



mecha odyssey

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On March 7, 1999, filmgoers worldwide reeled at the news of the death of filmmaker Stanley Kubrick. The man behind Paths of Glory, Dr. Strangelove and 2001: A Space Odyssey, who had set standards of cinematic excellence and performed acts of artistic bravado with only a handful of titles over his forty-four-year film career, was suddenly and inexplicably, gone. As both colleagues and critics reflected on the news, the concept of a world in which there would be no more Stanley Kubrick films threw his unrealized projects into poignant focus. Kubrick had always been extremely secretive of his work, particularly so in regards to his longrumored return to science fiction-reportedly in development since 1974cryptically entitled A.I., the robotic-science acronym for 'artificial intelligence.' In November 1993, a brief Warner Brothers press release had announced the official start of development of A.I.; in December 1995, there had been another statement indicating that A.I. would follow Eyes Wide Shut, a project which itself had been twenty years in gestation. When Kubrick passed away in his sleep after a heart attack, shortly after completing Eyes Wide Shut, the fate of A.I. seemed at last to have been determined.

In the intervening years, four novelists and a handful of Ku-brick's A.I. collaborators stepped up to provide glimpses of the unrealized project. British science fiction author Brian Aldiss confirmed to the London Daily Telegraph that the project had grown from the seed of his 1969 short story Super-Toys Last All Summer Long—a tender mood piece about a lovelorn android boy and his robotic teddy bear. Science fiction novelists Bob Shaw and Ian Watson followed Aldiss, Watson recounting his own Kubrickian anecdotes to Playboy in August 1999. Shortly after Kubrick's death, poet and novelist Sara Maitland completed the picture, explaining to the London Independent how Kubrick had recruited her in 1995 to find an emotional underpinning for what had become an epic tale of cybernetic *Evolution*. Publications as diverse as Wired, People and England's New Musical Express also fanned A.I. embers with tales of Kubrick's plans to employ an actual robot boy, and of secret conferences with Industrial Light & Magic

regarding a postdiluvial vision of a flooded New York City.

ILM visual effects supervisor Dennis Muren began his association with Kubrick during a whistle-stop five-hour visit to his home in St. Albans in Hertfordshire, England, on Thanksgiving Day 1993. Inspired by ILM's digital animation breakthroughs in *Jurassic Park*, Kubrick arranged a full Thanksgiving dinner for Muren and ILM producer Ned Gorman, and invited them to brainstorm possibilities for A.I. After the meal, Muren and Gorman presented Kubrick with a reel of visual effects tests supervised by Eric Brevig for Ann Bonny, an unrealized pirate movie, containing footage of a digital pirate ship composited over a real boat in *San Francisco* Bay. "Stanley threaded the projector himself," Muren recalled. "Ned and I sat in his little theater while Stanley operated the projector. He'd run out to look at the film, then when it was coming to the end, he'd run back, stop the projector and run it back again. He was funny, a little chubby, with a big beard and old clothes like a ragged-up Santa Claus; but he was very cordial and nice."



The years-long development of A.I., a pet project of Stanley Kubrick, came to a sudden halt with the death of the legendary director in March 1999. A year later, the reins were picked up by Steven Spielberg, with whom the notoriously secretive Kubrick had shared story ideas and concept art for the film in the years prior to his demise. Written and directed by Spielberg, A.I.: Artificial Intelligence became a hybrid that combined the younger director's talent for populist, domestically-centered entertainment with the elder's sense of cinematic grandeur and dark view of humanity. To realize the project's ambitious effects slate, Spielberg reunited with longtime collaborators Dennis Muren at Industrial Light & Magic- who co-supervised the visual effects with Scott Farrar- and with the creature effects team at Stan Winston Studio.



Spielberg on the set with Haley Joel Osment, the young actor pegged to play David, a state-of-the-art robotic boy programmed to love.

A three-hour grilling session ensued, with the conversation ranging from effects techniques used in 2001 to possibilities

for creating flooded views of Manhattan; but, aside from showing Muren and Gorman an early concept rendering by British science fiction illustrator Chris Foss, Kubrick remained vague about plot details. Back in San Rafael, Muren commissioned ILM art director TyRuben Ellingson to generate Photoshop experiments, designing potential looks for a robot boy by digitally spacing a real child's eyes further apart. Dialogue continued; but Muren's commitment to *The Phantom Menace* prevented his returning to England to peruse Kubrick's completed treatment for A.I. "The unusual thing," Muren observed, "was that most of the thoughts we had over the years were never concluded. We'd submit ideas, but Stanley would always respond, 'We'll keep looking at this,' or, 'That's not important any more, let's look at this.' Everything was changing all the time; and that made it very difficult to budget and schedule, to figure out how we were going to do it." Kubrick last called ILM as he was nearing completion on the editing of *Eyes Wide Shut*, seeking Muren's advice on laboratory techniques, bluescreen photography and postproduction correction of unwanted camera moves. "A.I. was still floating around out there. It was probably going to be his next project. When Stanley passed away three weeks later, I figured that was the end of it."

On March 15, 2000, one year after Kubrick's death, Warner Brothers announced that Steven Spielberg had signed on to write and direct the project, now officially titled A.I.: Artificial Intelligence. Dennis Muren was one of the first to discover the full extent of Kubrick's plans. "Around August of 1999," related Muren, "I read on the Internet that Steven might be doing A.I., and I said, 'Oh, that's ridiculous!' Two weeks later, I got a call from him, and I went down to meet with him in L.A. That was when I saw all the artwork Stanley had generated in the period between when we had first met and when he'd passed away. I was shocked. I had no idea he'd done that much work." Muren was confronted with more than 1500 pen-and-ink conceptual drawings produced for Kubrick by illustrator Chris Baker, an artist best known for his colorful, photorealistic fantasy book covers, created under the pseudonym 'Fangorn.'

With so much story development and concept art invested in the project, Muren agreed with Spielberg that A.I. should not be relegated to a vault, never to be seen on film. "Stanley had done so much work on this film," Muren commented, "and had been talking to Steven about it for so many years, Steven and I both felt that the movie really should be made."

The resurrection of A.I. had started when Kubrick's widow, Christiane, and her brother, Jan Harlan– a production associate since the director's unrealized Napoleon in 1970– approached Terry Semel, then chairman of Warner Brothers, and nominated Spielberg as the man to see the project to fruition. Spielberg had been a friend of Kubrick's since a chance encounter at Elstree Studios in England in 1979, and was one of the few people with whom Kubrick shared his eighteen-year-old future vision. To realize A.I. as an Amblin/Stanley Kubrick Production, Spielberg brought on board trusted members of his own production team, including producers Kathleen Kennedy and Bonnie Curtis, production designer Rick Carter, cinematographer Janusz Kaminski, physical effects supervisor Michael Lantieri and property master Jerry Moss. Kubrick's conceptual designer would also join the team, summoned from his studio in Birmingham, England. "On my first visit to Amblin," Chris Baker recalled, "I met with Rick Carter, who took me to a conference room where they had my illustrations pasted to these large panels. They just filled the room. It was the first time that I'd been able to talk about the movie with anyone other than Stanley, so it was quite an emotional moment."

Baker's own involvement with A.I. had commenced after his graphic novel, *Legend*, attracted Kubrick's attention in December 1994. Although rooted more in swordplay and fantasy than cybernetic hardware, Baker's art displayed a graphic style and narrative thrust that Kubrick wished to unleash upon his robot world. "In my first meeting with Stanley, I asked him what he wanted me to do," Baker recalled, "and he said, 'Anything you like!' He had a very bare-bones treatment, in terms of description, and he had brought me in to start generating ideas. So I went away and started generating concept illustrations— not storyboards, though some had a storyboard sense of motion— and I began sketching random elements, just working my way through, nine to five. At the end of each day, I'd fax sketches to Stanley, he'd make comments over the phone, and we'd keep chipping away. We worked like that for two and a half years."

Disparate Baker visuals included serene circular layouts for the home of Monica and Henry Swinton, who attempt to ease their grief over their incurably ill son, Martin, by agreeing to act as foster parents for a prototype android boy named David. Baker also conceptualized the Cybertronics lab where David is 'born' and outlandish set pieces for Flesh Fair, a nightmarish festival where robots, dubbed 'mechas,' are mutilated and destroyed in celebration of 'orga'—organic—life. Baker's sketches further explored the psychedelic Rouge City, a lurid metropolis where a 'love-mecha' named Gigolo Joe plies his cyber-wares. Baker continued to work closely with Spielberg, refining concepts as the shooting script, being written by Spielberg himself, took shape. Baker also spent two weeks at ILM concentrating on Rouge City and the movie's final act—in which David meets the next *Evolution*ary stage of man and machine—afterward maintaining that contact from his studio in England.

With the visual effects count pegged at 350 shots, Dennis Muren split the assignment with co-supervisor Scott Farrar. "I wanted to do most of the virtual set and model work," Muren said, "so I focused on the third act. Scott did most of the scenes that involved actors and physical sets, which were in the first part of the movie. Our workloads were about the

same because the last part of the movie was pretty much all at ILM."

While Baker had sketched mecha concepts for every part of the film, all of the robotic characters ultimately emerged from Stan Winston Studio. Winston's robotic history most notably boasted James Cameron's *Terminator* films, but also included a brush with the *Tin Man* for *The Wiz* in

1978, Oscar-nominated full-face gelatin robot prosthetics for *Heartbeeps* in 1982, and the 1983 music video character Mister *Roboto* for rock group Styx. "After doing all those robots," Winston observed, "it was wonderful to be asked to create a world of robots unlike anything that people had seen before. We did hundreds of designs for robots, and Steven would immediately say, 'Oh, that looks too *Terminator*-esque!' So we used my history with robots as a place of departure. A.I. eventually used a combination of every technique we've ever tried, sometimes in ways we'd never imagined before. We had prosthetics, character makeup designs, animatronics, puppetry, combinations of character makeups with CG, and we designed complete CG characters. A.I. was a challenge beyond anything we'd ever done."

Winston conceptual artists Mark 'Crash' McCreery and Aaron Sims led the robot design initiative, once again conferring with Chris Baker. Lindsay Macgowan served as Winston effects supervisor, overseeing the cosmetic, sculptural and fabrication issues, while J. Alan Scott oversaw the animatronic and mechanical design. More than 140 artists were employed at Winston Studio at the height of production, which coincided with production of *Jurassic Park III*. "It was the largest crew we've ever had at the studio," commented Scott. "Fortunately, the industry was slow while we were beginning A.I., and a lot of the shops were letting go people that had been figureheads around town for a long time. So we were able to bring everybody together on this picture and learn from everyone's diversified knowledge. It was very exciting."

As production ramped up for an August 2000 shoot, the art department, animatronic and physical effects teams concentrated on creation of the Swinton home and occupants, which Spielberg elected to film in continuity, kicking off the shoot with the first act before advancing essentially in story order. The tactic would allow performers—in particular twelve-year-old Haley Joel Osment, starring in the role of David—to establish an emotional arc in a linear fashion, a rare luxury for such a technically demanding film.

The film opens with shots of crashing waves and a spoken prologue (narrated by Ben Kingsley), in which the history of the mecha/orga world is outlined, then introduces Professor Hobby (William Hurt) demonstrating the current state of the art in A.I. in his Cybertronics lab. Hobby stabs his secretary (Sabrina Grdevich) in the hand—a Michael Lantieri retracting knife effect—then opens up her impassive face to reveal a mechanical interior. The isolated scene was an exception to the 'in continuity' shooting rule and was one of the last to be filmed. As a result, the completely digital robotic effect of the woman's face opening was conceived on the fly by Scott Farrar. "I had about an hour to figure out what I was going to do," Farrar recalled. "We wanted it to have the feeling of a garage door that opened up through a very realistic-looking synthetic skin, revealing the workings of her face. We imagined it was made out of futuristic plastics and metals, but it had to be very refined and elegant and interesting to look at—most of all, not menacing."

Once the concept had been defined, Farrar applied two tracking marker dots to the actress' face and Spielberg filmed his scene with Hurt performing to the reveal, nonchalantly extracting a small central processing









A.I. opens at Cybertronics, a high-tech firm specializing in the production of 'mechas,' robots built to serve the 'orga,' or organic, world. There, in a demonstration of advanced mecha technology, company founder Professor Hobby reveals the robotic interior of his very humanlooking secretary. Still and motion picture views of actress Sabrina Grdevich served as reference for the building of a computer generated head, which was subsequently matched to the live-action and animated.