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N his conclusion to The Origin of Species, Charles Darwin wrote that natural selection "works solely by and for the good of each being" so that in Man "all corporeal and mental endowments will tend to progress towards perfection.

However, as Patrick Parrinder points out in Science Fiction: A Critical Guide (Longmann, 1979), the noble optimism of these words conceals the fact that natural selection is based on competitive struggle and the "elimination of the unfit"

(page 69).

The image of humanity engaged in an evolutionary struggle in space, competing against other species for survival is a key image of the twelfth season of Doctor Who. Its mark can be found on all of the stories, but it is played out at its most personal level in THE SONTARAN EXPERI-MENT.

In this story the alien Sontaran, Field Major Styre, subjects human colonists (among the last remnants of mankind) to a series of exacting tests to determine the strengths and weaknesses of humans. Styre, as a clone, is representative of his entire race. And he assumes, perhaps incorrectly, that the sample of humans he has captured is representative of theirs.

However faulty the Sontaran's scientific method may be, what is presented is a personalised conflict between the two species. In a way it is a test of mankind's right to survive. By the conclusion we know (from the survival of Erak and Krans, and from the self-sacrifice of Vural) that mankind is up to the mark.

So THE SONTARAN EXPERIMENT shares the same-world view as other stories in the twelfth season. It is the same world-view that Patrick Parrinder finds in the work of Wells, Haldane, Bernal and their successors. It is a worldview that has as its object the entity Man, that is (as Parrinder notes) "Man considered not as a divinely-created being or a paragon of reason, but as a competing biological species" (page 79).

The season's evolutionary theme is made explicit in THE ARK IN SPACE (serial 4C — see IN VISION issue 2) by the Doctor's highly romanticised vision of humanity's evolution: "Homo sapiens - what an inventive invincible species. It's only a few million years since they crawled up out of the mud and learned to walk, puny defenseless bipeds. They've survived flood, famine and plague. They've survived cosmic wars and holocausts. And now here they are, out among the stars, waiting the begin a new life, ready to outsit eternity. They're indomitable . . . indomitable."

Despite the romanticism, this speech underlines the image of mankind as a species, and as

only one of a number of other species, competing for survival. This point was rarely apparent in the alien encounters of the Pertwee years.

If there are winners in this competitive scheme of things, there are also losers. In THE ARK IN SPACE it is the Wirrn who have been ousted from their breeding grounds in Andromeda by human colonists such as those we meet in THE SONTARAN EXPERIMENT. But for a story focussing on the consequences of losing the evolutionary conflict we must look to REVENGE OF THE CYBERMEN (serial 4D, see IN•VISION issue 5). "We are destined to be rulers of all the cosmos," asserts the Cyberleader. "Cybermen can survive more efficiently than animal organisms — that is why we will rule the galaxy

The Doctor perceives the hollowness of the Cyberleader's claims. The Cybermen have clearly failed to make the grade: "You're just a pathetic bunch of tin soldiers skulking about the

galaxy in an ancient space ship.

Also to be found skulking about the galaxy but in an ancient asteroid — are the Vogans. Their fate is comparable to that of the Cybermen. To remain "safe from the genocidal threat of the Cybermen" they have had to abandon the evolutionary race to determine which species will dominate the galaxy. They now lead what Vorus describes as a "cowering, furtive, underworld

OTH the Vogans and the Cybermen are the casualties of natural selection. The Cyber-wars proved, as the Doctor himself points out, "a glorious triumph — for human ingenuity." The Vogans had the means of destroying the Cybermen — gold — but it was the humans who put that means to use, by creating the glitter gun. Perhaps a comparison is being drawn here between Vogans and the Chinese, who possessed gunpowder before the western world, but used it for fireworks rather than a weapon of war.

But evolution has a final trick to play on the 'victors'. As Parrinder points out, "since there is no finality in the evolutionary process - except that of extinction - he (mankind) cannot look to the stabilisation or conservation of any features of his present civilisation as a long term goal. Man's aim accordingly must be to transcend his own present cultural and eventually biological identity" (page 72).

However, the concern of the species in the twelfth season is often to try to half the evolutionary process, to hold their present form and culture in stasis. On board the Ark the humans are obsessed with maintaining a pure bloodstock. Deviation is seen as regressive.

But the story that focusses on the destabilising mutational effects of natural selection is, of course, GENESIS OF THE DALEKS (serial 4E, see IN VISION issue 4). Security Commander Nyder proclaims: "We must keep the Kaled race pure", but this is already an impossibility. The race has already begun to adapt to the new environment created by the war with the Thals. The chemical weapons used during the first century of the war have already triggered a rapid mutation, contracting the usually massive evolutionary time scale. Davros's experiments have shortened it still further, and have allowed the Kaleds a glimpse of their future selves - cold intelligences that require machines for movement, and indeed any actions that a contemporary Kaled can perorm. These are the Kaleds' "final mutational form", as the scientist Ronson describes them, "the ultimate creature."

HE conflicts between humanity and the alien in Doctor Who are not usually to preserve the human race, but to preserve a particular form of the human race, to halt evolution at a particular point. At the level of the individual, characters are often exhorted to throw off some process of mental or physical absorption or transformation, to "remember the man you once were", as the Doctor tells the Wirrn Noah. In short, they try to maintain physical and mental identity in stasis. Deviations from this are regarded as monstrous in form and nature.

Parrinder notes that in science fiction "the vision of evolution beyond Man is usually presented by some grotesque marriage of biology and cybernetics". This brings the Daleks and Cybermen to mind, and underlines an interesting point: that the aliens in Doctor Who are not only competing species, but are competing visions of what the human species may one day become.

In the case of the Cybermen, this was emphasized in THE TENTH PLANET (serial DD) where their home world was shown as Earth's twin planet. In the case of the Daleks, this is apparent both in GENESIS OF THE DALEKS, with its allusions to the world wars of the twentieth century, and in the short story by Terry Nation in the Radio Times Doctor Who tenth anniversary special publication (1973) entitled We Are The Daleks. In a similar way, the K-1 robot in ROBOT (serial 4A, see IN VISION issue 1) stands as a physical representation of the mental change the Scientific Reform Society wants to bring about, to condition people - to program them as if they were robots.

The ever-evolving, ever-changing nature of humanity and its environment is neatly illustrated in THE SONTARAN EXPERIMENT. We see that the Earth has physically changed beyond all recognition, and we find human culture has also changed. The colonists, for example, all speak with 'South African' accents, which writers Bob Baker and Dave Martin had theorised would be what all Earth languages would eventually evolve

The Time Lord in GENESIS OF THE DALEKS tells the Doctor that the Time Lords can "foresee a time when they (the Daleks) will have destroyed all other life forms and become the dominant species.'

In Doctor Who the war of all against all is not just between humanity and other species: it is between humanity as it now stands (represented by Harry and Sarah), and the species it might become —a product of evolution's experiment. □



AIM

THE AIMS of the production team here were limited—to produce two episodes of passable Doctor Who with the minimum of time, materials and budget. Economy was of the essence. Given the nature of the restraints, nothing new or original was attempted, except that which could be said to arise as a side effect of the pared-down scenario.

LOCATION

DARTMOOR PRESENTED director Rodney Bennett with a landscape possessed of genuine bleakness and beauty that could potentially heighten suspense. Unlike the more familiar quarry, where careful camerawork might be needed to avoid trees and buildings entering a shot, the location allowed more freedom.

However the natural landscape also lacks the kind of photogenic possibilities taken for granted when filming in, say, the grounds of a country house. As a new choice to represent a planetscape, it did not benefit from the **Doctor Who** audience's association of a quarry with a far-flung world. Yet while being on Earth, the director cannot rely on the cosy juxtaposition of alien machines and everyday scenery; this is the future.

Alternative approaches could have included a rubble-strewn wasteland (as in THE DAY OF THE DALEKS, serial KKK)) to suggest ruin and destruction, or the sudden discovery of present-day landmarks as fallen relics among re-established rural life (as in THE TRIAL OF A TIMELORD part one, serial 7A).

The direction never really follows up whether the pits and caves we see are in fact remnants of the underground. But within the limitations of the production, the establishing of the post-holocaust theme had to be left to Tom Baker's "Trafalgar Square should be over that way" and his comment on venturing into the passageway: "definitely not the Central Line" (that is, a sewer).

A project report written by Allan Toombs for the 'Galse

ASSESSR SURV

On balance, the location's novelty balanced its drawbacks. Rodney Bennett's direction produces some very suspenseful opening shots, with startling camera angles and sharp editing. Yet there seems to be little guiding touch throughout the production, and ultimately it's not very inspiring.

SCRIPTING

THE SCRIPT makes sense as a basic plotline, yet there are a number of inconsistencies even before we begin fine analysis. One dubious assumption made by Bob Baker and Dave Martin is that of an Earth sterilised by solar flares, which while leaving the atmosphere intact has produced geographical changes violent enough to erase all evidence of larger lifeforms. Luckily, the site of Central London is still a landmass, and our heroes do not reappear underwater.

Theoretically, the heather could have survived the sun's onslaught. Yet there is a discrepancy in the dead branches that litter the ground and which aid the Doctor on a number of occasions: there are no trees in sight.

THE SONTARANS

GIVEN THAT the Earth is now of strategic importance in the Rutan war, and that it is now an empty, undefended planet, why do the Sontarans fritter away their opportunities on reconnaissance, and with Galsec on the doorstep? We are told that "Sontarans are very methodical", but Styre's verbal sparring with his Marshal reveals more, bitter power struggles within the High Command. Bureaucracy is fostered, allowing Styre to indulge his passion for "scientific experiment".

This works well enough in the context of this story, but it runs against what we know of the Sontaran character. They dominate by force of superior technology or strength. They regard all others as inferior species. They battle against worthy opponents as the only natural activity. This does not suggest a military force that would investigate more thoroughly than a quick surface scan, planting a self-erecting flag and going out all guns blazing — especially when presented with an open door such as the vacant Earth.

"You're just the same," Sarah tells Styre, believing him to be Linx. In fact, no two Sontarans could be more different. Physically, Linx was three-fingered and had a swarthy complexion. Styre on the other hand has five, and is pasty-faced. It is a measure of the success of the first Sontaran appearance that details such as the number of fingers were quickly incorporated into the **Doctor Who** mythos to the extent that Styre's 'deformity' was spotted by eagle-eyed fans.

Psychologically, Sontarans are not all "methodical" and ready to kill someone, as the Doctor asserts. Linx showed great ingenuity and initiative when marooned in a primitive culture, always remaining indifferent to whether inferior beings lived or died. Styre, by comparison, is a plodder, prolonging a series of "experiments" with less than scientific detachment.

One aspect of Sontaran culture never enlarged upon elsewhere is the warrior code of honour, the ritual of unarmed combat by which the Doctor tricks Styre into exhaustion. Perhaps these old values are becoming submerged in bureaucratic militarism. If so, then Styre's ready acceptance of the challenge



Journal of Alien Studies'

highlights his divergence from mainstream Sontaran culture, with its emphasis on efficient warfare. The defining spirit of the Sontaran race is already

The defining spirit of the Sontaran race is already established as ruthless militarism. So they seem strangely attired in the mantle of mad scientist thrust upon them by Holmes, Baker and Martin. One imagines cadet-sergeants shaking their heads at the young Styre pulling the wings off a fly. "Why doesn't he crush it in one co-ordinated manoeuvre?" they ask.

Such differences are surprising, with Kevin Lindsay playing both roles in quick succession. This underscores the way direction and script can affect an actor's performance.

The common factors in both appearances are the Sontaran traits of egotism and domination. Both Sontarans underestimate the threat the Doctor poses until he reveals himself as superior to ordinary humans. It is interesting to speculate that the Sontaran pattern of single-pilot spacecraft and solo missions acts as an escape from the everyday reminders that they are members of a clone society.

Their domination is almost total. Whatever the situation, Styre dismisses the operation of any will but his own. The arrogance of honour, described by the Japanese as "keeping face", is absolute. And like a prison camp commandant, Styre is capable of any act of barbarism to satisfy the precise stipulations of the military council.

How he enjoys carrying out orders. To the end, he never cracks, but retreats tactfully to recharge his batteries. Styre's end is effectively achieved by special effects. Like Dracula who crumbles to dust at dawn, once their weeknesses are fatally exploited, Sontarans go out in a gloriously grisly fashion.

The Sontarans may have lost the battle for Earth, but had already consolidated a place in viewers' imaginations as 'a **Doctor Who** monster. Even after two solid but unremarkable stories, their return was inevitable.

OTHER CHARACTERS

THE LACK of heavy plotting and entertaining characters may have provided, like other forays into minimalism (for example THE EDGE OF DESTRUCTION, serial C), a chance to close in on

the regular cast, and in particular their reactions to pressure.

Tom Baker still seems to be fine-tuning his portrayal of the Doctor, post-regeneration. The Doctor wants to go straight back into danger to retrieve his sonic screwdriver: the scene underlines affection for the device his predecessor turned into a trademark, but also his otherworldy eccentricity. Pertwee's Doctor would have cut his losses and run, but Baker's unpredictable new Doctor might just consider recovering the talisman to be worth risking his life

Despite Elisabeth Sladen's reported reservations about her performance this story, she is always a pleasure to watch. What really hold her back are some poor lines and awful situations. No-one can respond well to hypnotic illusions of rubbery snakes and cloyingly advancing mud.

With no sets, the props could be counted on the fingers of a Sontaran's hand. Roger Murray-Leach's design talents, so much in evidence in THE ARK IN SPACE (serial 4C), are invisible here. The Sontaran ship had previously been established as spherical, and so logically other artefacts of Sontaran technology like the communications console echo this. Strangely, so does the ring of transmat globes. Otherwise, the gravity bar and the atronauts' rifles

are nothing special.

The Galsec astronauts have reason to be bitter:
"While you were sleeping, we built an empire," says
Vural, his accent pointing to the colonial resentment
felt towards the mother planet. Whatever qualities
are required of the astronauts, they seem to be
quickly reduced to the level of swagmen loafing in
the Outback.

A neglected theme here is the demoralisation of a group once its leader sells out: one of the least-convincing scenes is Krans and Erak's reaction to their betrayal, muted as it may be by the robot's tethers and the programme's restrictions on real language. The subplot is given a cruel twist by Styre's 'gravity bar', which again owes more to the Marquis de Sade than to science. Styre goads the weightlifters. But their refusal to allow Vural to be crushed to death underlines the human difference between them and the Sontaran. Humanity is repaid in full when Vural dies in saving the Doctor's life.

DESIGN

IN IAN MARTER'S novelisation, the TARDIS appears instead of the transmat. The two are in fact interchangeable: the story starts and ends using the transmat terminal as a source of light relief in the same, jokey way the TARDIS has been throughout the show's history.

On appearing, the Doctor arrives intact, Harry fades in and out and Sarah arrives legs in the air, showing off the awful yellow and red waterproofs she has picked out. The regular cast beam up just like an member of *Star Trek*, but the erratic transporter allows Tom Baker to flicker back and deliver a masterful one-liner of the kind that further cemented his claim to being the Doctor.

With no sets, the props could be counted on the fingers of Styre's hand. Roger Murray-Leach's design talents, so much in evidence in THE ARK IN



Field Major Styre — the beast with five fingers

SPACE (serial 4C), are invisible here. The Sontaran ship had previously been established as spherical, and so logically other artefacts of Sontaran technology like the communications console echo this. Strangely, so does the ring of transmat globes. Otherwise, the gravity bar and the atronauts' rifles are nothing special.

Which leaves us with that robot, a way of making Styre's job easier and keeping him hidden until half-way through. Glimpsed only briefly early on, it is moderately threatening, and later it pushes hapless atronauts to their deaths and glides smoothly, rather than trundling along in the heather.

But that is its weakness: it is a product of clever camera angles, and we can't see its undercarriage because that would reveal wheels and a dolly track. In comparison, the strength of the Daleks is that they appear tough and ruggedly mechanical even if directed badly. This contraption only looks fragile and rickety, and not unlike a Smash Martian. Its most chilling feature was the electronic bleeping.

PRODUCTION OBSERVATIONS

THE FIGHT sequence works well, but doesn't show the Doctor as any kind of Errol Flynn as he repeatedly parries Styre's savage but unskilful attacks. While influenced by Tom Baker's injury (see 'Production'), it also suggests the Doctor is dragging out the combat to exhaust Styre. Eccentric he may be, but foolhardy he is not. Venusian Aikido is not part of the new Doctor's repertoire, and a plot-spoiling ability is conveniently lost post-regeneration.

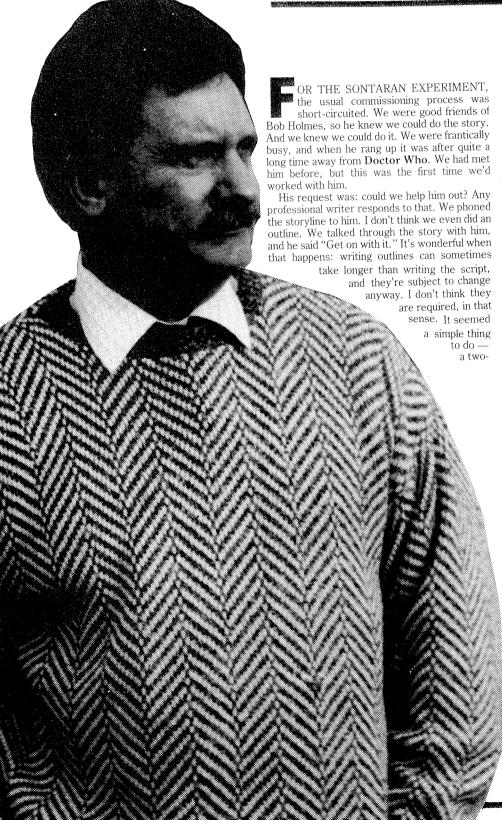
Dudley Simpson's music is suitably mysterious at the beginning, but the interesting faint electronic screeches later give way to a stock music feel, with stereotypical hooks to heighten dramatic scenes.

CONCLUSION

THE SONTARAN EXPERIMENT is very much a Pertwee tale. Many of Baker's more atypical lines are just right for his predecessor, and Sarah Jane's scatty behaviour might be explained as a relapse into scriptwriting for Jo. The regular cast work hard to overcome this, but the old team still seem to show through.

The story is something of a black sheep in the season. Aspects of the production's oppressive atmosphere and bleak landscape would later be enlarged on, but the whole still has no immediate parallels in the show's history. The EXPERIMENT was chillingly executed, but such a production was never deemed worth repeating.

Brief encounter



Bob Baker and Dave Martin wrote \$\int 1974\$. They were asked by script edite part Sontaran story, set entirely on logimmediately before and after it. **Bob** opportunities that the challenge offered

parter. And it was made to sound more interesting in being all on location, which we preferred. It was the way that we naturally thought. We thought in terms of **Sky** (HTV, 1972) in a particular location, a particular place. Confining the action to sets is always a bit of a pig. But it's part of being a professional writer. You can enjoy it sometimes. You can get cleverer at it.

When we went to see Bob, he said "We've got this story which goes to this point, they come down to Earth for two episodes, and then they go back up again to finish it off. And this will spread the cost of building the set over ten, instead of the budget for four."

The middle of the three stories was to be all on the new vidicams, so he said: "You can set it where you like." We chose Dartmoor because they could travel and stay and shoot it there keeping the cost down to a minimum and therefore invention up. We'd been there many times.

The idea was of this lovely landscape, like the *Planet of the Apes* film where the Statue of Liberty is sticking up out of the beach. We'd have loved to have had the top of Nelson sticking out through the grass, but you can't afford that. I mean, it's **Doctor Who!**

Research was always the fun thing to do about writing. Preparing it, seeing the picture. That kind of rough moorland is exactly how it would end up, we read, if there had been wars. Entropy—the seas get shallower and the hills flatten. It seemed all right to have it flat, barren, rather grassy. The little stoney crags looked good as well—is it a building, isn't it? There was that sort of feel about some of them. We didn't have truins in mind.

We'd read scientific journals about that time projecting what the Earth might be like in geological terms, and how other planets had evolved. I was interested from an early age: I did a film in 1956 called *Entropy* about how, eventually through change after change, matter would end up as the chemical element lead.

We had read the previous story as part of the brief, so we knew how we fitted in the THE ARK IN SPACE (serial 4C). Therefore there were references to it. We didn't particularly need or want to see the following story.

Bob Baker: "It seemed like it would be a fairly simple thing to do"

THE SONTARAN EXPERIMENT in pr Robert Holmes to provide a two-pation, and fitting in with the stories **Baker** told us of the problems and d...

The production team wanted to keep the story down within reasonable limits, not with hordes of baddies rushing about because it was a tight schedule and a two-parter. I think they were a week on Dartmoor. We were going to get out and see them, but couldn't get away — pressure of work, as always.

If you've gone over budget, the best way is to try and salvage something. And this was a rather clever way of doing it. Putting an extra bit of money into doing a week's filming was the cost of the circus going down to Dartmoor. That's less than the cost of the sets. We appreciated that and did our best.

Bob had given us the most incredibly deep briefing on the life and breeding systems and defecation systems of the Sontaran (I think he must have met one at some time). We just had to stop him, he was going on so much. It was very funny actually. He was under a bit of a strain, I felt, and this was manifest in the way he was talking about the Sontaran.

So he said: "There's the character, in you go

"Research is always the fun thing to do about writing"

and put the story for two episodes around that."As far as cramping our style goes, it was just a brief — just like the Doctor is already a character. We didn't feel we were being fobbed off with a Sontaran. A story is a story, and we did get our own little monster in it.

The script was printed, rushed down to the location, and shot. I think Bob changed three or four words — about the Sontaran. "He wouldn't do that. He wouldn't say that." "Oh all right then, change it Bob. It's your monster."

You couldn't ruffle Bob, because he was infinitely able to change without worrying. He could get uptight, but he'd say: "We'll sit down, work it

out, and do it." You knew that you were with someone who could apply himself totally to solving the problem in hand. He was always involved in what I call 'falling downstairs' jobs — like having rewrites in ARK IN SPACE and changing the concepts a bit. It's nothing new to me or Dave to have this crazy pressure. For us, it's normal. We were delivering scripts for *The Pretenders* in 1971 to be taken out on location. They'd go out on location and shoot run-bys before the script arrived.

We hardly saw Philip Hinchcliffe. He was was very interested and concerned, but had other problems to deal with too.

Producers are overseers really. They come in on a script conference when you've almost hammered out the thing to say "How are you getting on?" Only if there are really big problems will you have a meeting with the producer as well, because he's got so many other things on his mind. Sometimes things get kicked out, but there are very good reasons and usually they're not much to do with the script.

The invention in the writing was in how to make this kind of location stuff exciting, keeping up the usual **Doctor Who** pressure. Which is a big climax of some sort every five minutes, and something else every two and a half, and then a sort of edge every one.

Harry was actually quite difficult to write for, because he was so British and so upright. I think Lis Sladen was excellent, and we got some quite interesting situations arising from the three of them being caught and experimented upon, and the other prisoners as well. And the way, gradually, the Doctor worked out how to deal with

We hadn't seen Tom much more than ROBOT (serial 4A), but immediately liked him and his style. We felt that we could really write for this man. We'd got to feel what Jon Pertwee did. If you've got a good actor, and Tom Baker is a good actor, he'd put his style on and all you'd do is feed him — he uses it in his own inimitable style.

The first half seems to rumble along quite reasonably, but on the mystery element and the revelation: you're in Piccadilly or Trafalgar Square or whatever. And having fun with the location.

The story seems to intrigue fans quite a lot. In fact, it's just a piece of the pig television having to work properly and the workers in it having to solve problems thrown up by the mechanics of it. And the other problem of the gorgeing monster the money-eater. The thing that people never realise is that **Doctor Who** was a low-budget show. Yet everyone expected lavish sets, and they pretty well got it. But you had to be careful. I'd hate to have to produce it on the budget they had. I think they did a marvellous job.





OR the first time in ten years Doctor Who scheduled a story in two parts: THE SONTARAN EXPERIMENT. Effectively, the story together with THE ARK IN SPACE (serial 4C) was treated as a single six-part serial, with an option to extend it to ten episodes (by re-using the ARK sets in a later story) if economies were necessary. Philip Hinchcliffe: "Probably it was Bob Holmes's who came up with the notion to return to the Ark. The idea was that we would use it again. That was conceived as a way of containing the overall costs of that series. You don't do each one in isolation — you can see what you've got coming up and you have to balance the overall budget for the season. So you might give a lot more filming to one show, and another one you might keep in the studio."

Treating the stories as a single six-parter made financial sense. Although, as Philip Hinchcliffe observes: "Basically, if you could finish the show in the time allotted, then you weren't going to go over budget by a huge amount. OB (outside broadcast) and filming are very expensive. So THE SONTARAN EXPERIMENT would have been a very expensive show. We were all staying hotels on Dartmoor, and had to drive there and get fed."

However, it did not overcome the problem that Robert Holmes was too busy rewriting THE ARK IN SPACE and evaluating story outlines about space casinos and the Loch Ness Monster to spend time on his planned Sontaran story. So, on the recommendation of Terrance Dicks and Barry Letts, he called in the experienced Doctor Who writing team of Bob Baker and Dave Martin to write the script in just four days (see Brief Encounter). Baker and Martin were familiar writing to a Doctor Who commission after their brief to write THE THREE DOCTORS (serial RRR).

Their working brief was simple: six part stories usually had a week's filming allocated. The two part story would be shot entirely on location during that scheduled week, using the new lightweight outside broadcast

technology to enable the production team to record more material

Since the location work for a story is almost always shot first, THE SONTARAN EXPERIMENT would be made before the story which was to precede it — THE ARK IN SPACE. This had the additional benefit of leaving open the option to reuse some of the Ark sets in the story to be recorded next, still being written by Gerry Davis (see IN•VISION issue 5, REVENGE OF THE CYBERMEN).

But there was a reason other than cost for having a six-part production cycle yield two stories, as Philip Hinchcliffe explains: "Bob (Holmes) was fed up with doing six-parters, and I realised early on that six-parters were very difficult to sustain. You got a sag in the middle. So to do a two and a four was quite a good wheeze really. It broke the season up a bit.

"After that I introduced more four-parters. My notion was that then you got another opening night. The natural length of a story was probably about four episodes, and you were really pushing it after that. On the other hand it's more costly, so I had to argue the next season to have my budget put up. Because to do one extra story you have to build a whole new chunk of sets more. That was a budget battle that I won — so we had more four-parters."

ECAUSE of the restrictions imposed by shooting entirely on location, and by the budget, other production costs were to be kept to a minimum. Special costumes, elaborate makeup, complex visual effects, and even bookings for post-production editing and sound dubbing were all reduced. Since the writers had been warned that this was the case (for example, they wrote in only one 'active' Sontaran — the only other appearing in prerecorded inserts on a screen), the script was written to accommodate this

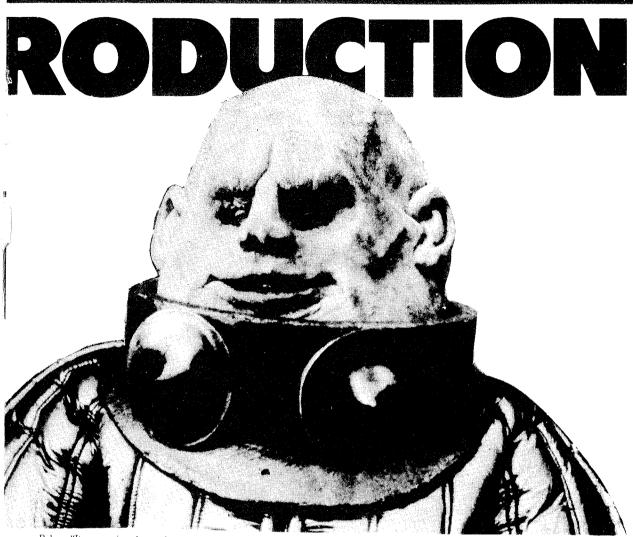
Recording the fight between the Doctor and Styre: note Terry Walsh doubling for Tom Baker, Stuart Fell for Kevin Lindsay

The only real casualty was Styre's robot, added by the writers as their own 'monster'. According to Bob Baker: "We wrote the monster in a certain way, and it came out in another way. Because it was on location, they couldn't work what we wanted. It was supposed to move almost at the speed of sound for very short distances, just whip across the landscape and be somewhere. Almost invisible, just arrive.

"But they found that difficult to set up in the time, and ended up with a kind of perambulator with things sticking out the top. Anyway, it only had a smallish part to play and, once in the context of the Sontaran who was rather bumbling, it all seemed to work out.

"The effect would have been pixelation. Or you can use ChromaKey with exterior video, but I don't think they'd tried it much by then. With pixelation, you'd stop and lock off, and then move the thing, and then move it again, stop and lock off, move and so on." A similar effect was used to move the Valeyard towards the Doctor in the location recording for THE TRIAL OF A TIMELORD episode 14 (serial 7C).

The basic framework of the story was hammered out during the script conference between Robert Holmes and Bob Baker and Dave Martin. The Doctor, Sarah and Harry would Trans-Mat down from the Ark to a scorched and ruined Earth to find a Sontaran expedition already there researching and evaluating the planet for a forthcoming invasion. Robert Holmes supplied all the Sontaran background material (for example, that the character was Field Major Styre, of the Sontaran G3 Military Assessment Survey). The writers rose to the challenge of budget and to the opportunity to set a story entirely on location. Partly because, to quote Bob



Baker, "It was a nice change from corridors". Yet he also observes: 'With **Doctor Who** I think one realised in the end that they are better done in the studio. You can suspend disbelief more in the studio set than you can having the Doctor and monsters in a location. We found that to our cost with K-9. Quite a lot of the monsters just look silly in a natural environment.

"The more they used ChromaKey, the more liberating it became. In UNDERWORLD (serial 4Y) we posed so many problems for them that they had to invent machines to do it. With the first one we did, VAMPIRE FROM SPACE (retitled THE CLAWS OF AXOS, serial GGG), we used quite a lot of ChromaKey. That was the new toy. We stretched HTV quite a bit on Sky (1972). All they'd used it for was weather and news, never for drama before."

never for drama before."

The story's original title was THE DESTRUCTORS.
This was changed (to the chagrin of the writers, since it gave away the revised ending of the first episode) to THE SONTARAN EXPERIMENT before transmission.

Work on serial 4B, began the 1974-5 **Doctor Who** year, with Philip Hinchliffe now the producer. Barry Letts, the previous producer, stayed on for a while in an advisory capacity in case Hinchcliffe needed any help, and recalls sitting in the OB van while THE SONTARAN EXPERIMENT was recorded.

OB Baker: "A new producer comes in and likes to put his stamp on the show. That's what Philip did. I knew him before he became producer of **Doctor Who**, and I kept in contact with him. But he was kept so busy, we hardly saw him during THE SONTARAN EXPERIMENT." In the event, Hinchcliffe was well able to cope on his own, and Letts had less and less involvement throughout the twelfth season.

The script suggested that Dartmoor be used as post-

holocaust Earth, and the area was scouted by Production Assistant Marion McDougall who had a good knowledge of the West Country. All but one of the production requirements were eventually satisfied within a five mile radius. The only requirement not met was some stone ruins, suggestive of the solar flares' aftermath. Ideally, director Rodney Bennett wanted a derelict stonehouse village, but instead he had to settle for caves and gullies to suggest the remnants of civilisation. The ruined area was to have been where Styre set up his base

The decision had already been made in the planning stages to record entirely on outside broadcast video equipment rather than shoot on film, another financial consideration. The Production Unit Manager, George Gallacio, had seen recent documentation describing the BBC's new OB equipment: lightweight video cameras, some of which were compact enought to be held without the need for a tripod. With sufficient cabling, these cameras could reach places previously only accessible to a film crew. The unit's equipment would need to include a travelling studio control room (housed in a van) complete with an onboard editing suite. But there would be savings in terms of wasted film stock, and the need for editing and dubbing suites at TV Centre.

Another consideration was that, as Barry Letts observes: "Location filming produces three to three and a half minutes of footage a day — six on a good day." Using the OB technology, the plan was to record a two part story over just one week. The productivity rate is apparent from the fact that the production was completed on time despite bad weather and other problems.

Three cameras were used, each with about a hundred yards of cable. Bob Baker says: "I thought there was a lot more imagination used in the shots than there would have been normally if it had just been a day's filming." A number of sequences feature high POV shots, for example the scenes of the Doctor looking down on Styre's conversations with the Marshal.

Not booking any studio time did have two knock-on

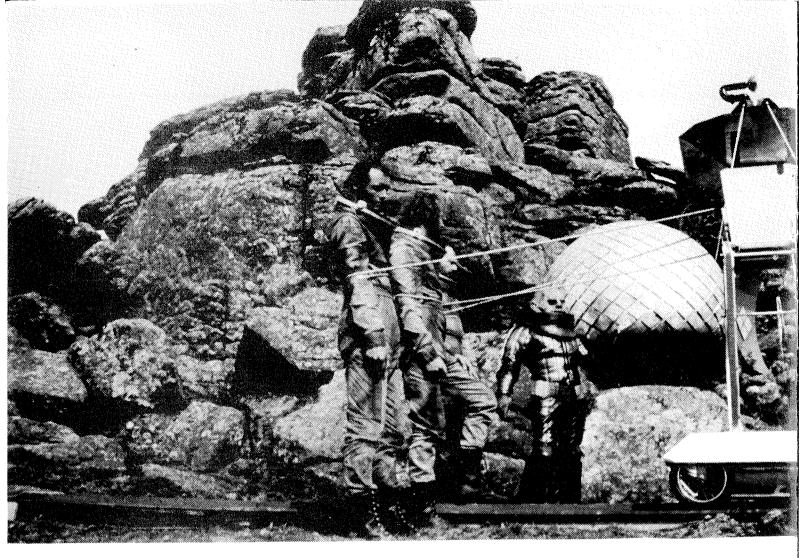
effects. First, it meant that the opening and closing credits (on 35mm film) were edited in during the first gallery day of the next production (serial 4C, THE ARK IN SPACE) on 28 October, 1974. The editing facilities aboard the OB van did not include a telecine transfer system.

Second, since the van did not have an inlay desk either, Styre's robot could not be done using ChromaKey, so a full-sized prop was needed to work in real time with the actors.

HE robot, created by visual effects designer Tony Oxley, was a lightweight frame, housing remotely controlled gears and pulleys, and which was clad in aluminium sheeting. Small battery-powered motors and solenoids fitted inside worked the rotating lozenge-shaped 'turret' (last vestige of the originally-scripted robot design), the elevating 'head' and the twitching 'sensor rods'. The whole machine was mounted on a camera dolly and pulled along rails on location by hand. The rails and the dolly were kept out of camera shot in order to preserve the original idea of the robot hovering.

The restraining 'grabs' were manually-powered. These 'restraining' devices which (in the script) shot out at whiplash speed to encircle their victims, were just trailing lengths of wire which could be retracted into the robot's casing. There was no mechanism to shoot them out. One piece of equipment which the OB van did have was an instant replay videodisc (usually used when covering sporting events). This was used to reverse footage of the wires 'untying' their captives and retracting so that they appeared to shoot out from the robot and encircle them.

But with the limited facilities offered by the OB unit, optical effects were kept to a minimum. For example, the firing of Styre's pistol was achieved with three shots. A shot of Styre firing (keeping the gun steady at the same point, and only moving his hand to squeeze the



tngger) was mixed with a red-tinted caption slide seen by another camera, with a flare image (from a third camera) at its centre.

The monitor images of the Marshal were prerecorded and played back live for Kevin Lindsay's reactions as Styre. The same technique was also used for Styre's observation of the Doctor and the Galsec colonists, and of his experimenting on Sarah.

This required visual effects to provide a model snake (which Sarah's bonds turn into), and creeping gunge to smother her legs made menacing with slow motion video replay. The sound effect for the latter was created by Special Sound man Dick Mills recording (and manipulating) the sound of Swarfega being squelched between his hands — which he quotes as one of his favourite sound effects. The illusion of the rocks falling on Sarah was achieved by tilting and zooming the camera up to the rock face, the final effect enhanced by Sarah's screams and the music.

John Friedlander, the other visual effects designer, redesigned the Sontaran mask. The original costume had been tailor-made for actor Kevin Lindsay (who played the Sontaran Linx in serial UUU, THE TIME WARRIOR). But Lindsay suffered from a weak heart. This condition had led to delays during the shooting of THE TIME WARRIOR: wearing the heavy latex mask and the claustrophobic helmet had put a severe strain on the 53-year old actor (best known to TV viewers at the time as the cheery milkman in the Milk Marketing Board commercials).

As a result the Sontaran looked a little different from previously — for one thing he now had five fingers on each hand, rather than the bifurcated hands of all other Sontaran stories. The new mask was much thinner, resting on the actor's head rather than enclosing it. The only uncomfortable element was a mouth brace which Kevin Lindsay wore to fix the mask's lips to his own. He was also relieved of the helmet, required only to wear it briefly at the end of the first episode, to recreate the unmasking scene from the episode one climax of THE TIME WARRIOR.

In fact, the original script had the end of episode one slightly later than it was eventually put. Instead of ending with Sarah's recognition of the Sontaran and Styre's removal of his helmet, Bob Baker and Dave Martin intended the episode to end with Styre striding to Sarah, grasping her by the throat and saying: "Aaaaah. A female of the species."

Kevin Lindsay played both of the Sontarans who appear in the story — Field Major Styre, and his

The Galsec crew (I-r: Peter Walshe, Donald Douglas Glyn Jones) are captured by Styre (Kevin Lindsay) note the robot's tracks

superior The Marchal. The writers had not intended them necessarily to be played by the same actor. The Marshal only appeared on Styre's monitor screen, and was distinguished by o round bosses positioned on his collar.

Apart from the regular cast and Kevin Lindsay's two Sontarans, the rest of the characters in the story were the survivors of the Galsec space ship. The script suggested that they should have South African accents. Bob Baker explains: "We felt that if you boiled down the Earth languages to English, the most likely outcome would be a sort of South African accent — a mix of Australian, South African, American. A lot of our characters came out with South African accents (the baddies). In THE MUTANTS (serial NNN) also they were a bit like that, the Marshal for example."

In finding South African actors to fit the space suits (which were being reused from Moonbase Three) Rodney Bennet was successful apart from group leader Vural, played by Donald Douglas. A side effect of this was that Glyn Jones returned to Doctor Who after nine years. Previously, he had written THE SPACE MUSEUM (serial Q). In THE SONTARAN EXPERIMENT he played Krans. He recalls the trials and tribulations of the week's recording.

lations of the week's recording:

"Filming on Dartmoor in October was enough to freeze the proverbial brass monkey. Looking at it on the small screen one doesn't realise that, for the most part, the sleet and rain were pelting down. And I wondered why I looked so large until I realised that under my spacesuit I had enough tracksuits and sweaters to fit out the entire crew of an oil rig.

WASN'T there when Tom Baker broke This collar bone. I wasn't filming at the time — I heard about it that evening. What infuriated Tom though, was that he was doing such a brave act and being so nice about it, but when he went to the hospital the doctor said, 'It's only a broken collar bone, we have thousands of these after a rugby match.' So that deflated him a bit."

Tom Baker's accident, slipping on the wet rocks, fortunately came late enough in the week-long recording shoot not to neccessitate major rescheduling. Unusually for **Doctor Who**, this story was recorded out of story order, the shooting schedule being determined by the particular day's location.

Saturday 28 October was Encampment Day, where the colonists' base camp was recorded. This session included the scenes of the Doctor's interrogation by the Galsec crew, in which he teases them by reeling off a list of clocks. Baker and Martin felt happy that Tom Baker could carry this idiosyncratic speech having already seen the finished version of ROBOT (serial 4A), and a couple of Tom Baker's films - The Golden Voyage of Sinbad and Nicholas and Alexandra.

The crew travelled to Dartmoor to begin shooting on Thursday 26 October 1974: *Heath Day*. This was when all the scenes in and around the Trans-Mat receptors were done, the effect of the Doctor and his companions fading in and out being achieved by a simple 'roll back and mix' of the images. Friday 27 October was *Pit Area Day*, when the Doctor, and Harry's stunt double (Terry Walsh) tumbled into the hole in the ground.

Saturday 28 October was *Encampment Day*, where the colonists' base camp was recorded. This session included the scenes of the Doctor's interrogation by the Galsec crew, in which he teases them by reeling off a list of clocks. Baker and Martin felt happy that Tom Baker could carry this idiosynchratic speech having already seen the finished version of ROBOT (serial 4A), and a couple of Tom Baker's films.

Sunday 29 October was Sarah's Dungeon Day, which was when Tom Baker slipped and fell during the afternoon's recording.

Monday 30 October was *Ruins Day*, where Styre had his monitor (and where the Marshal's scenes were also recorded). This was the longest recording day, and was also *Sontaran Ship Area Day*. By this time Baker was fit enough again to do his scenes, coat and scarf concealing the neck brace. He did not however do the action scenes of the fight between the Doctor and Styre. Apart from close-ups, the action was performed by Terry Walsh (doubling for the Doctor), and Stuart Fell (doubling for Kevin Lindsay's Styre).

The climax of the fight is Styre's death, when he deflates after being fed on by the energy he has been trying to absorb to revitalise himself. This was a mechanical effect — an empty mask being deflated above a flattened, empty costume.

Elisabeth Sladen and Ian Marter in 'Sarah's Dungeon' — where Tom Baker's accident happened



Audience

T first glance, Doctor Who's appearance in the North East region's weekly top ten (episode 2, w/e March 2, 1975) may be no surprise after THE ARK IN SPACE's huge audience. A TVR of 48 put it equal with The Six Million Dollar Man, and after Sale of the Century (53) and Love Thy Neighbour (50).

The figures are misleading: the episode's highest reach was in fact 35 (North East and Yorkshire), and the 48 was wishful thinking on behalf of JICTAR.

The figures in the table show how Doctor Whofared in all regions for episode 2 of SONTA-RAN EXPERIMENT. Note that different ITV regions scheduled early-evening programmes differently - occasionally the same show at different times.

The regions for which figures are available are: London (L), Midlands (M), Lancashire (LA), Yorkshire (Y), Central Scotland (CS), Wales and West (W), South (S), North East (NE), East England (E), South West (SW), Ulster (U), Border (B) and North Scotland (NS).

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	L	M	LA	Υ	CS	W	S	NE	EΕ	SW	U	В	NS	TVR	Homes	š
News 17.10	24	26	29	23	26	25	18	27	23	34	30	23	21	27	4739	
Black Beauty 17.17	-	-	-	23	-	_	-	26		_				24	682	
New Faces 17.21	35	-	37	39	-	31	-	39	36	33	37	35	28	38	5806	
Sale/Century 17.32	-	35	-	-	33	-	_	_	-	_	-	-		35	1428	
Born Free 18.20	-	-	-	-	33	-	-	-	-	_	39	_	_	34	554	
Sale/Century 18.20	-	-	41	48	-	-	35	53	42	42	_	42	-	43	3672	
Cartoon 18.43	-	-	-	~	33	-	-	-	-	-	-	_	31	34	504	
Carry on/Camel 19.15		-	-	40		-	-	44	-	-	-	-	26	40	1254	
Sale/Century 19.19	40	-	-	-	-	38	-	-	-	-	53			40	2371	
Adventurer 17.20	25	-	-	-	-	-	-	-	-							
On the Buses 17.52	29	-	-	-	-	-	-	-	-							
Movin' On 19.50	31	-	~	**	~	-	-	-	-							
Cartoon Time 17.17	-	29	-	-	-	-	-	-								
Film 19.01	-	36	~	-	-	-	-	-	-							
Film 18.51	-	-	37	-	-	-	-	-	-							
Woody Woodp, 17.35	-	-	-	?	-	-	-	-	-							
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Kung Fu 19.48	-	-	-	-	35	_	-	_	-							
Crash Dive 19.01	-	-	-	-	-	30	-	-	_							
The Comedians 18.06	-	-	-	-	-	26	-	-	-							
Tarzan 17.21	-	-	-	-	-	21	-	-	-							
Amazing Chan 17.18	-	-	-	-	-	-	-	21	-							
Royal/Yard 17.39	-	-	-	-	-	-	-	26	-							
Crocked Hearts 19.20	-	-	-	-	-	-	-	32	-							
Wheeltappers 20.46																
T 6 1 17 07	22	20	20	21												
Tom & Jerry 17.07	23 28	29 28	28 28	31	30	30	29	31	20							
News/Sport 17,15 DOCTOR WHO 17,30	30	29	27	35	28	29	33	35	29							
Disney 17.55	30	32	27	35 32	28 33	33	34	35	31							
Dixney 17.33 Dixon 18.41	28	30	31	27	33	31 28	34 31	32	29							
Lulu 19.32	24	26	28	25	31	28 29	31	27 25	29							
Luiu 13.32	4	∠0	20	23	31	∠3	J I	23	27							

CAST DR WHO
ERAK Peter Walshe KRANS Glyn Jones ZAKE (1) Terry Walsh VURAL Donald Douglas ROTH Peter Rutherford FIELD MAJOR STYRE Kevin Lindsay PRISONER (2) Brian Ellis THE MARSHAL (2) Kevin Lindsay DOCTOR'S STUNT DOUBLE Terry Walsh HARRY'S STUNT DOUBLE (1) Terry Walsh STYRE'S STUNT DOUBLE (2) Stuart Fell
CREW PRODUCTION ASSISTANT
John Friedlander, Tony Oxley DESIGNER Roger Murray-Leach INCIDENTAL MUSIC Dudley Simpson SPECIAL SOUND Dick Mills PRODUCTION UNIT MANAGER George Gallaccio WRITERS Bob Baker, Dave Martin SCRIPT EDITOR Robert Holmes PRODUCER Philip Hinchcliffe DIRECTOR Rodney Bennett

TRANSMISSION

Part 1: 22nd February 1975 -- 17.30.10 (24'27") Part 2: 1st March 1975 — 17.30.23 (25'00") REPEATED: Omnibus version, 9th July 1976 — 18.25.24 (47'52'')

RECORDING

OB Recording — 26th, 27th, 28th, 29th, 30th September, 1st October 1974 (Dartmoor).

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