

Auntie's

P L A Y R O O M



The Way Things Are

Neve desk, plentiful outboard effects systems, BBC Micro-based syncing system, Studer 16-track tape machine, analogue and digital synths from Elka, ARP and Yamaha

Despite a sky-high reputation and more media coverage than the rest of Britain's music studios put together, the BBC Radiophonic Workshop is a place few people really know much about. We take a trip to Maida Vale and sort fact from recent fiction.

Words Simon Trask **Pictures** Matthew Vosburgh

The BBC Radiophonic Workshop has received more than a fair amount of journalistic attention over the years, and much of this has conformed to, and therefore reinforced, popular perceptions of what the Workshop is. It's a typically

British institution – an institution within an institution, if you like. And institutions are generally perceived as static, unchanging – that's why they're institutions. Mention the two words 'Radiophonic Workshop' to anyone over the age of ten, and the chances are they'll respond with a particular set of images: 'Doctor Who' (always 'Doctor Who'), weird spacy sounds, exotic custom-made instruments and ancient synthesisers, and a collection of suitably eccentric composers. On my recent visit to the Workshop I didn't encounter anyone who could be classed as eccentric, and the picture turned out to be rather different from popular preconceptions. And before we go any further, let's get one thing into perspective: 'Doctor Who', which has been described as 'both a milestone and a millstone' for the Workshop, accounts for six projects a year out of 200 that the small group of composers takes on. The Workshop is theoretically on call for any radio or television program the BBC makes – and that includes local radio and the World Service.

It's precisely because the Radiophonic Workshop is the subject of so many preconceptions that I harboured a desire to go there to find out what it was really like. In particular, I wanted to discover how the Workshop was responding to the new music technology. On the tube on the way over, a whole host of questions buzzed through the journalistic head. What equipment were the composers using? How were they using it? What were their views on subjects such as sequencing and sampling? And what did they see as the strengths and weaknesses of particular pieces of equipment? A weighty list, to be sure, but one to which the staff responded with rare enthusiasm and generosity – for which I owe a considerable debt. You can usually tell how well a piece of reporting has gone by the number of sets of batteries the Walkman has got through in the process, and thanks to the openness of the Workshop's composers, I think I can safely go out and buy shares in Duracell now.

History first. Imagine it's the late 1950s. The advent of magnetic tape has furthered the development of *musique concrète* in Paris and purely electronic music in Cologne. Back in London, producers and studio engineers at the BBC are inspired by what they hear of these two techniques, and are ideally positioned to pursue these developments themselves. The new music appeals to 'Auntie' for its potential applications in the developing field of radio drama and comedy, rather than as an art-form.

The setting up in 1958 of an experimental workshop for the production of what came to be termed 'radiophonic' sound and music is the inevitable end result of this, and two of its founding members, Desmond Briscoe and Daphne Oram, are among the early experimenters. The official press release marking the opening of the Radiophonic Workshop draws attention to the dual approaches to be adopted – the manipulation of sound using tape and the generation of sounds by electronic circuits, the latter referring to simple oscillators and white noise generators.

That, roughly, is how the studio complex Bob Moog once described as 'a source of inspiration and experience', came into being.

The Workshop's early work centred around providing imaginative sound effects for 'obscure radio dramas', to quote the Workshop's current longest-serving composer, Dick Mills, and comedy programmes like the infamous 'Goon Show'. The next step was the provision of

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Elizabeth Parker (in monitor screen) *“We're often restricted by what people think they want... Channel 4 are very adventurous in the stuff they use, but the BBC are terribly frightened of doing anything way out.”*

'mood music' for radio drama – the sort of thing producers could use to reflect the state of mind of characters.

But it wasn't until its members broke into working for television that the Radiophonic Workshop really began to spread its wings. Even then, the first requirements of it were to provide effects for science fiction

programmes like 'Quatermass'. Educational and art programmes followed, then jingles for local radio, then signature tunes and, finally, incidental music for just about any form of TV programme you care to think of.

This variety of application continues today, so the composers who work daily at the Workshop's studios have to stay on



Peter Howell *“We don't make a habit of throwing things out when something new comes along. Only when equipment can no longer be integrated into the studio as we're using it does it start to become redundant.”*

their toes to survive. Their work schedules are heavy, the Workshop's order books full to overflowing. And as the Workshop has become increasingly ambitious in the scope of the work it has tackled, so the 'other-worldly' sound effects for which it's best known have become a relatively small (though still important) part of its work, while major TV series such as 'The Living Planet' and 'The Body in Question' have benefitted greatly from music provided by the unit's composers.

I've mentioned that the Radiophonic Workshop is a typically British institution but what you can't ignore is the enormously high esteem in which its work is held by broadcasters, engineers, musicians and composers all over the world. Many overseas broadcasting organisations regard it as a model to be learned from, and Brian Hodgson and Jonathan Gibbs (Workshop staffers both) gleefully recount the tale of one chief engineer 'from a broadcasting organisation which shall remain nameless' who came to them with plans for a studio along the lines of the Workshop; by the time he left, head hung low, he was prepared to go back to the drawing board and start again from scratch.

The Workshop staff is surprisingly small in number. There are 11 souls in total, six of whom are composers.

Head of the Workshop is Brian Hodgson, who first joined as a composer in 1962, left for five years (1972-1977) to run his own commercial electronic music studio (an experience that proved invaluable), became Workshop Organiser in 1977, and Head (taking over from Desmond Briscoe, who'd held the post since the unit's inception) in 1983. The post of Workshop Organiser (I'll explain the job later) is held by Jonathan Gibbs, who joined in 1981 and started off as a composer before taking up his current post. The Workshop also has its own Engineering department, staffed by long-timers Ray White and Ray Riley. They take on anything from rewiring a studio to servicing the Fairlight, a diversity of tasks which they revel in. That leaves the secretary (she's called Penny) and the composers: Dick Mills, Malcolm Clarke, Roger Limb, Peter Howell and Elizabeth Parker. For those that have been doing their arithmetic while we've been going along, I should say there is one other composer – but thereby hangs a tale which will unfold presently.

In case you're wondering if the Radiophonic Workshop is some sort of musical TARDIS (sorry, everybody) travelling the airwaves, it does actually have a location: a long, low-lying building which was once a Roller Skating Palace and Club. What was once the skating rink is now a huge studio for the BBC Symphony Orchestra and the Radio Orchestra who, in addition to performing conventional musical tasks, also provide the Workshop with a ready source of 'conventional' musicians and musical instruments as and when required. Running down one side of the building is what's reputed to be the longest corridor in the BBC. It has a hushed calm and an almost reverent atmosphere, and it's here that the Workshop is to be found, with a number of small studios leading off it at either side.

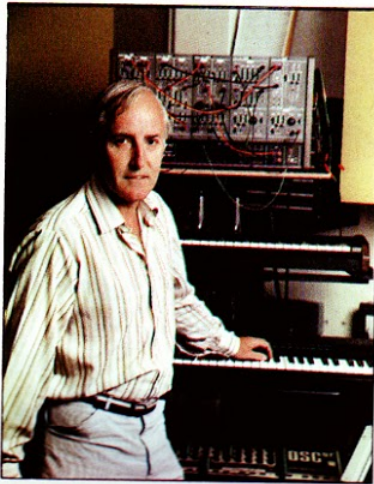
Each composer has their own studio, an arrangement that allows them to work with their own personalised equipment setups, to come and go as they please (each

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composer is left to work in the way that best suits them), and gives them that most precious of musical commodities – silence.

But the life of a Workshop composer isn't an easy one. Their work is usually done at the final stage of a production which means there's little leeway – less than that if, as often happens, the production is running well behind schedule in the first place. Hence musical talent is almost taken for granted when it comes to fulfilling the rôle of composer. Or as Jonathan Gibbs put it, 'If you can't write then you don't even bother to look in the front door'. Fair enough. The creativity and ingenuity of the composers is constantly being put to the test; there's no time here to wait around for divine inspiration.

But equally important is sheer stamina. For a Workshop composer it's not so much a matter of working through the night to meet deadlines; you have to be able to work day in, day out for years and years on end. Jonathan Gibbs again: 'What the Workshop needs are people who can be consistently good, and yet not burn out after two years'. All of which makes more



Dick Mills "With all due respect to the latest equipment, I find it's quicker to do my things the old-fashioned way."

remarkable the number of years the composers have been at it: Dick Mills has been at the Workshop for all but the first six months of its lifespan, Malcolm Clarke joined in 1969, Roger Limb in '72, Peter Howell in '74 and Elizabeth Parker in 1978. Which only goes to show that the Workshop is more a way of life than a means of paying the mortgage. Then again, perhaps Workshop composers exist on a different time-scale to most other people. Elizabeth Parker: 'I've only been doing this seven years, which really isn't all that long. And when you consider how far the Workshop has come in that time, there are an awful lot of things for me to find out about, and which I do intend to find out about. At the same time you've got to keep all the work going. And until I get a programme which requires a certain approach, it's hard to do any serious investigation in that direction.' This

combination of a keen sense of discovery and a pragmatic outlook is something all the composers seem to have in common. Personally, I reckon it's a mark of their professionalism.

Logistically, an important element of the Workshop's code of practice has always been that composers have been their own operators; operational techniques have always been regarded as part of the creative process. But what the increasing complexity of new equipment has eventually made necessary is the employment of someone to investigate the equipment marketplace, familiarise the composers with new equipment bought by the Workshop, and trace any hiccups inherent in new instruments and head them off before they become serious problems. This, essentially, is what the Organiser does, so Jonathan Gibbs is a busy man.

Brian Hodgson: 'Because the composers can't afford to spend a month getting to know a new piece of equipment, Jonathan is the one who spends the month. Then he's able to give induction courses for the composers so that they can pick up a machine very fast – they get the information which is relevant to them'.

But what equipment does the Workshop have? What marvels of new technology grace its studios? Well, as the accompanying extract from the Beeb's equipment files shows, there's an interesting mix of the (comparatively) old and the new, which reflects a refreshingly catholic attitude towards equipment that all the composers seem to share. First, the DX7 has proved indispensable: there's one in every studio. Moving further away from what non-BBC-financed musicians can afford, we find the Fairlight 'wanders' from studio to studio, though Peter Howell appears to have made most use of it. The PPG plus Waveterm should theoretically have similar status, but as Elizabeth Parker is very keen on it and nobody else particularly wants to touch it (there've been complaints of operational hassles and reliability problems), she's retained it and built up a large library of sampled and synthesised sounds for it. But the old VCS3 – first used by the Workshop in 1968 – hasn't been forgotten; quite apart from its historical significance, it's still valued for its white noise generator and ring modulation.

Effects include Quantec and Lexicon digital reverbs together with a collection of plate, gold foil and spring reverbs, Roland flangers and phasers, Eventide and MXR harmonisers, DeltaLab delays, Drawmer and Aphex compressor/limiters, and Roland and EMS vocoders. Desks are almost exclusively Soundcraft (there's one Neve 8066) while the preferred multitrack is Studer (a mix of eight- and 16-track). Each studio also has quarter-inch stereo and twin-track machines (Studer and Revox).

Peter Howell: 'We don't actually make a habit of throwing things out when something new comes along. What we're talking about is a gradual accrual of all sorts of different techniques and equipment. Only when something is no longer capable of being integrated into the studio as we're using it does it actually start to become redundant.'

Thus Elizabeth Parker on the Godwin String synth that lurks next to her PPG: 'I don't know how old it is, but it's got its own

sound. It has a sound that no other new synthesiser has got, and if you use it carefully and in moderation at the right points, then it adds something, without a doubt. And I still use it. Even now, with all these sampled string sounds, it has a very individual sound which can be very beautiful.'

And as for elder statesman Dick Mills, he finds himself spending more time manipulating tape loops than standing over MIDI synths. 'With all due respect to the latest equipment, I find that for the sort of work I do it's probably still quicker to do it the old-fashioned way, if you like, with tape manipulation or tape copying - or multitracking, which brings me into the 20th Century.'

'Personally I think that things with keyboards attached to the front lend themselves much more readily to keyboard performers...I'm really looking for a sound-generating synthesiser. I don't mind the keyboard being there, because it's easy to hit keys. But I don't get too brainwashed by the black and white notes; they mean nothing to me when I'm using the keyboard to trigger sounds off.'

Of all the Workshop's composers, none believes in the ideal of the 'all-singing, all-dancing' box which allows you to sample, synthesise, and make the tea all at the same time. Diversity was the key word back in the 60s, and it remains so today. Thus not even the Fairlight is ever used exclusively for a piece. Peter Howell again: 'I've never done anything that's been entirely on the Fairlight. People always think that the Fairlight's capable of doing lots of things all on its own, but I'm not particularly interested in just one piece of equipment answering all my questions all at once. So I don't restrict myself to one particular thing.'

Still, an upgrade to the new Series III Fairlight will take place as soon as it becomes available, because as Brian Hodgson says, 'the Workshop does feel that it has to keep on that cutting edge of technology.'

And the Workshop's composers have plenty of admiration for the CMI, choosing it in preference to the Synclavier because it allowed greater control over a sound once it had been recorded. As Jonathan Gibbs put it, 'the sample should have an integrity of its own.'

Peter Howell has some 35 disks of Fairlight sounds, 90% of which are his own samples or sounds created within the CMI's synth section. The only problem he has is having to think of a name that will identify a sound without placing any preconceptions on it. But then again, that's a dilemma common to all the Workshop's composers, not to mention just about everybody who's ever been involved in electronic sound creation. He's enthusiastic about the prospect of getting a Series III, too...

'Obviously the long sample time they're proposing will make it a revolutionary instrument. The Fairlight component in the studio will become a studio in itself, which will have very interesting implications as far as tape machines are concerned - especially for us, as we do a lot of work with pieces of music that last no longer than 50 seconds. So you're talking about the possibility of realising an entire signature tune, say, in a digital recording form as a voice, which is very exciting.'

But when Workshop composers want to make use of acoustic sounds, they use actual instruments rather than samples of those instruments, maintaining that the difference is always noticeable, both in terms of the sound and the actual

performance. You get the feeling that the chance to work with outside musicians is another, equally significant, reason, as most of the composers' work is done in splendid isolation, and it must get lonely after a time.

Then again, working on your own is a lot easier now than it was five years ago, let alone back in the 50s when the Workshop took its first, uncertain steps on the road to technological enlightenment. The Fairlight, PPG and Emulator all have onboard



sequencing facilities that can also drive MIDI equipment (the Workshop Fairlight has the MIDI card we looked at in E&MM June '85, though it's been giving problems), but it's the Yamaha QX1 which is attracting the most attention at the moment, mainly because of its inherent flexibility.

Peter Howell: 'I can see this is the sort of thing that could have a radical effect on the way you actually write. But what I'd like to think is that you don't necessarily change what your original intentions are, it's just that you're able to realise them in a way that you can look at them and change them and make decisions about them very much faster than you would otherwise have done.' It's the ability to be able to improvise onto the sequencer, then go back over the improvisation and work on it in very fine detail that particularly attracts Howell to the QX1 - it gives a new sort of freedom he hasn't encountered elsewhere, so it isn't surprising the Beeb has another one on order.

But there are hassles with the big Yamaha, not least of which are its limited information display facilities, which make working on chord editing a problem, and cross-referencing between tracks a real headache. Howell: 'With all pieces of equipment, you've got to get to know their deficiencies as well as their advantages. You've got to know the deficiencies first so that you know it's completely pointless wasting your time going up that avenue.'

For TV commissions, the composers work from a video of the programme which has the time-code 'burnt into' it. Increasingly, they're taking advantage of a syncing system that's been developed in-house by Jonathan Gibbs and which, for the moment at least, is intended only for Workshop use. Called Syncwriter, it's an all-purpose time-code system, built around the BBC Micro 'more for convenience than any other reason', as the Syncwriter software effectively rewrites the computer's operating system. A further unit plugs into the computer's 1MHz bus and handles MIDI, SMPTE and click/trigger processing. Non-MIDI clocks can be set to any of the standard clock rates, including the Fairlight's 384ppqn (for MCL and Page R), while four different clock rates can be sent out simultaneously from independent sockets on the rear of the unit. The result is a powerful yet easy-to-use system that the

composers have taken to very quickly. Elizabeth Parker: 'It's absolutely superb. When you're doing tight television picture work, Syncwriter has such a major advantage over working purely with tape that there's just no comparison. And it's much more sophisticated than the previous time-code reader and generator that was devised at the Workshop.'

Not surprisingly, the challenge of working with new music technology is seen by the Workshop's composers as a particularly stimulating aspect of their job. For Peter Howell, it meant he stayed with the Workshop when he might otherwise have looked elsewhere for a means to realise his music, though he remains unconvinced by those who see technology as more than simply a means to an end.

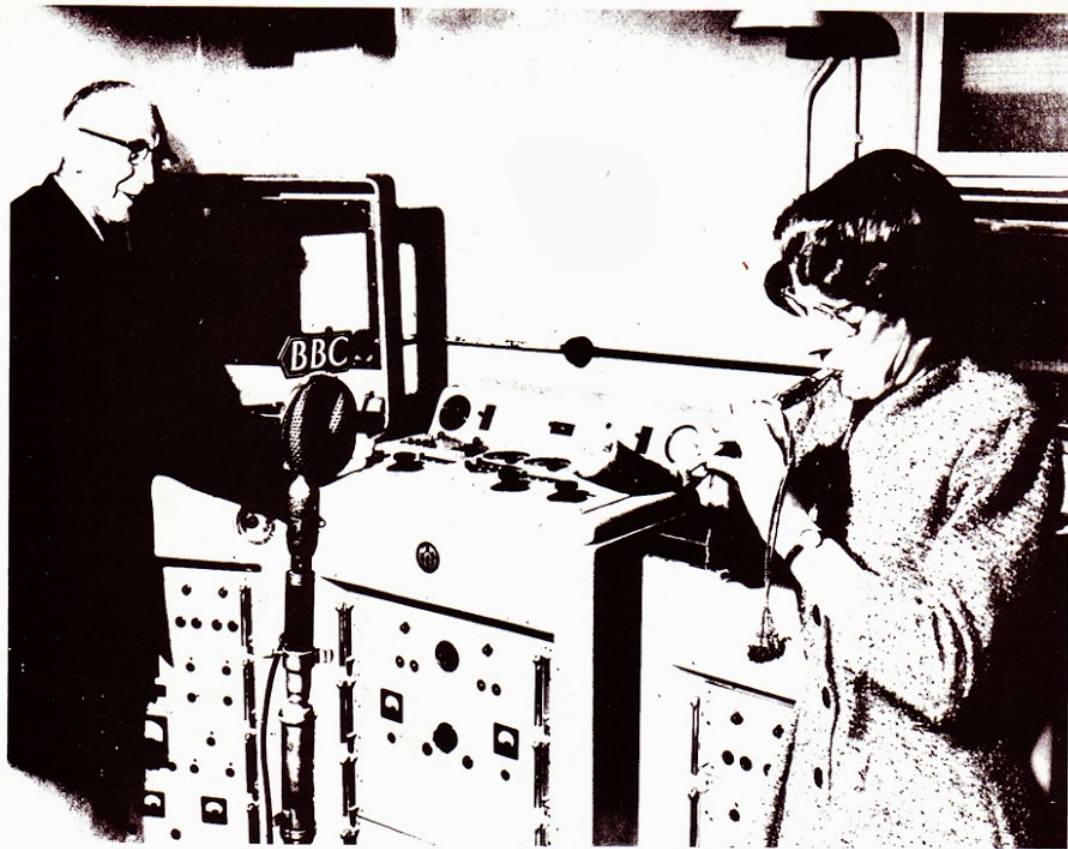
'I like to think that the originality of ideas doesn't rely on the equipment you use. It relies on what you're inspired to do when you see a picture, a graphic sequence, or when you get a particular job to do. And you realise those ideas through as helpful a range of equipment as you can lay your hands on. So I'm obviously interested in the fact that the equipment is developing, and it would be nice to go into each job with a slightly different array of equipment that led you into different areas. But I still think that the original idea is a completely esoteric one - it's not something that's linked to buttons.'

Elizabeth Parker: 'I find all the new technology incredibly stimulating and very very exciting. I don't like to be in a room with equipment that I can't use, so I'm determined to get to grips with whatever I can. I don't like to have a piece of equipment sitting around doing nothing. The potential of all this equipment is fantastic, but then again, I do still work with tape loops sometimes.'

'I think that if you can introduce as many different elements into your work as possible, then you're never going to sound the same as anyone else. There's a danger with all these DX7s around that everyone could sound like DX7s. The more variation you can instil into your work, with whatever means (I use my voice a lot, along with tape loops and the modular System 100M), the better. Really I just use whatever I can. I like any piece of equipment which doesn't say "you've got to do this or else". One strength of Jonathan's Syncwriter system is that it's very open-ended; you can do exactly what you want, and that's why I like it. I like to start from the principle that everything can be used in as many ways as possible. That way, you don't end up going down the same paths again and again, or end up sounding like anyone else.'

Malcolm Clarke adds another perspective. 'What is happening in the technical world is both exciting and frightening, because technology is developing step by step in a scientific way, not in an artistic way. As soon as one problem has been posed in technical terms, it is almost as quickly solved. Technical progress is shooting ahead in a straight line whereas art doesn't work like that; it works in a nebulous, airy-fairy way. As artists, we don't think in straight lines; we think laterally and backwards and forwards - all over the place, in fact. With the pace modern technology is going at, there is a very real danger that we can't feel the framework within which we are working any more, because it is forever moving away from us.'

Perhaps, but whereas the current team's predecessors faced technological dangers alone, there are now a whole host of commercial studios that have equipped themselves to tackle technology head on - >



The Way Things Were

Daphne Oram plays a mijwiz while Richard Bird records on a Motosacoche tape machine, one of the BBC's first; it took 15 seconds to get up to speed

▷ and ensure that in the long term, music does benefit. No longer is the BBC Radiophonic Workshop at the very forefront of technological development, no longer is its array of musical equipment unique in the UK. Mind you, things are a lot better now than they were in the 70s, when the technology available to the unit actually fell behind what commercial studios could gain access to, and morale among the resident composers dropped to an all-time low.

Brian Hodgson feels the removal of the element of experimentation – or the decrease in its significance, anyway – is probably a good thing.

'The composers are no longer the experimental wizards. There isn't time for the old-style experimentalism and there isn't time for self-indulgence. When there wasn't the equipment, you had to work that way, but now that the equipment is here, there's no excuse for doing anything the hard way.'

In some ways, the Workshop's detachment from the commercial field has been a blessing. The Beeb's team can safely sit back and wait before making a commitment to, say, digital recording, whereas pressure from clients might force a commercial studio owner to take a decision prematurely.

On the other hand, the Workshop's previous work has brought it such acclaim and exerted such an influence over the field of incidental music, the unit's composers can find themselves working under artistic restraints a commercial setup can avoid.

Elizabeth Parker: 'Unfortunately – and

you have to remember that we are a service department – we're often restricted by what people think they want. We can't just go ahead and do what we want. We're working to a commission, and quite often people, and especially the BBC, are quite conservative in their expectations and their requirements. Channel 4 are really very adventurous in the stuff they use, while the BBC are terribly frightened of doing anything way out. So if you do something that is way out, it's quite possible they may not like it. You have to fulfil the brief. You can steer them halfway towards something but you do have to be careful. There's no point in getting your work constantly turned down because it's too way out – we're not here to do that.'

'The sort of modern sound you get on records these days isn't something we're called upon to produce very often – which is why I haven't gone any further than I have in that field, I suppose. The important thing is to be aware of what's going on outside so that you could produce it if you needed to. It's also important that we don't become too inward-looking or incestuous – that would be terribly bad.'

Well, one element that might help to kill any incestuousness before it gets a chance to take hold is the appointment of the mysterious extra composer I mentioned earlier on. Because for the first time in its history, the Radiophonic Workshop has appointed an outsider, one Richard Attree, who begins work in October. The traditional method of recruitment into the Workshop is via 'attachment', a system whereby BBC employees are seconded to

another department, usually for a three-month period. All the current composers apart from Dick Mills came via this method, and were previously studio managers within the BBC. However, Brian Hodgson has decided to break with tradition in recognition of the high quality of potential applicants outside Auntie Beeb, and advertised externally as well as internally for a new composer to help cope with the Workshop's increasing workload.

Luckily, it seems likely the present composers will accept the arrival of an outsider with outstretched arms. Elizabeth Parker again: 'Really the time has come when we should be able to appoint people from outside, and I think it's very healthy. Richard's got his own music which I think is very different to what any of us do here. Plus he's a very keen advocate of the digital approach, which I think will help pull us forward. What you want with anybody new is new ideas and the impetus to push the place forward, or at least to stir it up a bit – and I should imagine Richard will do that, which can only be a good thing.'

'In the end you're still creating music. Providing the music works, the way you get to it is important. If the music doesn't work, the way in which it's achieved is useless – there's no point doing it.' ■

More from 'The BBC Radiophonic Workshop: The First 25 Years', a wonderfully informative book published by the BBC itself and costing £7.75 from booksellers. There's also a video entitled 'Opus 10259: Five Days at the Radiophonic Workshop', just produced by the Beeb and, with luck, available for hire by the time you read this.