Some ramblings since beginning to work in more than 2 channels.
(Or: Be careful what you ask for!)

1) GENERAL COMMENTS
2) PAST AND PRESENT TOGETHER?
3) MORE SPECIFIC RAMBLINGS.
4) PERSONAL ENCOUNTER WITH MULTICHANNEL FORMAT
5) FINAL POINT.

1) GENERAL COMMENTS.

A recording is always a recording, whether it be visual, aural or both. It is an artefact. An objectified experience, a *record* of an experience.

Although perceiving the object involves experiencing it in the 'now' (as a series of moment by moment present events) the content of that series of moments is, by definition, second-hand; rendered sounds or images from some past actuality.

I believe this encourages us to respond to any recorded artefact with a fundamentally **nostalgic** attitude. This response impacts our awareness of our own mortality and as such, carries deep emotive implications.

The recording is an embodiment of moments from the past that can only be re-captured in this objectified form.
However, this very nostalgia works as a positive discriminator. It encourages us to ignore the fact that this is an artefact and to embrace it **'as if it were a present actuality.'** The mechanism for this response is complex, but I believe at its core lies our secret wish to become the one exception to death; our personal requirement to live forever.
Perhaps we think, if we respond to evidence of the past as intensely as possible, past and present might merge, and the contemporary moment expand to encompass *all* of time. Then we would be free from the nagging certainty of our own mortality.

This fact also informs our response to the quality of the recording, or should I say, the *lack* of quality.
The fact that this is:

> **'a playing back of a recording of a past series of present moments'**

is the prime informer of our responses.

No matter if the sounds are emanating from an Edison wax cylinder recorder/reproducer of the late 1800's, or from a contemporary acousmonium, our response is essentially the same. Just because we can now record and reproduce sounds and images with alarming fidelity does not alter the fact that they are still recordings.

We reach, through the experience of listening to the recording, back to a past series of moments, and bring them forward in time, where they impact our sensibility as a *contemporary actuality*.
The recording functions as an intermediary between the past, recorded reality, and our present moment responses.

We hear the past as if it were the present.

Maybe one day this will change, but for the moment this paradox remains central to the way we hear recorded sounds and images and I believe it should always be born in mind.

2) PAST AND PRESENT TOGETHER?

As the technology improved (over the period since the late 1800's) the role of the recording process has changed from being essentially curatorial, to a more open, creative stance.
As the categories of recorded object expand from solely self-contained cultural artefacts (recordings of musical performers etc) to de-contextualised sound objects used for their own sake, (objects sonores), is the sound still received by the listener as 'something from the past heard in the present', or does its very de-contextualisation free it to be heard in a more immediate manner, as a sound made by an instrument (in this case a loudspeaker) which enables the listener to identify to a greater or lesser degree with the (real or imagined) source of that sound.

In works which use both sign and abstraction, do the two categories complement each other, the first carrying an encapsulated past, and the second functioning as present tense, sonorous commentary upon that past?

3) MORE SPECIFIC RAMBLINGS.

So, as far as I know, there is still no generally available technology that successfully convinces a human being that their experience of a contrived reality is, in fact an actual reality. We always know the difference.
But, as I say, the irony lies in our tendency to positively discriminate against this knowledge, and to respond to the contrivance *as if it were a reality.*

Lets go back a little, and make a few obvious observations about the evolution of the technology.

The superior depth of image produced by stereophony (by recording slightly different aspects of a sound and reproducing them from two suitably configured loud speakers) compared with monophony, has long been accepted.
It, accompanied (much later) by the digital revolution, is still (despite the advent of various multi-channel formats) the most commonly used configuration in contemporary promulgation and distribution of recorded musics.

The question: 'why use more than one speaker' seems rather moot, given the efficacy of stereophony,
 So, is a seemingly similar question: 'why use more than *two* speakers' also moot? Has the improvement in sound imaging provided by the step from monophonic to stereophonic been matched by the subsequent step from stereophonic to multi-channel? And, more importantly, has this enlargement enabled an equivalent improvement in the creative possibilities offered by the genre?
What shape is the improvement curve from Edison's monophonic wax cylinder recorders of the late 1800's, to monophonic analogue recorders of the 1950's and 60's to stereophonic analogue recorders of the 70's and 80's to stereophonic digital recorders of the 90's to ambisonic digital sound field recorders of the new millennium. And what comparison would this curve make when laid upon the creative success curve of the works created in that century and a bit, which use materials provided by these recorders? Is there a 1:1 ratio between technological improvement and aesthetic success? Does a lowered noise floor necessarily ensure a closer approximation to a successful creative result?
There is no simple answer, and the evidence is conflicting across the entire field of human technological endeavour. But there is little doubt, that improved technology in any arena is a double-edged sword that can decapitate the user if wielded without care.

Let's segue to another medium for a moment.

If one looks at the phenomenon of 3D cinema and television, one is given substantial reason for pause.
2 dimensional cinema (even in its very early monochrome, unvoiced form) seemed to satisfy a deep requirement in the viewer for a 'moving image'. Once this had been achieved, everything else could be imagined. The blatantly flickering image was not enough to destroy the viewers' sense of plausibility as they filled in the gaps between the flickers by a leap of subjective belief driven by the positive discrimination factor mentioned earlier.
Improvements have been enormous of course (perhaps the advent of colour being the visual equivalent of stereophony), but the ability of the temporal, moving image (compared with the frozen photograph) to take the viewer to another, much more available emotional location, one closer to their 'real life experience' was already achieved. The step from instantaneous to temporal was the crucial one.
I contend that there is essentially no difference in the mechanism of the viewers' response to a silent movie of the late 1800's, and a contemporary cinematic blockbuster.
Remember the periodic experiments with enlarged formats, multiple screens, and quite early rudimentary attempts at giving the surface of the two dimensional screen an illusion of depth. They came and went. They have come again it seems, and I predict they will depart as they did before. Why? Because for the main part, they are unnecessary. The two dimensional screen carries enough data to allow the genre to succeed. If further bells and whistles are added, they usually become an annoyance. Even multi-channel cinema sound tracks can be more distracting than enhancing.
I guess this is why large format, 3D cinema (iMAX) succeeds best as a stunt, rather than as a serious development of cinematic expression.

Do we face the same situation with acousmatic, multi-channel audio? Are the extra channels merely bells and whistles that provide very little genuine expressive bang for their buck? Will they eventually prove to be vestigial and depart?
It is clear that if they are to remain, they must contribute unique gains to the sonic object which facilitate a substantial increase in its expressive potential.

4) PERSONAL ENCOUNTER WITH MULTICHANNEL FORMAT

I realise I have always combined a high-minded, idealism with number 8 fencing wire pragmatism. The first points to the objective, the second controls how close you get to it. You can only do what you wish, if you have the tools to do so, and those tools will, more and more, influence what you wish.

I fell into the multi-channel world by chance, and proceeded guided by my usual trial and error approach, a method not renowned for rapid or efficient progress!
It is only now, after nearly a decade of more or less full time effort, that my initial intoxication with multiple output channels has begun to sober, or should I say that I am beginning to sense that various channel configurations are useful for various ends.

My first multi-channel piece was 'Birth Circle' an 8chn work. It used the 8chns 'in a circle' surrounding the listener, being an installation that supported a performance model of a multifarious crowd of individuals at various distances and angles from the listener. The performance model (the idea) came first, the 8 channels (the tools) second. (the number 8 provided by the maximum outputs of a single digidesign interface!)
Since then, I have made a number of multi-channel works all of which use the 8chn configuration in various ways, influenced by the expressive objectives of each work.

There is no doubt in my mind that sonorities with increased depth and numinosity can be achieved with a greater number of output channels and complex loudspeaker array, but at the same time the problems of image stability and morphological plausibility which already haunt the stereophonic world, are exponentially increased, and the prime response mechanism of the listener to the result is unchanged.

The fragility of the discrete multi-channel image (compared to the stereophonic one) still takes me by surprise. More output channels does not mean greater stability of image, or even of straight sonic impact. The need for omnipresent fill amongst contributing discrete programmes is the first lesson I have learned, even within the small acoustic volume of my home studio. The balance between aerated textures designed to oscillate luminously, and spatialised material conceived as a multichannel singularity, is often a difficult one to manage.
This presents even more problems when the work is played back in a larger acoustic volume, leading in my case, to the sessions being left as un-bounced as possible so that access to the various contributing elements is facilitated, allowing compensatory action to be taken.

This was a slow discovery for me, sped up by my relatively recent experience of

playing the works here in the KMC as well as two or three other larger spaces elsewhere.

The characteristics of the monitors also becomes much more influential. Even a simple change in speaker type can have huge effects on the result. It is clear that the installation used in the making of the work, is critical.

For example, the work I am making at the moment, uses 24 channels. It uses this number for two interlocking reasons.

The first is the ***performance model*** in which a number of the enclosures take on the role of characters in a psychological drama realised as spoken text. They are visible, single point sources within the personal space of the listener. The other enclosures sit outside in various configurations, angles and distances, invisible to the listener, functioning as the providers of a deeper, more numinous soundscape.

The second is the ***technological fact*** that with my present set up I can use three digidesign interfaces, each of which provides 8 outputs. What I am saying is, I needed to find a central rationale that would allow me to wield the output channels with some kind of objective in mind. This has allowed me to progress with the work, but it also provides me with all kinds of dilemmas when I think of playing the work in some other space.

The physical characteristics of how and where the loudspeakers are installed is critically affected by the dimensions and character of the acoustic space, to the point where the work can only succeed if the entire set up is reproduced exactly. Here the sounds of the work are totally dependent upon the context of the instrument in which and by which they are being made. Although this may be seen as a justification for the use of multiple outputs, it complicates the promulgation of the work a great deal.

Although I have used single point sources in some pieces, I still mostly work with individual files in stereophonic format, but with more and more of an idea of how these sounds might perform when split wider than the normal frontal 60 degrees.

The 'surround' image is still very much frontally tilted most of the time, the problem of frontal projection of the rear pair often making *them* vestigial.

It is very seldom now that I will leave a single stereophonic file emerging from only two outputs.

My preference for largely mimetic sources, including spoken materials, seems to suit the use of more than 2 channels. The sounds lend themselves to narrative: prosaic, metaphorical and symbolic.

The multi-channel environment can then be exploited to differentiate amongst various narrative streams, and the transformed sounds which may accompany them.

Often structural devices which mimic literary ones seem to provide eloquent, large scale expectational forms, capable of complex multi-layering.

I have always been uncertain as to the feasibility of wielding so called 'abstract' acousmatic gestures within large-scale architectural forms.

Due to their peculiar neutrality, I think there may be a fundamental difficulty in establishing perceptible hierarchical functions using only this sort of material, no matter how arresting the sounds may be.
Will the ability to 'sculpt' abstract sound gestures in 3 dimensions within a complex loudspeaker array help solve this structural problem?

It is a beguiling paradox that progress towards a more eloquent result in acousmatic art, an art founded upon technology, may have surprisingly little to do with the seemingly increased potential provided by the continued growth of that very technology.

Do the mechanisms of the way we hear and see, and how we subjectively respond to these senses establish natural constrictive boundaries within which the artistic genres which exploit hearing and seeing *must* operate?

5) FINAL POINT.

Difficulty of access to facilities raises its head again.

An acousmonium is an instrument. The loudspeaker array and the acoustic volume it occupies is a unique context. The best (perhaps only) way to understand its potential is to be exposed to its characteristics as often as possible. This is of course no different to the requirement of composing for *any* instrument.

However, many composers of multi-channel sonic art undertake initial work with their laptops, auditioning binaurally, and only enter the multi-channel environment towards the end of the composition process. This is often necessary due to the heavy use of expensive multi-channel studios, but can cause all sorts of difficulties. Obviously it is better if the multi-channel environment is experienced during the full gestation of the work, so that all of the implications of its spatial and numinous potential are allowed to impact on the composer at opportune moments in the growth of the work. Also, the more channels one uses, the more work is involved.
This greatly increases the time needed to make a work, and compounds the accessibility difficulty.

And so we are taken back to the situation where only relatively wealthy centres (mostly institutions) can provide the studio facilities required to make the work, thus taking away the (relatively recently acquired) freedom of low cost individual access via the now powerful laptop.
It also presages the prospect of institutions again exerting inordinate influence on the nature and direction of the evolution of sonic art through their monopoly of the facilities required to make it.
This, combined with their perennial preoccupation with judgement and assessment, a characteristic which tends to encourage various aesthetic modes and fashions deemed to be acceptable, or not, cannot be a healthy development.