correcting in the original manuscript all the changes which I made last year during the rehearsals and performances of two large works.⁹¹

By the stage of full rehearsals, it's true, the great majority of these adjustments tended to concern the difficult area of acoustic balance, above all when larger forces and / or a major electronic component were involved. In the case of one of the two works referred to here, **EVA's LIED** (which received '300 or so hours' of full rehearsal prior to the première⁹² – an impossible figure in the ordinary concert world), Stockhausen goes on to tell Richard Dufallo that:

Every day I found details to correct, spots where I had to specify the performance instructions and make them more precise.

RD Was that a misjudgement initially on your part?

KS No. It's just that I cannot foresee all the dynamics, the space projections, the mixtures of the timbres ... it's so complex. Just the spacing of six sound sources around the public changes the proportions of the dynamics. I cannot foresee totally what happens, though I have a lot of experience. I just can't know everything about the balance between basset-horns and the sound mixtures of the six synthesizers when they play together. I have programmed the individual timbres, during weeks and weeks working with each synthesizer player, before we all came together. But once they came together, then all of a sudden, I heard that certain sounds cancelled each other out, covered each other, and so on.⁹³

The process would run its course until

finally the score doesn't change any more, the process of perfecting becomes quiet, and finally I can print the score. So it might need twenty performances before I have checked everything and before I can be sure that every detail will remain final.⁹⁴

Though this isn't quite the end of the story. For one thing, Stockhausen's own copies of his published scores would not remain free of his annotations prompted by experience of subsequent performances under various conditions. It may be assumed that these documents will come to be regarded – like his writings, recordings, and latterly (given the importance assumed by the visual dimension) videos – as adjuncts to the scores as printed, which themselves tended to contain more and more supplementary information as the years went by.

I always recommend that as long as I live, performers contact me or musicians who have worked with me because the score cannot possibly contain the necessary information about the ideal performance. I do so many things in performance which are not in the score. (...) There are hundreds of habits among interpreters [of other music] which they are not even aware of themselves. In my music, they don't apply.⁹⁵

In this light even the thoroughgoing attempt to create his own oral tradition, culminating in the establishing of the Stockhausen Foundation in 1994, may be viewed as an extension of the compositional process.

This brings us to the subject of Stockhausen's relationship and behaviour *vis-à-vis* the wider musical world, and to one of his defining features as a creative artist: 'a perfectionism that comes close', by his own admission, 'to pedantry. I detest half-measures, lack of clarity, disorder, disorganization. It's no more than a physical disposition.'⁹⁶

Given this, it is no surprise that his dealings with musicians outside his own circle (and sometimes within it) could be volatile. Stravinsky, reporting on preparations for the original **GRUPPEN**, formed 'rather a bad impression of Stockhausen, as of an arrogant Nazi (...) in his treatment of musicians'.⁹⁷ Not untypical was the case of the baffled WDR harpist at rehearsals for the première of **KONTRA-PUNKTE**, who he managed to offend so comprehensively that she not only walked out on the performance but (using the incident as a pretext, Stockhausen concluded) never returned to the orchestra.^{98N} Prepared for at least

one such outburst in the course of ten days' intensive rehearsal of **INORI** with the BBCSO in 1982 – it was the first time I had observed him in such circumstances – I was therefore surprised by the appearance he gave almost of detachment. Even one orchestra member's 'Sieg Heil!', greeting one demanding request too many (tasteless enough, though in context probing rather than malicious), he preferred to turn into a joke against the British rather than rise to.

Having done my share of Stockhausen-watching after that, I came to believe that here too a consistent pattern underlay what seems like conflicting evidence. The first thing to say is that his behaviour appears generally to have mellowed with the years. He came to acknowledge that, although he had never lacked a clear vision of what he wanted, for a long time he had remained unsure about how to get others to realize it. Frustrated by his inability to make his radical intentions understood, he tended to resort to emphasizing them more forcefully, and this seems to have remained a problem certainly until at least 1958, which was when Stravinsky encountered him. 'Awful! I was very impulsive', he later admitted.⁹⁹

As time went on, his growing experience tended to reduce this factor, as perhaps did an improvement in the level of co-operation by professional ensembles as they adjusted (through changes of personnel rather than of heart, be it said) to the demands, and of course the very sound, of such an unprecedented musical language. It is significant that by 1982 the members of the BBCSO had been living with such music for many years, had in some measure grown up with it, whereas to the 1953 Cologne players the sounds of **KONTRA-PUNKTE** were literally unheard of. What had got the young Stockhausen's blood up back then was in reality not the harpist's inability to play what he had written, but rather her refusal to suspend disbelief and give it a try. Not her 'No one can play that!' so much as the rest of her outburst: 'I'll never play that! That's not music! You can't compose anyway!'¹⁰⁰ As this attitude became rarer, so did such violent confrontations.

Another factor in Stockhausen's varying behaviour towards his executants was the status of the musicians themselves, who might be separated into three categories. There were those with whom he cultivated long-standing associations. When first encountered, these might be fully-formed virtuosi (Tudor, the Kontarskys), students (the *Collegium Vokale* ensemble which originated **STIMMUNG**, Peter Eötvös, Kathinka Pasveer), or his own offspring. It didn't matter. Once a relationship had been forged and they had been accepted as partners he demanded dedication to his exacting standards, and seemed to have no difficulty inspiring it, at least until things went sour, as eventually with his 1960s group. In a second category were other professional musicians, from whom he claims the right (since this is their profession) not only to something like the same standards but, for the duration of the engagement, a comparable level of commitment. Thirdly, he has worked a great deal, on the same one-off basis, with students. Here, by contrast, he insisted only on the good will he demanded as his due. When it came to ability, he formed a view of what was possible, and though his aim then became to extend that, he was reasonable – the odd bad day at the office aside – in his expectations and capable of considerable patience. But good will is an active thing, and woe betide those falling short through lack of preparation or effort.

For 'his due', read 'the music's', and when this suffered the old frustrations would always be likely to flare up. Nor were musicians the only obstacles. Smoking stage hands, indolent lighting technicians, inadequate facilities, avoidable irritants of every sort – and with his works there was more than unusual to go wrong – were liable to make him snap. There may well have been more method to this than sometimes appeared, an element of acting the tyrant to shake everybody up or to get done what needed doing. He frequently threatened to take the next flight home, though I am not aware he ever actually took it. Usually, by the time the

concert came around, the tribulations of its preparation had been consigned to history. Necessarily.

I shouldn't be in a mood before I'm performing. I meditate before I start to play, I pray. When I start playing I have learned to forget about myself. It hardly ever happens nowadays that while I'm working I'm thinking of something else for even a fraction of time. The moment I start playing I'm gone, and I am the sounds and I am the process, and you can't ask me – I can't give you any answer – what has happened. When it's over, then I fall back, like from a session of laughing gas, into thinking and becoming aware of my environment.¹⁰¹

The story of Stockhausen's relations with the musical administrators, apart from leading us further away from our central concerns, would do no more than reinforce what we have just found. 'I have a horror of organizations', he said.¹⁰² His aversion may have been another case of 'physical disposition', but was no doubt also attributable to the position such bodies occupied between his work and its audience. His solution was, where possible, to take responsibility into his own hands. The outstanding example is the Stockhausen-Verlag set up in 1975 to provide for the publication and distribution of his scores, after a period of casting about for a satisfactory alternative to Universal Edition, with which he had become disenchanted long before breaking with them in 1971 (by which time, he claimed, no less than 23 of his pieces remained in manuscript).¹⁰³ Later he would sever another long association, that with DGG, on much the same grounds, going on to issue his back catalogue and new recordings in his own 'Stockhausen Edition'. This was not without its down side, be it noted in passing. To this day his scores and CDs have to be ordered direct from the Stockhausen-Verlag and are not likely to be encountered in the usual places. Paul Griffiths points to this as one reason 'Stockhausen is so under-regarded these days',¹⁰⁴ and it is impossible to disagree.)

If the dissemination of his works thus became the basis of a cottage industry, he was also prepared to fight for them in the marketplace – where else but in established opera houses could he hope to find a stage for **LICHT**, for example, in the absence of his own Bayreuth? The tactics he developed in such circumstances, which he did not trouble to conceal, are epitomized in remarks about what was probably his greatest coup:

At the World Fair in Osaka I was in a special position: a country (Germany) wanted to show that it could be modern, and it took me as a kind of exhibit. I just used this opportunity and told the organizers what to do. So I turned the whole thing around and made my music.¹⁰⁵

– and in others having relevance not least to the way **LICHT** had to be financed:

when I was asked to write a piece for a special occasion, I always tried to compose what I had to do next, and to convince the person or the society who commissioned the new work that this is what I wanted to do.¹⁰⁶

The point about the creation and dissemination of Stockhausen's works being the goal of all his efforts and undertakings has by now been sufficiently hammered home. But although this provides us with a key to understanding his behaviour, it doesn't actually convey the essence of the kind of artist he is. So what type, if any, can we class him with?

We might describe him, as he once described Mahler, as 'a universal being within whom all threads converge'.¹⁰⁷ This may seem to be pitching it a little high, but I believe only true to

the facts. In the first place, it applies to the all-encompassing nature of his musical approach and output. 'I think it's deeply in me to try everything once',¹⁰⁸ he said on one occasion. It is indeed impossible to picture him remaining for ever on the idealist mountain-top he once shared with Goeyvaerts, absorbed in the quest for 'absolute purity'.¹⁰⁹ Though he had to try this too, he was not *only* that kind of person, or artist.

This eclectic tendency didn't lead him to disparage specialism, only to point out its limitations.

There are people who have written only songs or a certain kind of piece in one style and have done beautiful work. We think of Goethe as a greater artist than ... Mörike, for example. But Mörike had his own qualities. (...) But this uniqueness by exclusion is a very special kind of quality. You can always immediately identify this 'style'. A vaster mind, however, tries to compose a polyphony of styles: one style for him is what a single *sound* is for another person.¹¹⁰

In this connection he invoked the composer who as much as any contemporary embodied the other side of this coin: 'I once told Morton Feldman that one of his pieces could be a moment in my music, but never the other way around.'¹¹¹ Though Feldman would certainly have disputed the implication here (explicit in Stockhausen's talk above about 'a greater artist'), this cannot be said to misrepresent the ambitions of a man who, as he put it himself, 'tried to bring into my music (...) just very few essential things';¹¹² who pronounced himself content, indeed, 'to be continually rearranging the same furniture in the same room'.¹¹³ Value judgements to one side, it is a statement of fact to say that Stockhausen's range, whether considered from the point of view of sonic resources, that of style, or almost any other, is of a different order to Feldman's. But then it is surely unapproached by any contemporary, these things taken together.

Thus there are works – one thinks of **HYMNEN** and **MONTAG aus LICHT**, for example – which the sequel to his characterization of Mahler, above, might be describing:

In his music, the old and the new, the trite and the never before heard, the naive and the laboured (with every imaginable degree of shading between each of these extremes) are ranged above, beyond, and alongside each other, as though in an impassioned effort to compress the whole of life into one single experience.¹¹⁴

At the other end of the spectrum are pieces such as the **ELEKTRONISCHE STUDIEN**, certain of the **KLAVIERSTÜCKE** ('my drawings'¹¹⁵), **REFRAIN**, the various pieces of **AMOUR**, and others of which it may be said that they could be moments in the larger type of work, but not the other way around, so 'exclusive' are the experiences they provide. The territory between these extremes was itself very thoroughly covered, when we consider his output as one immense *Lebenswerk* (p.xxx). And looking at this matter another way, it is fair to say that Stockhausen could by turns be as bizarre as Kagel, as intimate as Kurtág, as passionate as Henze, as direct as Pärt, as meditative as Feldman, as lapidary as Birtwistle, as 'scientific' as Xenakis, as artificial as Ligeti, as anarchic as Cage, as intellectual as Boulez, as carnal as Bussotti, as relentless as Carter, as lyrical as Berio, as wedded to process as Reich – and so on, until all his contemporaries have been covered. It all depends at which 'moment' we happen catch him.

Of his creators of 'vaster mind', Stockhausen goes on to say:

History tells us that only at certain periods of time are such beings possible. They need four eyes – two looking into the future and two into the past – and also a very lucky constellation of life events. They need so many skills at once and a long time to develop them. Certainly Bach was such a person, though his followers accused him of being too conservative. Which seems strange to us now because he was really an embracing, great mind. But also history helped him to be in this position. And for Goethe it was the same.¹¹⁶

And for Stockhausen too? Stockhausen as the latest 'Janus-head' (his description of the Beethoven of the late quartets¹¹⁷), straddling our own immediate past and future like a new Machaut (*Ars Antiqua* ↔ *Ars Nova*), or Josquin (Medieval ↔ Renaissance), or Monteverdi (Renaissance ↔ Baroque), or Bach (Baroque ↔ Classical), or Beethoven (Classical ↔ Romantic), or Schoenberg (Romantic ↔ Modern)? It may be too early to judge, and who am I to claim it?

What I think may be asserted – indeed has been asserted, by Rudolph Frisius in an article whose title includes the phrase¹¹⁸ – is that Stockhausen, as surely as any of these mighty figures, fits well a description once applied to the last of them: 'revolutionary conservative'. The case for this can be made without our having to do much more than review two types of evidence already heard here (though a caveat will then be necessary).

The 'conservative' side of the description first. Though he would have thoroughly approved Mahler's view that most of what passes for musical tradition is mere '*Schlamperei*' ('sloppiness'), the fact that Stockhausen, for all his reputation and own early statements, saw no merit in rejecting the past for the sake of doing so has already been established in several contexts (pp.82-3, xxx, and xxx). Most tellingly we have heard his claim to have consciously aimed, in his development of Formula composition, at a 'polyphonic integration of the musical acquisitions of the twentieth century' (p.xxx). This cannot be put down to a regressive move on the part of an ageing composer whose attitude to the past had once been fundamentally different. To recall from §1(iii) (p.xxx) a 1971 statement:

When I started to compose, after the war, there were many different directions in musical research which had been prepared by the great masters Schoenberg, Webern, Berg, Stravinsky, Bartók, Varèse. I had to go to the roots of their individual work, and find an underlying unity. It fell to me to synthesize all these different trends for the second half of the century (...).¹¹⁹

This at a distance of 20 years. At the time, as we know, such remarks would have been anything but politic, all the emphasis at that time being on building the new future. By the same token, once he had conducted his investigations, to think too consciously in terms of a synthesis would have cut across his creative first priority, touched on in §1(ii), of arriving at a 'clear position' (p.xxx) of his own. Published correspondence from the time of his very first compositions, however, leaves no room for doubt that the problem of Inheritance versus Innovation was one he recognized and had his struggles with.¹²⁰

Turning now to his 'revolutionary' (or, as he would have preferred, 'evolutionary') aspect:

Much of what I have done in my life has been intended as prospective, futuristic. The greater part of it reckons with a musical situation which so far does not exist.¹²¹ I like to think of an unlimited capacity of the musician to make music, no matter how he succeeds for the time being. This world of imagination is as real to me as the world in which the musician lives right now.¹²²

Examples of this attitude again spring to mind from earlier sections; three notable ones:

(i) 'In the future, music will become space-music', we heard Stockhausen say in **§3(iv)** (p.xxx). If so, though he may not have been the only one to have the dream, he will be recognized as the first to have consistently worked on the assumption of the reality: 'to me it is in large part already so.'

(ii) It became clear in **§1(vii)** that **LICHT** is specifically intended – to borrow a phrase from the composer of a certain other operatic cycle – as an Art-work of the Future. Of the myriad aspects of this, one need only mention the staging. As our look at the work implied,

SAMSTAG aus LICHT will experience highly diverse staging in the future. The employment of means analogous to today's projection systems will enable the definition of areas by still completely unknown structures, made from materials much lighter and more flexible than metal or wood.¹²³

Similar comments in other interviews suggest that he viewed all the early attempts to present **LICHT** as little more than preliminary rehearsals for how it might eventually be done. He regarded this as partly avoidable, and could be scathing about the standards and facilities to be found at many opera houses of the day. But even the best contemporary conditions could not have satisfied him. How could they, given his dreams of convincingly flying musicians and shrinking sets?

(iii) Foreseeing as they do *technical* advances, such fantasies were really prophecies, and Stockhausen's prophecies, perhaps most notably in the whole field of electronic music production, already have a record of coming to pass. The most futuristic of all his purely musical conceptions, however, depending as it does on *human* development, has been Intuitive Music, as **§1(iv)** showed. Even more emphatically than **LICHT**, this way of making music in truth calls for 'a new type of musician' (p.xxx), if not actually a more evolved type of being, and for all the results achieved with his own ensemble he went on record saying that 'only in the distant future'¹²⁴ did he anticipate its demands being met. No project better exemplifies the exploratory spirit of his remark, apropos Marcel Proust, to Jonathan Cott:

I once said: Let's not only pursue things of time past, but also of the time not yet found: to regain not only the subconscious and the unconscious layers within us, but the layers of time that are coming – the superconscious and supramental.¹²⁵

Paul Klee: 'What a weighty destiny: to be the hinge between this side and the other side, a hinge at the border of yesterday and today.'¹²⁶ If Stockhausen thought of his own position this way ('I feel myself – and I am – a bit like Janus'¹²⁷) he considered it partly an accident of history that it should be so. But it was also a deliberate choice. To take up a point Frisius makes in the article referred to, 'Stockhausen has from the start always attempted to mediate between traditions and innovations'.¹²⁸

Accepting the point about his Janus status, we must recognize which side the scales ultimately come down on. Schoenberg, as Pierre Boulez for one has pointed out,¹²⁹ for all his innovation strove above everything to continue The Tradition. With Stockhausen, unavoidably connected to that past, the main thrust – no doubt about it – was always in the direction of 'the time not yet found'.

As Frisius implies, Stockhausen's *oeuvre*, building on his initial 'monistic way of thinking' (p.xxx), demonstrated an increasing preference for what might be called uniqueness by *inclusion*, and there are grounds for extending this characterization to his artistic disposition – as a 'universal being' – itself. For example, one of the most obviously true descriptions of him, 'intellectual', cannot be withheld from someone able to fully hold his own in debate with Theodor Adorno.¹³⁰ Feldman considered him a man of 'vast intellectual appetites',¹³¹ and no one who has read Wörner's book, for instance, would be inclined to doubt it. And yet to call Stockhausen an intellectual, without referring to a quite different side to his nature, would be telling half the story. The other half is suggested by Peter Eötvös (who should certainly know): 'Stockhausen is very emotional and naive in the best sense, open, full of passion.'¹³² By the same token, like Liszt, his (undoubtedly real) religious piety did not prevent him enjoying a full and varied life of the senses.

One could go on with examples of his personal as well as artistic complexity. Instead, to summarize much of what we have been finding, before passing to the (crucial) points remaining to be made in our appraisal of his creative nature, let Stockhausen himself be quoted (ostensibly discussing Schoenberg):

From time to time there appears a composer who is not just a specialist but completely universal, a composer who deploys all the octaves of expressiveness, inventiveness and discovery. In that very rare instance one can find in a single composer an exceptionally wide range of works, taking in highly subtle compositions in absolute harmony with elemental nature and pieces that are totally spiritual. Such a composer doesn't always exist on the same level of spirituality. He is everything between an animal and the gods.¹³³

There is little doubt that here, as indeed in his description of Mahler as a universal being, he has his own case in mind. These links with earlier composers of a certain (larger-than-life) type are interesting in view of what we have next to consider. For just as Mahler, like Schoenberg, 'often (...) felt a kind of "mysterious, unknown force" dictating to him',¹³⁴ so Stockhausen, if pressed, would refer to the origins of his own music in similar terms. This was scarcely touched on in our earlier investigation of those origins, where the emphasis was on inner visions and inspiration, but published letters show what can only be called an overwhelming sense of mission to have been present from the very start of his composing.¹³⁵ Such claims are not so very unusual in the history of music, of course, even among the moderns. The most celebrated testimony is probably Stravinsky's 'I am the vessel through which *The Rite* passed.'¹³⁶ Webern's is, characteristically, less self-referential, though it amounts to the same: 'Man is only the vessel into which is poured what "nature in general" wants to express.'¹³⁷ Here now is Stockhausen's, given to Cott:

All my energy goes into the music, and it's not really my music. I don't ultimately know what my music has to do in this world and what it means. Because it must be filled with new meanings, with other people, other spirits. I'm commissioned, so to speak, by a supernatural power to do what I do.¹³⁸

This introduces a slightly different note – the messianic – which again calls Schoenberg to mind. As we find in *The New Grove*:

It was not only Mahler and his great predecessors whom he had come to see as divinely inspired: his admission that the role of the 'chosen one' in *Die Jakobsleiter* was based on his own experiences removes any doubt that he placed himself in their company.¹³⁹

The parallel with Stockhausen, highlighted by the projection of his own experiences onto the figure of Michael in **LICHT** (whatever his explanation of it – p.xxx), inevitably extends to the critical consequences for both composers. For a long time Stockhausen's detractors were content to accuse him merely of egocentricity. Criticism of **LICHT** tended to be used as evidence of the graver charge, frequently brought against Schoenberg too, of full-blown megalomania. Given the apparent certainty of his self-belief, the grandeur of his vision, and the ambition of his projects, nothing could have been more inevitable. The avowal that 'it's not really my music' – that his authorship of it is to that extent an accident – could not save him from critical damnation. For it is an old story that the one claiming only to act as the medium for something greater than himself will be derided all the more on that account. Unless, that is, the power of his artistic message has been unmistakably felt, as in the case of the composer who is famously recorded as having said:

I well know that God is nearer to me in my art than to others; I commune with Him without dread. I have ever acknowledged and understood him; neither have I any fear for my music, it can meet no evil fate.¹⁴⁰

I invoke Beethoven partly because Stockhausen – who could almost be speaking here – does so himself with reference to the very conversation from which this quotation comes. His remarks are worth quoting at length, as they help us to assess his claims, his view of his own role, fairly and in their proper context.

It cannot be decisive for me as a composer whether you like my music or not. If you do not like it, someone else will like it; if no one liked it, then that too would not make me despair. I work on something, and when it is finished I make something new. Naturally I am happy if I now meet someone who is sympathetic to me – in whom I detect waves that are beautiful – and who likes what I have made. But that is a purely personal matter, that is Stockhausen. That which in my music is not Stockhausen – the most essential part –, is timeless, universal. 'Stockhausen' is only a label, a name. When I have gone, it is no longer there. But the music lives on. Then my name is merely a word, as when I say 'Moments' to name something. But that no longer has anything to do with me. None of you knows 'Beethoven'. He is a myth! He is a series of letters. None of you knows the person. Seen from the exterior he was a decrepit little man who usually had pains in the ear and belly-aches, who now and then ate a hare and drank a glass of wine, who was usually grousing like a madman and quarrelling with housekeepers: he was certainly a complex and, to many, an unsympathetic man. With a very fine sensitivity to vibrations you might perhaps have understood what kind of being the other Beethoven was, whom Bettina von Arnim described. She got him to talk, and saw what a wonderful soul lay behind this wild facade. She quoted sentences of his that are fantastic, so wise and so enlightened! She managed it. For others he was a taciturn type. Today of course, today everyone finds his music wonderful, when they like it. They do not know Beethoven at all. While listening to this music they feel wonderfully alive, full of energy, elevated, divine. In every Beethoven-lover there lies hid this spirit that was in Beethoven. I will tell you: Stockhausen's music is not Stockhausen, but this spirit which is using me.¹⁴¹

That Beethoven would have understood and (one dares say) concurred with this is more than suggested by further remarks transmitted through the sympathetic Bettina:

although the spirit be not master of that which it creates through music, yet it is blessed in this creation; in this manner too is every creation of art, independent,

mightier than the artist himself, and returns by its appearance, back to the divine, and is only connected with men, in so much as it bears witness to the divine mediation in him.¹⁴²

Which brings us face to face with an understanding of music's true purpose that has been shared by many of the greatest composers, though none has expressed it better than Stravinsky:

the consummated work spreads abroad to be communicated and finally flows back to its source. The cycle, then, is closed. And that is how music comes to reveal itself as a form of communion with our fellow man – and with the Supreme Being.¹⁴³

This is what Stockhausen too believed, not merely after he apparently 'got mysticism' at some point during the 1960s, but from his discovery of Hesse's *The Glass Bead Game*, which he seized on in 1948 precisely

because it connects the musician with the spiritual servant. I found it prophetic, for I realized that the highest calling of mankind can only be to become a musician in the profoundest sense; to conceive and shape the world musically.¹⁴⁴

Such a belief explains why he sometimes referred to his music as a form of communication (p.xxx), though he always – autobiographical appearances in works like **HYMNEN, MUSIK IM BAUCH**, and **DONNERSTAG aus LICHT** notwithstanding – denigrated using it as a vehicle for personal expression in the widely-assumed 'psychological' sense. Rather his aspiration, movingly enunciated in **VISION** by a by-now apotheosized Michael, his 'one world day' as a kind of Stockhausen figure at an end, was from the start, in the true Stravinsky spirit

to bring celestial music to humans
and human music to the celestial beings
so that Man may listen to GOD
and GOD may hear his children.¹⁴⁵

§(3vii) The Stockhausen Problem

We are I hope by this stage pretty well placed to appreciate how Stockhausen viewed his own role in relation to the activity that provided his central focus. We have seen that he held music to be 'the subtlest, highest art'¹ and, by virtue of this, 'something very special for the earthling',² above all in its capacity for facilitating a two-way flow between the human and the more-than-human – the divine, if you will. We now know, moreover, that he believed himself to have been called upon to play an active part in this process. His music, like Michael's in **DONNERSTAG**, was thus intended both to summon up 'waves on which you ride to the eternal' (p.xxx) and to stand as 'an acoustic metaphor for the Divine Perfection' (p.xxx). It was always so intended – **PUNKTE, KONTRA-PUNKTE, KREUZSPIEL**; this was cosmic music'³ – even when the sacramental in it was less conspicuous than the cerebral, that is by the complexities of its structural organization: 'The essential aspect of my music is always religious and spiritual; the technical serves merely to elucidate.'⁴

What we have not so far gained is any very clear idea of the *nature* of Stockhausen's spiritual convictions. Who or what, for example, are the 'celestial beings' (p.xxx) his music would put

us in touch with? There is also the troubling question of how such language sounds in the mouth of so radically modern an artist.

'I'm not speaking', he tells Cott, 'about the old God.'⁵ For long, of course, the old God of his father had been enough for him: 'I was a man who related to the cosmos and God through Catholicism.' (p.xxx) Nor, when this particular adherence ceased, was his decision attributable to even a temporary loss of faith, any more than it was influenced by intellectual fashion.

I left the Catholic Church in the early 60s. This has a particular reason, not because I'm opposed to Catholicism, but because I was not able to follow the rules.⁶ (...) I fell in love with Mary Bauermeister. I was married to Doris. So my love existed outside marriage, and was thus condemned by the Church. I excommunicated myself and gave up all religious practices.⁷

Though not entirely, for we have heard him tell how, during the course of the decade, he 'got in touch with many other religions' (p.xxx), often partaking of their ceremonies. A Catholic, of course, would see this merely as confirming his apostasy. Equally naturally, Stockhausen regarded his discovery of 'a suprareligious way for myself'⁸ as a spiritual expansion, a trend irresistible to regard as paralleling the tendency to universality and inclusion unfolding in his work during the same period. While happy to see most of his children confirmed in the Catholic Church,⁹ he was becoming convinced 'that the religions were all part of the face of a multifaceted universal spirit, of the total spirit' (p.xxx), conceived of as 'a true reality which is beyond the senses and which is always the same'.¹⁰ We tend to think of this as a distinctly eastern outlook, and certainly it prepared him for key experiences such as his discovery of Sri Aurobindo. This came via Satprem's book, where in May 1968 he would have read, with a shock of recognition, such passages as the following:

That which seems to be the most important part of a religion for the Westerner, the structure which *distinguishes* it from all other religions and which says that man is not a Catholic or a Protestant unless he thinks in this way or in this other and subscribes to such and such an article of faith, is the least important part for the Indian, who instinctively seeks to remove all outward differences in order to find the whole world at a central point where all things communicate.¹¹

(To find a parallel with his dawning insight, a decade later, concerning the intervallic common denominator underlying all musical languages (p.xxx), is, I believe, significant rather fanciful. It is clear that, in the view Stockhausen and Aurobindo shared, the various religions are no more than 'dialects' of the 'true reality'.)

His spiritual certainty, whatever form it took, needless to say always put Stockhausen out of step with the 'established intellectuals' (p.xxx), and more broadly with the intellectual temper of the times. Among artists one need only compare him with perhaps the only contemporary literary figure of comparable achievement, Samuel Beckett, or with an archetypal modernist painter such as Francis Bacon. Typically, even when not such an out-and-out nihilist, the modern artist at most avows a stoical humanism. The utter contingency of man's place in the universe being taken as read, preoccupation has tended to be with questions of the value (and potential beauty) of the creative act and / or problems of technique. Put another way, underlying the most diverse trends in the art of the twentieth century – and this covers even a yea-sayer like Cage – is the attitude encapsulated in a sentence Boulez approved: 'What we can know of the world is its structure, not its essence.'¹²

Stockhausen's unflinching readiness to swim against this tide was his greatest strength as an artist, and by the same token a major factor in his gradual critical isolation. Increasingly, the esoteric references which began in the 1960s to find their way into his utterances, and even his scores, tended to alienate commentators, and it was a rare review of a **LICHT** premiere that neglected an opportunity to take a sideswipe at its author's confused mysticism.

The second element of the charge is beyond dispute, one definition of mysticism being:

The doctrine that a knowledge of ultimate reality, and the divine, can be gained only by immediate intuition, especially by concentration of the mind on, and absorption in, the divine essence, which leads through ecstasy to the revealing vision.¹³

In view of this we may say that 'mystical' is precisely what Stockhausen's bent was, unmistakably from around 1968 but actually all his life. Nor, in a statement as characteristic for its matter-of-factness as for its invoking of music ('I think identifying with a sound *is* meditation', he once said elsewhere¹⁴), does he feel the need to apologize for it:

I have often been accused of vague mysticism. These days, mysticism is easily misunderstood as something vague. But the mystical is something that cannot be expressed with words, that is: music! The purest musicality is also the purest mysticism in a modern sense. Mysticism is a very incisive capacity to see right through things. To this end, the intellect is a piece of equipment that serves intuition. Intuition, clearly, is not innately present in man, but constantly infiltrates him, like the rays of the sun. Thinking is a way of formulating things, of translating intuition in terms of our equipment, and our practical world – an application to the realms of perception.¹⁵

As for the first half of the familiar charge – confusion, vagueness – one need not share Stockhausen's position to find the accusation a little too pat. His views on music, the universe and everything can certainly be confusing, at least when they reach us through an unsympathetic or uninformed third party. But extraordinary as his personal cosmology undoubtedly was, it emerges from a *sympathetic* – or simply unbiased – examination of his innumerable statements on the subject down the years as nothing if not thoroughly thought out (and, I suspect, self-consistent).

Be this as it may, it is high time we attempted to address what I take to be the heart of the convictions Stockhausen actually expressed. Pressed to encapsulate these in a single word I would recall one used in **§3(v)** (p.xxx) to describe his outlook: in the widest sense, *evolutionary*. By which I mean, he viewed the universe as an all-embracing *whole* (taking us back to Khan and Whitehead at the start of this part of the book (p.xxx), existing in a perpetual state of *becoming*, which is to say forever increasing in overall *consciousness*.

Nowhere is this conception more vividly expressed than the 1969 letter to his daughter Suja translated in full as **Appendix 1**. In the present context this is a key text, going a long way towards answering the question of what the word 'God' meant in Stockhausen's lexicon. It meant, we hear first, simply everything that is. (Everything? asks the orthodox believer. 'I don't think, he once said, 'that the evil, or the destructive, or the chaos and so on, is *outside* of God; I mean, that would be a reduced concept of the divine itself.'¹⁶) All human problems, he implies, stem from failure to grasp, or refusal to accept, this basic condition of existence.

In cautioning his daughter against this error, he may have had in mind two crises in his own experience. We recall how, in his adolescence, he was able to transcend loss and the most

appalling adversity once he 'began to see the whole and to live for the whole' (p.xxx). And how, on the other hand, it was his momentary loss of sight of the whole brought on by a *personal* blow that had led him, barely more than a year before this letter was written, for perhaps the only time in his adult life to stray close to the abyss of negation (p.xxx).

The analogy of the human body, frequently used by Stockhausen, though nowhere more tellingly than in this letter, sheds further light on the evolutionary aspect I mentioned. God, as well as the whole body – 'the *I* of the entire universe' (p.xxx), Luciferian warts and all – is at the same time conceived of as the most evolved, that is the most conscious, part of that body: the 'mind' of existence, in overall control of such cells and atoms as suns and men represent. That this centre is itself in continuous evolution is a notion he developed elsewhere:

That's how it is, and God becomes aware. I often say that if a particle is still diseased and imperfect, then God is diseased and imperfect in part of his being. God is thus a Single Being – the One and Only Spirit within a process of increasing awareness and conscious shaping. The fact that this Being can be so universally intelligent and at the same time perfect itself still further is a mystery beyond our comprehension.¹⁷

Not an entirely new God either, then, it would seem, to hark back to his remark to Cott at the start of the section. Nor is it just Stockhausen's language here that compels such a view. For as other statements make explicit, it is this evolving 'mind' of existence – a 'Being', after all – that makes prayer appropriate. This is obviously the point at which a good rationalist like Whitehead, supposing his rejection of 'the notion of independent existence' (p.xxx) had enabled him to entertain the 'body' illustration, would find himself offering Stockhausen his excuses and heading off in another direction.

It is perhaps worth pausing to note the part these particular aspects of his convictions played in Stockhausen's works. Consider first the direct appearances, such as the intoning at a crucial juncture in **STERNKLANG** of a prayer set down not much more than a year after the Suja letter:

God, you are the All.
The galaxies are your limbs.
The suns are your cells.
The planets are your molecules.
And we are your atoms.
Fill us with your light.¹⁸

The desire to incorporate 'imperfect' elements (e.g. the 'trash' of **HYMNEN's** of national anthems) within schemes set overall on a higher harmony has unmistakable quasi-programmatic implications, rather as the transcendence-striving schemes common to works as various as **SPIRAL**, **TRANS**, '*... am Himmel wandre ich ...*', **INORI** and **HARLEKIN** embody more or less overt dramatizations of their author's preoccupation with the evolution of consciousness. This is, of course, the journey towards the light of his prayer above, and of **LICHT** itself, a music drama quite beyond comprehension without reference to the matters we have been discussing. At a significant point in **FESTIVAL** from **DONNERSTAG**, for instance, the choir sings, three times for emphasis, and following a general pause lasting fully two minutes:

There is no resting place [*Zuhause* – literally, 'at home']
Even the angels are always in transit.¹⁹

Throughout **LICHT** the character of Luzifer dramatizes Stockhausen's belief (cp. the Suja letter) that the grit-in-the-oyster forces of strife, negation and rebellion have their place and lessons to teach 'within a process of increasing awareness' leading 'towards the **LIGHT**'.²⁰

If this suggests that Stockhausen's work – **LICHT** only most explicitly – is in the last analysis 'about' the evolution of planetary consciousness, this merely confirms our findings in **§3(v)** about what he believes the true purpose of music to be. Nor are the steps to his conclusion by this stage unfamiliar. Man is the 'great experiment', as he described the subject of **DONNERSTAG**.²¹ He is in other words a 'Zwischenstadium',²² an intermediate stage 'between ape and angel',²³ poised according to Stockhausen (paraphrasing Aurobindo) 'at the threshold of a new terrestrial mutation where a few beings, very few for the time being, are changing into something else, into a kind of supra-human being'.²⁴ And in this process music, by virtue of the unique relationship outlined in **§3(v)**, has a special part to play.

If one's reflex is to write this off as merely the kind of thing a composer of Stockhausen's pretensions might have needed to believe, let us again be wary of throwing the baby out with the bathwater. The terms of some of the composer's statements in this area may indeed be off-putting, but we should realize that beneath them lies a belief in the power of music which is anything but unspecific, and which begins to look more plausible (or at least more interesting) as soon as (a) the word 'consciousness' is understood as synonymous with less esoteric-sounding concepts like 'awareness' and 'perception', and (b) we consider his own long-term view of matters. People are certainly not envisaged as sprouting wings as a result of listening to Stockhausen. What *is* going to happen – so he believed, and lived to help bring about – is that humans are in the long term going to extend the boundaries of awareness, recognition, concentration, and so on – in short, of musical perception and appreciation. Through listening to his music, they are going to become capable of perceiving processes which at present lie 'deeply hidden' (p.xxx), accessible only to laborious analysis, if at all. More specifically, he was convinced, successive generations will learn to attune themselves to faster and more complex rhythms as well as to what seem at present impossibly *slow* events. He stressed that in music such as his own, the listener is no longer bound by the limitations suggested by the physical actions of our bodies, as has been the case with the song- and dance-derived music of western tradition. In a work of his, events faster than the speed of thought can be taking place in one layer, while in another we perceive as mere background colour what is in fact one note of (for the time being) an inhumanly attenuated Formula. Whether we develop to hear such music differently, or the music helps bring the evolution about, he expressed the belief that 'in 300 years'²⁵ there will be humans capable of hearing the longer Formula expansions of **LICHT** for the extremely slow melodies they are.

If such beliefs represented the far limits of Stockhausen's spiritual beliefs there would be nothing to delay us proceeding to the music itself, and the final part of the book. His conception of the cosmos, as I have been careful to outline it in this and previous sections, is one in which even many who find too much of 'the old God' for their taste might, in generous mood, find little to object to. The 'body of God' metaphor, in its evolutionary aspect, for example, need not frighten the horses, while even his claim to being 'commissioned', as we saw in **§3(vi)**, is something we are willing to indulge in Stravinsky and Schoenberg's cases. Even in many of his more outlandish-sounding utterances, there will be many a sceptic (the present author among them) willing to acknowledge elements of what might be called *imaginative* truth. Take for example the following exchange, on being asked by Richard Dufallo to elaborate on his claim to being able to travel in spirit.

KS ... whenever I close my eyes, I can move with any speed. I can be in New York within ... no time.

RD You mean right now you're in New York?

KS Well, if I close my eyes ... yes ... I am standing at the corner of 42nd Street ... right. There is the gallery *Bonito* at the left side.

RD And you feel you were there. And now you're back.

KS Yes.

RD Mm. Not just a blink of remembrance.

KS I see it.

RD You were there.

KS I see it, I feel it, and I am aware of it.

RD I can do that too. That's not very extraordinary.

KS That's what I mean.

RD I mean, I can say, 'Well, now I'm in Schiphol Airport. I am in Ramp 32.'

KS Very good.

RD But what's significant about that?

KS Once you know that, then you know that you are not fixed to your body.

RD But don't you think most people do things like this?

KS Clear! But they don't take it seriously. They think it is only an illusion. They don't take it as a reality.²⁶

This is either very silly, or rather profound. Before too hastily deciding which, we should hear him out, bearing the end of this exchange in mind as we listen to him describe, in a lecture, the novel demands associated with his use of 'sound walls' (cp. p.xxx).

We now have the means technically to make the sound appear as if it were far away: 'as if', they say. (...) Now I come to my point: when they hear the layers revealed, one behind the other, in this new music, most listeners cannot even perceive it because they say, well, the walls [of the auditorium] have not moved, so it is an illusion. I say to them, the fact that you say the walls have not moved is an illusion, because you have clearly heard that the sounds went away, very far, and that is the truth. Whether the walls have moved at all has nothing to do with this perception, but with believing in what we hear as absolutely as we formerly believed in what we see or saw. They open their eyes and they say, well now, aha, there are the walls, so that was an illusion, the sound has not really moved away. What makes it so difficult for new music to be really appreciated is this mental block in people, which makes them say 'as if', or that they can't even perceive what they hear. To hear a sound three miles away, they expect a person, a bird or a car to be three miles away: they identify the sound with an object that must be at the given distance. That's what we are struggling with, and that's what will change mankind as gradually more and more people perceive this music in its real terms.²⁷

Scratch Stockhausen's flights of fancy and surprisingly often you will encounter this kind of provocative insight grounded in practical experience – not to mention valuable clues to approaching his work.

The trouble, from the point of view of Stockhausen's reputation as one of the great creative minds of modern times, is that the stranger type of claim so far discussed, so far from being the touch of wackiness we might regard as almost inevitable, represents the tip of a great iceberg that threatens to sink without trace his very credibility in the mind of the most sympathetically-inclined observer. There exists, that is to say, an acute Stockhausen Problem, akin to that diagnosed by the art critic Robert Hughes in the case of another master

whose name is a byword for modernity and whose methods were nothing if not rationally based.

Mondrian was a devout man who wanted to make icons, and one difficulty his career presents is that he (...) accepted as truth the woolliest nonsense that Theosophy could offer.²⁸

One man's nonsense, needless to say, may be another's article of faith. The problem lies at least as much in the woolliness, or putting it another way in what the composer Elisabeth Lutyens characteristically referred to as 'the mystic balls of Stockhausen'.²⁹ The sacred texts of the world's great religions, supernatural claims and all, are one thing. Quite another, most of us feel, are the prophecies of Nostradamus, the esoteric writings of Madame Blavatsky, or *The Urantia Book* ('a curious and expensive piece of occult arcana, ostensibly extra-terrestrial in origin', as Toop describes it³⁰), by all of which Stockhausen is known to have set store.

The inventory of those of his convictions and claims that overstep the bounds of normal discussion is in fact as extensive as it is colourful. And if many of the things to which he was willing to give credence seem to reveal a naivety different in kind from that identified earlier by Peter Eötvös (p.xxx), more breathtaking still are some of the claims for himself. Of which a sample:

I have been able in a few moments of my life at a very high state of consciousness to identify completely with an animal or with a plant.³¹

Since I started composing, I've once in a while had the physical experience in which a dead composer was standing behind me while I was working. This has happened to me with Schoenberg, Webern, and also Bach and Beethoven, and Mozart. I can't explain this, and people will think I'm insane, but when I've been very tired or when I was struck [sic] with a problem, then somehow I received help. Whether people believe this or not, I have experienced this ... and I've also gotten help in my daily life from my parents, who were both killed when I was young.³²

If the first of these cases elevates a talent for identification (cp. the Dufallo exchange lately quoted) to the plane of mystical experience, and the second is to be accounted for by exhaustion or some other extreme state of mind (such as composing at Stockhausen's level of imagination would seem almost to require), what of the following?

Throughout my life I've been convinced that an angel constantly guides me. The angel involved has also changed along with the tasks I've set myself and which I've been set. (...) It's also certainly possible that momentary non-alignment with my angel, or association with other means or spirits, result in contrary influences entering my work.³³

Musicians are trained on Sirius. It's the natural post where you go after this life and where you come from when you are incarnated on this planet.³⁴ Through numerous signs of proof I have come clearly to understand that I attended school on Sirius.³⁵

Michael is my boss: he is the director of the local universe. True. I have known him since I was a child. Luzifer was in charge of our universe: he was one of the 700,000 creator-sons of our God who were allowed to create a universe at will, doing anything they wanted. But then he caused a rebellion because he was

fed up with the idea of creating men between animals and angels, and so Michael had to take over. One emanation of Michael was Christ, who tried to formulate the precise message of how individuals can make contact with the centre of the universe.³⁶

The spirits of **LICHT**, whom we might have assumed to be as much metaphors as 'Pluramon' in **HYMNEN** a (significant) decade earlier, turn out to be real personages. The substantial body of Stockhausen's statements on this and similar subjects, many of them equally circumstantial, leave no room for doubt that we are to take them at face value. We are thus left to respond according to our own lights. There will of course be those ready to accept such claims as perfectly natural. The rest, lacking the personal experience or other reason that would enable us to do so, must find a way of addressing the Stockhausen Problem. For some this will mean dismissing him as a crank plain and simple. Integral to the Problem, however, is that Stockhausen was far from a plain and simple anything, and the nature and magnitude of his achievement make it impossible to dismiss him so easily. Helpful here may be something James Joyce's biographer Richard Ellman wrote of his subject's attitude to William Blake (another great artist who, judged on his more interesting claims rather than his work, was away with the fairies, if not actually mad as a hatter):

Joyce acquits Blake peremptorily of the charges of insanity and vague mysticism: For the first, 'To say that a great genius is mad, while at the same time recognizing his artistic merit, is no better than to say he is rheumatic or diabetic.' For the second, he was a mystic only insofar as he could be one and remain an artist; his mysticism was no swooning ecstasy like that of St. John of the Cross, but a western mysticism filled with an 'innate sense of form and the coordinating power of the intellect.'³⁷

Much like Stockhausen's own, taken in the round (and leaving out the 'western'), I venture to suggest. At this point it perhaps needs stressing that Stockhausen did not consider himself remotely anti-rational. Instead he believed that reason, rather than an end in itself, is merely a valuable means, one that must be made to serve the forces that really drive the evolution of consciousness:

Let us realize that if reason is not constantly supplied with impulses from the supra-rational, it constantly recombines everything stored up within itself, and can at any time assert both anything it likes and its opposite. Reason can be utilized for *anything*. It represents any opinion, and can justify, support and refute anything. And if one has not learnt to switch it on and off, it races on without interruption. Reason is neither more nor less than a useful instrument: a model computer. But *who* uses it, and for *what*?

The higher self should provide reason with something to think about, receiving its impulse from the intuitive consciousness which is in turn fed by the higher and highest consciousness, linking every individual consciousness with supra-personal cosmic consciousness.^{38N}

Which only brings us back to The Problem. To the sceptic friendly to Stockhausen's music, its solution might seem to lie in divorcing the works from the spiritual context in which they come into being. I recall a request I once received to collaborate on an article about **DONNERSTAG** in which the party making the proposal would concentrate on the the score, leaving me to 'take care of the mystical bullshit'. We don't, after all, allow the theosophical trappings of Scriabin's music, or for that matter the Catholic trappings of Messiaen's, to spoil our listening, so why begrudge Stockhausen his foibles as long as the work justifies them?

His esoteric interests may in this light be looked on as positive insofar as they provide inspiration, as witness the relationship between aforementioned *The Urantia Book* and **LICHT**.

The danger of dismissing in the process the brilliant musical mind glimpsed for example through the Cott *Conversations* and Maconie's *Stockhausen on music* has already been touched on. But there is an even greater drawback to attempting such a separation, stemming from the fact that the rational and 'irrational' ('supra-rational', he would have said) elements in his outlook *cannot* be kept apart: both are part of the deal, sides of the same coin. That they always were, the early correspondence with Goeyvaerts demonstrates. Moreover, as we have found (p.xxx), a push-and-pull between these forces is one of the great themes of his composing, there to be observed in the works themselves. This, and not merely the mystical tendency itself, is the real Stockhausen Problem, which is also the Blake Problem and the Mondrian Problem, and perhaps archetypally, as Bertrand Russell suggests, the Pythagoras Problem.

Pythagoras is one of the most interesting and puzzling men in history. Not only are the traditions concerning him an almost inextricable mixture of truth and falsehood, but even in their barest and least disputable form they present us with a very curious psychology. He may be described, briefly, as a combination of Einstein and Mrs Eddy.³⁹

So where does all this leave us? Though we will have to be more sympathetic than Russell to bring it off, I would argue that it is perfectly possible to evolve a view of the mystical Stockhausen whereby he appears as neither a crank (madman even) who happens to have been musically extraordinarily gifted, nor as a talented composer who strained his brain with all those calculations in the 1950s and thereafter entertained increasingly weird ideas, but as belonging to an exceptional type of creative personality in which the two great intellectual and creative traditions (Rational / Apollonian – Mystical / Dionysian) are combined or held in balance. I quoted him long ago (p.xxx) as saying that 'nobody can afford to trust only his feelings or only his reason', while Maconie has identified the issue at the heart of **LICHT** as 'the spiritual tussle between the visionary and the rational spirit'.⁴⁰

Much evidence besides could be called to support the idea that the rational and the 'supra-rational' ('visionary', 'intuitive') act as another pair of apparent opposites embraced and brought into productive relation within Stockhausen's own 'very curious psychology'. To pursue this 'serial mediation' analogy, each of his ideas and preoccupations might be imagined as occupying a place somewhere on a scale of rationality bridging these extremes. If we have to be cautious about going further and saying that, like polar musical concepts in his composing, the two things will then go on to 'lose their antithetical character' (p.xxx), it is because each of us, in considering the body of Stockhausen's recorded utterances, will continue to have our individual cut-off point, dictated by personal experience, insight, temperament and the rest. Which the composer himself, in whom no such point appears to have existed, would doubtless have called our 'level of consciousness'.

Such at least is my conclusion, painstakingly arrived at and to which I intend to stick.

And so next, at last and not without a certain relief, to §4 and 'the MUSIC' (p.xxx), to which all my words are intended only to help clear a way. In the end, as Ernest Newman put it in a different context, 'the fact that we do not believe in ghosts does not make us shut our ears to *Hamlet*'.⁴¹ Stockhausen himself has said:

Anyone who doesn't accept the subject-matter of my operas can still simply view them as aesthetic events, which are interesting in terms of compositional aspects, the stage action, the formal structure, and visual and spatial elements.⁴²

This comes as sanguine, given the opinion expressed in his Introduction to Henry-Louis de La Grange's *Mahler*: 'For those who do not accept the message of the poems Mahler used, his music can only be an acoustic toy.'⁴³ But it is ultimately the 'compositional aspects' of his activity that we must focus on, and on which his reputation is certain to rest. Just as surely, though, we cannot hope to understand either Stockhausen or his work if we altogether ignore his insistence that 'the essential aspect of my music is always religious and spiritual' (p.xxx).

As he goes on to say in the Mahler text just quoted from (which as suggested earlier is one with undoubted bearing on his own case):

Above all, we must not make the gross error of dismissing as naive Mahler's deep and supradenominational religiosity. Even if the words are rejected, the music remains imbued with this religious spirit and will be a welcome oasis in coming ages of ice-cold intellectualism.⁴⁴