

## THE BLACK HOLE

A REVIEW OF DISNEY'S BIGGEST SF EPIC SINCE  
20,000 LEAGUES UNDER THE SEA BY JOHN BROSNAN.

If you want to learn anything about black holes don't bother going to see this picture but if all you're after is an occasionally entertaining imitation of Star Wars mixed with some watered-down 20,000 Leagues Under the Sea and a dash of Disney-style religion then The Black Hole will be right up your cosmological alley. Personally the *last* thing I wanted to see was yet another Star Wars imitation so I was less than impressed...

The publicity build-up for this picture has been huge by Disney's usual standards. "The most expensive and ambitious Disney film of all time!" "Five years in the making!" "A budget of over £10,000,000!" "One of the film world's most unique productions ever!" And along with the publicity came a shroud of secrecy, mainly centering on the film's climax. Apparently it was so audacious,

so mind-boggling, that the leading players weren't even permitted to know about it and the final pages were removed from their scripts. *Goah!* I said to myself, always a sucker for this type of publicity hype, the ending must be really something! Well, it's something alright...

Black holes are a very strange phenomenon. In theory they are created when a star of three or more times the mass of our sun collapses in upon itself. As the collapse continues the density of the material within the core of the dying star gets so condensed it eventually becomes a singularity: a point of zero size with infinite density. This is the black hole itself. Around the black hole is an area where the gravitational pull is so strong that nothing, not even light, can escape from it. The edge of this area —

the point of no return for any object approaching the hole — is known as the event horizon. Once past the event horizon an object, such as a spaceship, would be obliterated though by then the crew would have long since been crushed to death by the gravitational pull. Scientists believe that the forces within a black hole are so powerful that the natural laws of physics no longer apply, which has led to sf writers postulating that black holes might be utilised for faster-than-light travel. The idea is that if you could pass *through* the singularity you might emerge without any time lapses in another part of the galaxy, providing, of course, you could avoid being compressed into nothingness on the way in...

Because no light can escape from a black hole it is more or less invisible and could only be detected if it happens to blot out stars in the background. One might also be detected by material being sucked into it — matter such as dust and gas would start to heat up as it neared the event horizon and as a result the black hole might be surrounded by a glow of energy. That is, provided the hole happened to be situated in an area of space where there was plenty of such debris about. If not, you might not know you were even near a black hole until it was too late.

For the sake of visual interest the makers of *The Black Hole* have opted for showing their black hole at the centre of a cloud of whirling gas but they fail to suggest that the hole would, in reality, be a three-dimensional entity — a sphere of nothingness. Instead they've taken the

"term hole literally and so their creation" resembles a giant, two dimensional whirlpool leading down into some sort of cosmic drain pipe. Visually impressive but not very likely.

They have also decided to take a theological approach to the phenomenon. This is hinted at early on in the picture when one of the characters says, as he stares at the black hole: "whenever I see one of these things I always expect a figure with red eyes and horns to appear out of it." Later another character says that the hole could lead into the very mind of God... so it should come as no surprise when the end of the film becomes a crudely literal realization of these metaphysical suggestions.

This religious ending was presumably what had the Disney executives so excited but I can't say that it affected me the same way, having sat through a similar religious experience at the climax

of *Star Trek* only the week before. Both films, of course, owe the inspiration for their endings to 2001: *A Space Odyssey* but neither come close to capturing or recreating the sense of wonder that Kubrick's film generated.

All this may make *The Black Hole* sound unnaturally heavy for a Disney picture but rest assured it has the intellectual weight of a pea and the serious bits are few and far between. For the rest of the time it's all *Star Wars* type action and *Disney* type comedy. The latter chiefly revolves around a "cute" little robot called V.I.N.cent who has Orphan Annie's eyes and Roddy McDowell's voice — not the most attractive combination by a long shot. George Lucas has a lot to answer for in creating Artoo Deetoo and starting all this cute robot rubbish. Even worse, Vincent meets up with a similar

# "BLACK HOLES: THE GREATEST CRISIS EVER FACED BY PHYSICS."

Source: *Physicist John Wheeler Time Magazine 1978.*

A black hole is a place where the conventional laws of nature do not apply.

And any thinking that accepts black holes must need many comfortable theories about space and time. The universe is not, as we once thought, serene and unchanging. It is the scene of incredible violence, of exploding galaxies and stars of tumbling reverberating back from its fiery birth.

If whole stars can vanish within black holes, crushed out of existence, where has their matter gone? To another universe? To another time?

Scientists have all the questions, and plenty of mathematical equations, yet the answers still remain tantalizingly out of reach.

But what a great subject to make an extraordinary movie out of!

**WHAT IS A BLACK HOLE?**  
A giant star flares up and dies. As it collapses, its core is crushed together with enormous force. It becomes smaller and smaller, denser and denser. It vanishes from sight as it

dives to a bottomless well in the universe.  
It is now a black hole. At the centre of this black hole the original matter of the star has been compressed to an infinitely small volume.



A dying star shrinks to this, leaving behind a hole.

But it has become infinitely dense. And exerts infinitely high gravitational force.

This force sucks in anything and everything in its path. Asteroids, Planets, Stars. Nothing can escape from a black hole. Not even light.

Then what?

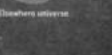
There are many theories. Time may slow down, and finally stop at the black hole's edge.

Or a space-time corridor may be set up, with an event horizon where matter could pass from one universe and emerge into a totally different one.

Or time could be warped completely. So a space traveller could theoretically enter a black hole, and suddenly find himself back where he started, before he'd even set out. He could even watch himself doing so.

There may be more than a million black holes in our galaxy alone.

Are they gateways to other universes? Or the end of time as we know it?



model robot who has the voice of that familiar cowboy actor, Slim Pickens! The scenes between these two will either have you chuckling or chucking up. Rock bottom is reached in the sequence where the Pickens robot, dying in McDowell's "arms", gives a heart-rending speech which ends with: "You'll always take a part of me wherever you go". I was expecting at that point the robot to actually break off a piece of himself and hand it over but no such luck.

The plot concerns a huge spaceship — the USS *Cygnus* — that has been missing in space for 20 years and is accidentally located by the crew of another ship in the vicinity of a black hole. They discover that its sole human inhabitant is a scientist called Dr Hans Reinhardt. According to him all the other members of the crew headed back to Earth years ago and he seems surprised when he is told that they never made it. It doesn't take long to work out that Dr Reinhardt is the archetypal mad scientist, particularly the way the usually excellent German actor Maximilian Schell plays him — he chews up more of the surrounding scenery than the black hole itself.

Reinhardt's crew consists of a large number of robots — some of them con-

## Reinhardt's deputy is a robot called Maximilian.

ventional and others with mirrored faces and wearing monk-like habits. The chief robot, and Reinhardt's second-in-command, is a large, armoured monster called Maximilian. Max is obviously supposed to be the film's version of Darth Vader as well as representing Reinhardt's evil, uncontrollable alter-ego, an allusion subtly telegraphed to the audience by giving him the same name as the star (nudge, nudge). Reinhardt himself is a mixture of Captain Nemo and Captain Ahab — he has deliberately cut himself off from the rest of the human race in order to devote his life totally to his obsession with the black hole which has become to him the equivalent of Ahab's white whale. He is determined to journey into the hole and discover what lies beyond, no matter what the cost.

His unwelcome visitors subsequently discover that the other members of the crew never did leave the ship but are still on board — as Reinhardt's slaves. He has turned them into cyborgs — part human, part machine — and they now work for him disguised as the mysteriously cowed robots. On learning this the others attempt to escape but are prevented by Reinhardt's robots. There follows several battles between robots and humans (and robots and robots) and finally the survivors all end up being dragged into the black hole to meet their various meta-physical fates...



**The Black Hole (1979)**  
Maximilian Schell (as Dr Hans Reinhardt), Anthony Perkins (Dr Alex Duran), Robert Forster (Captain Dan Holland), Joseph Bottoms (Lieutenant Charles Pizer), Robert Mimieux (Dr Kate McCrae), Ernest Borgnine (Harold Boust), Tommy McLoughlin (Captain S.T.A.R.).  
Directed by Gary Nelson. Screenplay by Jab Rosebrook and Gerry Day. Story by Jab Rosebrook, Bob Barbato and Richard Landau. Director of Photography Frank Phillips. Music by John Barry. Production Design by Peter Ellenshaw. Art Directors John B. Mandridge, Al Roelofs and Robert McCall. Edited by Gregg McLaughlin. Director of Miniature Photography Art Cruikshank. Miniature Effects Created and Supervised by Peter Ellenshaw. Composite Optical Photography Eustace Lyeest. Mechanical Effects Supervisor Daney Lee. Matte Artist Harrison Ellenshaw. Produced by Ron Miller. A Walt Disney Film Production.  
Time: 97 mins      Cert: A

Above: Dr Hans Reinhardt (Maximilian Schell) conducts a tour of his ship, the USS *Cygnus*. Left: One of the sinister robot security guards aboard Reinhardt's ship.

of the ship like a giant red snowball while tiny human figures can be seen scurrying away in front of it. (Yes, I know... it wouldn't be glowing because there wouldn't be any oxygen and all the air would have shot out through the huge hole it made on the way in, thus

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asphyxiating the humans instantly, but I wasn't going to mention that.)

But for all its undoubted spectacle *The Black Hole* is fundamentally a disappointment. Buried within it somewhere is a serious picture with an adult theme but only fragments of it remain — the Disney people decided to play it safe and take

"NEARLY 14 MONTHS OF SIMULTANEOUS FILMING, POST PRODUCTION & PROCESSING."

"\$17,500,000 TO MAKE & LIKE NO OTHER DISNEY FILM EVER MADE."

"BLACK HOLES... WHERE LIGHT IS LOCKED IN FOR ETERNITY... WHERE EVEN TIME IS FROZEN FOR ALL TIME."

"WHERE WHOLE PLANETS ARE SUCKED INEXORABLY IN AND PULVERISED TO NOTHINGNESS."

the easy way out, eschewing originality for warmed-over scenes from *Star Wars* and sure-fire laughs from the "funny" robots. You can't, however, have it both ways and hope to be successful; you can't jump from metaphysics to slapstick comedy and then back again and expect your audience to follow you... and so *The Black Hole* ends up an uneasy mixture of two opposing styles, with the result that the various parts add up to a rather bleak whole (sorry).

Still, on the whole (sorry again, I can't help it), I found it much more fun than the slow and portentous *Star Trek*, plus the fact that it's thirty minutes shorter with a running time of only 97 minutes. In these days of long, long movies that's quite an asset!

Above: The press brochure from Walt Disney studios explains the nature of the black hole. Below: Captain Dan Holland (Robert Forster) saves Dr Kate McCrae (Yvette Mimieux) from being turned into a cyborg.

