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WHAT WAS HAL?: IBM, JEWISHNESS, AND STANLEY KUBRICK'S *2001: A SPACE ODYSSEY* (1968)

Nathan Abrams¹

In Stanley Kubrick's 2001: A Space Odyssey (1968), the spaceship Discovery is run by a supercomputer named 'HAL 9000'. Kubrick seemed to be particularly concerned with HAL, spending more time, care, and attention lovingly crafting its character than that of the film's humans. Much ink has been spilled on the origins of HAL's name, particularly its proximity to the letters, and hence the company, IBM. In what will be argued is an example of his signature misdirection, Kubrick denied any connection, insisting that it simply stood for 'Heuristically Programmed Algorithmic Computer'. The odds of such a coincidence, however, were very high. As General Buck Turgidson (George C. Scott) put it in Dr. Strangelove Or: How I Learned to Stop Worrying and Love the Bomb (1964, Stanley Kubrick), 'we are ploughing through every possible three letter combination of the code [...] there are seventeen thousand permutations'. Drawing upon extensive research into the Stanley Kubrick Archive, coupled with a detailed knowledge of Kubrick's oeuvre, this article will suggest alternative readings of the character of HAL to (re-)locate "him" in the context of Kubrick's New York Jewish background and, in particular, how Kubrick's construction of the character showcased his sense of humour that so powerfully animated his previous two films, Lolita (1962, Stanley Kubrick) and Dr. Strangelove.

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In Stanley Kubrick's *2001: A Space Odyssey* (1968), the spaceship *Discovery* is run by a supercomputer named 'HAL 9000'. Although HAL appeared for approximately 60 minutes out of a total running time of 143-minutes, Kubrick seemed to be particularly concerned with this creation, spending more time, care, and attention lovingly crafting its character than that of the film's humans. Tellingly, Kubrick wrote, 'Hal is not just a machine. He's a highly specialised brain. He may be a complex of micro-electronic circuitry, but mentally and emotionally he is a conscious being, capable of pain and pleasure'.¹ Kubrick focused a great deal of his energy on HAL; for example, the above quoted 'The Other Hal Screenplay', dated February 1966, may have borne the names of Kubrick and his co-screenwriter, the science-fiction writer, Arthur C. Clarke, but it mostly appears to have been written by Kubrick alone. James Chapman and Nicholas J. Cull observe, 'The correspondence suggests that by this stage in the production Kubrick was driving the changes, while Clarke was becoming sidelined'.² In this he bears some resemblance to a previous Kubrick character, Clare Quilty (Peter Sellers) in his *Lolita* (1962, Stanley Kubrick), becoming *2001*'s figurative heart of darkness, present even when absent.

Drawing upon extensive research into the Stanley Kubrick Archive, coupled with a detailed knowledge of Kubrick's oeuvre, this article will suggest ways to read the character of HAL by locating him in the context of Kubrick's New York Jewish background. It will seek to show how Kubrick's construction of the character was a means for Kubrick to express his Jewishness through his concern with the Holocaust, as well as to insert his mischievous and sardonic New York Jewish black or sick sense of humour, both of which powerfully animated his previous two films, *Lolita* and *Dr. Strangelove or: How I Learned to Stop Worrying and Love the Bomb* (1964, Stanley Kubrick) respectively. It will be argued here that HAL can be read in contradictory ways: as both Nazi and Jew; father and mother; gay and asexual; androgynous, male, and female, and informed by Kubrick's signature penchant

for sardonic New York Jewish comedy, black, and sick 1960s humour. Consequently, *2001* continued Kubrick's interest in exploring secular ethnic identity, in particular the Holocaust and Jewish gender.

2001: A Brief Production History

Kubrick's interest in science fiction dated back to his childhood. As a child growing up in the 1930s, he had read such pulp magazines as *Amazing Stories* and *Astounding Stories* that were easily available from Bronx newsstands.³ He was impressed by *Forbidden Planet* (1956, Fred M. Wilcox), and he was subsequently inspired to watch a range of Japanese science fiction films. When critic Alexander Walker asked him if he intended 'to make a film about Outer Space', Kubrick replied, 'Please, be careful what you write'.⁴ In the early 1960s, a science fiction drama serialized on BBC Radio, called *Shadow On the Sun*, about a meteorite delivering a virus to earth interested him as a possible project.⁵ Kubrick also enjoyed the long-running BBC television show, *Doctor Who* (1963-), occasionally even watching it live as an audience member.⁶

Kubrick even envisaged adopting a science fiction approach for *Dr. Strangelove*. A 1962 version of the script featured it opening with a voiceover narrated from the perspective of an alien civilization in the distant future, looking back at the long-dead planet earth, as part of a series entitled, 'The Dead Worlds of Antiquity'. Similar narration was to close the film. Even though Kubrick ultimately discarded those science fiction characteristics, *Dr. Strangelove* still won a 'Hugo' Award for the best science-fiction film of 1964.⁷

In March 1964, Kubrick contacted science fiction writer Arthur C. Clarke with the aim of making 'the proverbial "really good" science fiction movie'.⁸ Kubrick had admired Clarke's books for some time. Kubrick and Clarke met in New York City in April of that year and together they developed a novel-like treatment for *2001* loosely based on two of Clarke's

short stories, 'The Sentinel' (1951) and 'Childhood's End' (1953). In collaboration with Clarke, the screenplay simultaneously took shape. In February 1965, Kubrick and Clarke submitted their treatment, now entitled *Journey Beyond the Stars*, to MGM, which agreed to fund the film for a reported \$5m.⁹ The following July, the first full screenplay of *2001*, referred to as the 'Athena Screenplay', was completed.¹⁰ In December 1965, when principal photography began, a revised version of the screenplay had been produced.¹¹ Shooting lasted seven months, being completed by July 1966. Post-production began but this took far longer than had been projected, taking almost another two years.

At this point, Kubrick and Clarke had developed a very different screenplay to that which was ultimately filmed. It included extensive voiceover narration, dialogue and explanatory sequences, a composed score by Alex North (who had previously worked on *Spartacus* (1960, Kubrick)), and a planned ten-minute opening expository prologue consisting of edited interviews with scientists, thinkers, and theologians (including a rabbi), discussing the existence of extra-terrestrial life, space, theology, biology, chemistry, and astronomy, among other things. Kubrick and Clarke also wrote some explanatory narrative.

Kubrick, however, increasingly began to follow his own beats by this stage. He continually revised the screenplay before, during and after shooting. The screenplay that took shape over late 1965 and early 1966 was mostly his own work.¹² Still not satisfied, Kubrick continued to tinker with the screenplay, particularly the narration, which he worked on throughout 1967. Between November 1967 and the summer of 1968, Kubrick implemented a series of changes that drastically changed the film. He discarded the expository prologue, narration and score, as well as test footage of aliens. The dialogue and other explanatory sequences were reduced dramatically. And a new score entirely composed of pre-existing nineteenth and twentieth century classical and avant-garde recordings by György Ligeti,

Aram Khachaturian, and Johann and Richard Strauss was inserted in place of North's discarded score.¹³

With principal photography completed by 1966, most of the next two years were spent on the special effects work which, as aforementioned, took far longer than anticipated. It was a period of trial and error and almost nothing like *2001* had been attempted before. Eventually, the first composite print was completed in March 1968, four years after Kubrick's initial meeting with Clarke. The film premiered in Washington, DC, on April 2nd 1968, followed by openings in New York City, Hollywood, Boston, Detroit, Houston, London, Johannesburg, Tokyo, Osaka, and Sydney. On April 5th, following the US screenings, Kubrick cut nineteen minutes out of the 156-minute version that had been screened to film critics.¹⁴ Initially, *2001* was released in 70-millimetre in those selected cinemas with the curved screen required for Cinema projection. It was an instant hit, particularly with the countercultural, New Left, anti-Vietnam War, hippie generation, grossing over \$1million, despite its initially cool critical reception. This tripled to \$3million after only eleven weeks. The film won an Oscar for special effects followed by a general released in 35-millimetre, garnering an additional \$6 million. The novel, *2001: A Space Odyssey* was published in July 1968.¹⁵

Kubrick's Concerns

Kubrick was rarely thought of as a Jewish director who made Jewish films (however that may be defined). Yet, born in 1928, and growing up as the Holocaust was taking place in Europe, the awareness of the inescapability of his Central European Jewish heritage arguably had a significant emotional impact upon him. As a Jew growing up in a post-Holocaust world, the events of 1933-1945 formed an indelible bedrock upon which Kubrick moulded his art. Although Kubrick said very little about the Holocaust, its presence is felt in his film, but it is

approached obliquely, often via analogies and metaphors, sometimes by overt albeit brief moments, which explore the very same issues raised by the Shoah. Frederic Raphael, who collaborated with Kubrick on the screenplay for his final film *Eyes Wide Shut* (1999, Kubrick), suggested, 'S.K. proceeds by indirection... [his] work could be viewed, as responding, in various ways, to the unspeakable (what lies beyond spoken explanation)'.¹⁶ And John Orr and Elżbieta Ostrowska have pointed out, 'Kubrick, who never realised his Holocaust film project, nonetheless had a post-Holocaust vision of the contemporary world'.¹⁷ This may well have been amplified by his third marriage, in 1958, to Christiane Harlan, the niece of Veit Harlan, who had directed the notoriously antisemitic propaganda film, *Jud Süß* in 1940. Kubrick had met Harlan in 1957 and wanted to make a film about him and Kubrick therefore was surely sensitive to the impact on the Harlan family on his decision to work so closely with the Nazi leadership.¹⁸ Previous studies have shown how Kubrick's Jewish identity, in particular the Shoah, informed his films, especially those from *Spartacus* onwards. These films were also interested in new constructions of Jewish masculinity and femininity albeit expressed in a sub-textual form.¹⁹

Kubrick had already showcased his sick or black humour in his previous two films. Michael Herr, who knew him well having collaborated on the screenplay for *Full Metal Jacket* (1987, Kubrick), described Kubrick's 'low adolescent humour, smutty actually, sophomoric, by which I mean a sophomore in high school'.²⁰ One of the reasons Kubrick chose to adapt *Lolita*, for instance, was because he felt 'the story offers a marvellous opportunity for humour'.²¹ Consequently, *Lolita* was full of sexual, toilet, and scatological humour, what John Trevelyan called the 'crude' 'juxtaposition of lavatory noises and sexual situations'.²² Likewise, *Dr. Strangelove* was similarly replete with deliberate, intentional, rich, symbolic, playful, smutty, scatological, sexual language, puns, innuendo and double entendres. Kubrick described *Dr. Strangelove* as 'an irreverent, vicious, satirical comedy. It's

[sic] objective will be to kick a few sacred cows and in the process examine some of the widely held attitudes and theories of the Bomb. It will be in the satirical tradition of Aristophanes, Juvenal and Swift'.²³ Meanwhile, as Kubrick was working on post-production for *Dr. Strangelove*, he registered the title '*Secret Uses of Uranus*'.²⁴ This approach meant he came much closer to resembling the alternative New York intellectual influences of the early sixties, in particular, Jules Feiffer, Lenny Bruce, Mort Sahl, Mike Nichols, Elaine May, Shelley Berman, Tom Lehrer, Joseph Heller, the Beats, Bob Dylan and *Mad* magazine.

Apart from the first half of *Spartacus*, Kubrick's previous films from *Fear and Desire* (1953, Kubrick) through to *Dr. Strangelove* were characterized by what he called 'the magic of words'.²⁵ They contained carefully-constructed dialogue, narration, wordplay, and punning. By contrast, *2001* entered the realm of near wordlessness. In a significant departure from every one of his films from *Day of the Fight* (1951, Kubrick) onwards, all of which used voiceover narration, Kubrick decided to remove every trace of it in *2001*. As a consequence, *2001* was marked by its sheer abstraction, resembling a silent movie complete with intertitles. The result was an extremely elliptical, enigmatic film confounding simple interpretations. This was deliberate. Kubrick wanted to 'convey complex concepts and abstractions without the traditional reliance on words'.²⁶ In an interview with *Playboy* in 1968, he explained his intentions:

It's not a message that I ever intend to convey in words. *2001* is a nonverbal experience; out of two hours and 19 minutes of film, there are only a little less than 40 minutes of dialog. I tried to create a visual experience, one that bypasses verbalized pigeonholing and directly penetrates the subconscious with an emotional and philosophic content. To convolute McLuhan, in *2001* the message is the medium. I intended the film to be an intensely subjective experience that reaches the viewer at an inner level of consciousness, just as music does; to 'explain' a Beethoven symphony

would be to emasculate it by erecting an artificial barrier between conception and appreciation. You're free to speculate as you wish about the philosophical and allegorical meaning of the film — and such speculation is one indication that it has succeeded in gripping the audience at a deep level — but I don't want to spell out a verbal road map for *2001* that every viewer will feel obligated to pursue or else fear he's missed the point.²⁷

It produced what Piers Bizony called an 'unapologetically ambiguous' result.²⁸ Viewers had to work much harder to decode and connect the series of images presented to them. This was particularly evident in the character of HAL, the supercomputer, voiced by Douglas Rain. Whilst *2001* may have indicated a significant break in narrative and aesthetic terms with his previous films in its near silence, shift to colour, and use of pre-existing classical music, it will be argued here that Kubrick carried over his signature humour in *2001* nevertheless. While many areas could be explored – food and toilets being just two – for the purposes of this article HAL will be taken as the focus to demonstrate that Kubrick showed his post-Holocaust sensibility in his construction of HAL who can also be read, as Charlotte Haze in *Lolita* has been, as an emotional, yet submerged, representation of the Jewish American Mother.

HAL as IBM

Much ink has been spilled on the origins of HAL's name, particularly its close proximity to the letters, and hence the company, IBM. Kubrick and Clarke denied any connection, insisting that the name simply stood for 'Heuristically Programmed Algorithmic Computer'. Leonard F. Wheat, however, finds such an accident 'almost inconceivable', suggesting that the odds against such a coincidence were 8,788 to 1.²⁹ As General Buck Turgidson (George

C. Scott) put it in *Dr. Strangelove*, ‘we are ploughing through every possible three letter combination of the code [...] there are seventeen thousand permutations’.

Kubrick and his production crew certainly enjoyed a close working relationship with IBM while making the film. Roger A. Caras, Kubrick’s assistant, and Vice-President of Polaris Productions from 1965-1967, stated, ‘We are working with IBM, of course, and using their technical assistance’.³⁰ While this was for the construction of the IBM electronic newspad (the forerunner of the iPad/tablet) used by the astronauts on the *Discovery*, there was also another reason.³¹ IBM’s role was also to supply equipment, such as their 1052 Typewriter, presumably in the construction of HAL.³² Bernd Eichhorn states that ‘IBM created a far-reaching design for the HAL-9000 predecessor ATHENA’. But Kubrick rejected it.³³ Tellingly, Frederick I. Ordway wrote to Caras informing him,

Stanley says we should procede [sic] on IBM but that we should plan on something less complex than they presented. What we need is a computer room designed by IBM with input and output devices that can be used in action sequences. Again, Stanley emphasizes hard-ware, hardware, hardware.... I’ll keep in touch by mail as I have a few technical questions to ask them resulting from some major plot changes in the story.³⁴

A year later, Kubrick wrote to Caras asking, ‘Does I.B.M. know that one of the main themes of the story is a psychotic computer? I don’t want to get anyone in trouble, and I don’t want them to feel they have been swindled. Please give me the exact status of things with I.B.M.’³⁵ In response, Caras updated Kubrick on the status of ‘IBM and the nervous computer’:

Sometime ago I explained to IBM at great length the change in the script as effects HAL. To be absolutely certain that the situation was clear and in the open I called C.C. Hollister their Corporate Director of Public Relations again today and repeated the story going so far as to explain to him that HAL actually causes human deaths. I

made it very clear, and this is completely true to the best of my knowledge that the name IBM is never associated with equipment failure and that it is obviously not an IBM machine. IBM's position is that if IBM is not associated with the equipment failure by name they have no objection if it is decided to give screen credit to the advertising companies.³⁶

Clearly there was some thought given to the issue and desire not to offend IBM. Yet, IBM demanded that all of its logos be removed from the *Discovery's* instrument panels and advised its employees not to see the film.³⁷ Whether the link between the names IBM and HAL was deliberate or just serendipitous will never be known for certain; however, what is clear that the construction of HAL was indebted to IBM's assistance and further that the two have been indelibly interconnected in the public's mind. To this end, by refusing to sever the connection between IBM and HAL by altering the latter's name, what was Kubrick seeking to achieve?

IBM, Nazism and the Holocaust

Geoffrey Cocks who has written extensively on Kubrick and Holocaust feels that because of 'its positive outlook, *2001* does not concern itself with the Nazi past'.³⁸ Yet, in spite of Cocks' assertion, it is possible to suggest that in invoking IBM – both explicitly and implicitly – Kubrick had inserted an oblique reference to the role that company played in facilitating the Holocaust. Edwin Black has pointed out how IBM forged a strategic alliance with Nazi Germany in the first weeks after Hitler came to power in 1933 and which continued well into the Second World War. IBM and its subsidiaries helped create enabling technologies, step-by-step, from the identification and cataloguing programmes of the 1930s to the selections of the 1940s. IBM's Hollerith punch card technology assisted in the identification and cross-tabulation of Jews who were then targeted for efficient asset

confiscation, ghettoization, deportation, enslaved labour, and, ultimately, annihilation. IBM's custom-designed and constantly updated Hollerith systems enabled the Nazis to automate the persecution of the Jews with speed and accuracy. IBM technology was at the heart of the Third Reich and its occupied territories in Europe, from the identification of the Jews in censuses, registrations, and ancestral tracing programmes to the running of railroads and organizing of concentration camp slave labour. According to Black,

People and asset registration was only one of the main uses Nazi Germany found for high speed data sorters. Food allocation was organized around databases, allowing Germany to stare the Jews. Slave labor was identified, tracked, and managed largely through punch cards. Punch cards even made the trains run on time and cataloged their human cargo.³⁹

Indeed, the efficiency and expansion of the Nazis' management, mobilization and extermination of populations across occupied Europe was

largely beholden to IBM and its custom designed and maintained punch card machine and card sorting system: this machine and system allowed administrators to more easily name, distinguish, and track laboring bodies, reproductive bodies, racially marked bodies, bodies deemed genetically productive or pernicious; in short, to manage what the regime regarded as raw materials in ways that could be mobilized, disciplined, resettled, exploited, and discarded by offices and functionaries as needed.⁴⁰

In his previous film, Kubrick had already implicitly linked IBM to nuclear holocaust and hence the Holocaust. In a version of the *Dr. Strangelove* script entitled, 'The Rise of Doctor Strangelove', Kubrick refers to the titular character possessing an IBM 906 digital computer.⁴¹ Images of the IBM model number 7090 had been shot by Kubrick for the film but ultimately cut according to John Baxter.⁴² Was it an IBM tasked with 'ploughing through

every possible three letter combination of the code’? Production Manager Clifton Brandon did insist that a member of IBM staff be present as s/he is ‘required to actually operate their equipment’.⁴³ And when Dr. Strangelove outlines his plans for some new Nazi-style eugenics breeding programme, he refers to the use of computers for *selection*:

Well, that would not be necessary Mr. President. It could easily be accomplished with a computer. And a computer could be set and programmed to accept factors from youth, health, sexual fertility, intelligence, and a cross section of necessary skills.

Such a computer would most likely have been an IBM model.

Contemporary reviewers perceived a link between HAL (IBM) and the Nazis. John Allen, in *The Christian Science Monitor*, wrote: ‘As Hitler was a false human version of the superman so the HAL 9000 computer becomes an equally destructive mechanical version of the superman’.⁴⁴ According to Georg Seesslen, since HAL’s name is midway between the words ‘hell’ and ‘hail’ (as in ‘Heil Hitler!’), HAL is a ‘fascist machine’.⁴⁵ Indeed, HAL seems to be a futuristic, disembodied version, or extension, of Dr. Strangelove himself, Kubrick’s satiric ex-Nazi, modelled on NASA rocket scientist Wernher von Braun. This is indicated, early on, when Kubrick wrote to Caras asking whether IBM would be willing to assign ‘a mad computer expert [who] can be around and advise on dialogue and jargon’. Such a figure sounds like Strangelove himself.⁴⁶ And when David Bowman (Keir Dullea) deactivates HAL’s memory banks, bit by bit, the computer’s final words are the rendition of the song ‘A Bicycle Built for Two’, another Kubrick joke, referring to a vehicle that, like Dr. Strangelove, HAL cannot even ride. The ‘two’ also invokes doubles, another prominent Kubrick theme, suggesting a pairing of HAL and Strangelove.

When HAL coldly, surreptitiously and antiseptically murders the hibernating astronauts on board the Discovery, their demise is marked by a bland bureaucratic

euphemism characteristic of the Holocaust, 'Life Functions Terminated'. Michel Chion suggests that this chilling phrase encodes 'two kinds of prophetic humour':

There is the humour that consists in using an apparent euphemism so as not to say 'death'. [...] The other joke is the use of one word, *function*, to designate (and thus place on the same level) both the activity of the computer and the normal processes of human life reduced to the physiological. In terms of narrative logic, we realise that the builders of the Discovery must have had a good sense of black humour and also plenty of cynicism, since they already planned for, made and installed the warning message 'Life functions terminated', designed to flash calmly like other messages.⁴⁷

Gene D. Phillips remarks, 'Never before has a film portrayed multiple murder with such shattering indirection'.⁴⁸ This sequence's presentation of what Mario Falsetto calls 'an antiseptic, emotionless murder, with no contact between the murderer and the victims' indeed invokes the automated killing of the death factories of the Final Solution.⁴⁹ This is reinforced by the lack of personalization: 'the same message suffices for all three cosmonauts, who die collectively and anonymously'.⁵⁰

The film contains other German allusions. Susan Sontag, in the *New York Review of Books*, opined that *2001* 'can also be seen as illustrating certain of the formal structures, and the themes, of fascist art'.⁵¹ Norman M. Klein argues that *2001* resembles Wagner who, as a feature of his *gesamtkunstwerk* (total theatre), 'exaggerated the gulf of blackness (prescient isolation) between the audience and the stage, and also hid the orchestra from view, turned down the house lights in complete darkness, and often exploited pitch-darkness inside the proscenium arches'.⁵² Furthermore, as Geoffrey Cocks points out, Kubrick's musical selections 'bear traces of the Second World War'.⁵³ He points to the compositions by Ligeti and Khachaturian, and the recordings on Deutsche Grammophon conducted by Nazi Herbert von Karajan.⁵⁴ Susan White has written of how Richard Strauss's *Thus Spake Zarathustra*

was a signature of Nazism. ‘Kubrick, a Jewish polymath with a razor-sharp ear for the cultural connotations of music, was surely aware of Strauss’s Nazi affiliations’.⁵⁵ When David Bowman smashes the glass, the broken shards on the floor pose a reminder of *Kristallnacht* [literally, ‘Night of Crystal’, but which is often referred to as the ‘Night of Broken Glass’], the wave of violent anti-Jewish pogroms which took place on November 9 and 10, 1938, some thirty years prior to the film’s release.

There are other subsurface allusions to the Holocaust, a theme which Kubrick had inserted into his films from *Fear and Desire* onwards. In Kubrick and Clarke’s novelization of *2001*, the Dawn of Man sequence explicitly refers to ‘the long, pathetic road to racial extinction’.⁵⁶ This description of the destiny of *2001*’s ‘man-apes’, echoes the Nazi dream of the Final Solution. Uncannily, images of the Namib Desert in South West Africa were used as transparencies for front projection during the filming of the Dawn of Man sequence.⁵⁷ Under German colonial occupation, South-West Africa was the site of the extermination of the Herero people in 1904, a precursor to the Nazi policy of *lebensraum* and the Final Solution. Indeed, Nazi sympathies died hard in that part of Africa. John Baxter reports how when Kubrick’s runner, Andrew Birkin, was in the former Germany colony of South-West Africa, shooting backgrounds for *2001* he

found a bookshop in the town of Swakopmund still stocked with postcards of Nazi leaders and boxes of pre-war Nazi Party yearbooks and magazines, all in the original packaging, and being sold for their cover price to an obviously receptive white community. The local museum also contained a cabinet inlaid with a picture of what appeared to be Christ surrounded by children but proved, on closer inspection, to be Hitler flanked by young Nazis.⁵⁸

And, in designing *2001* Kubrick worked closely with Frederick I. Ordway III and Harry (Hans-Kurt) Lange, both of whom worked closely with Wernher von Braun at the NASA Marshall Space Flight Center. Christopher Frayling asks

What did Kubrick feel about working with such close associates of von Braun, one of whom was German? After all, Dr. Strangelove, as played so memorably by Peter Sellers, had in many ways been a wheelchair-bound caricature of von Braun. Peter George's novelization of the screenplay – then recently published – was in no doubt about this. Sellers was to state categorically, 'It was always Wernher von Braun', and Ken Adam confirms it. He should know: the two men went to the same school in Berlin in the 1920s. Ordway recalls: 'Of course, Kubrick was Jewish and Harry would come in with Germanic clothes sometimes. There was a time when he even wore Bavarian jackets! But they got along fine. Stanley would sometimes say to me: 'Well I don't think I ever imagined I'll be working this close to a German'.⁵⁹

Finally, the film's structuring absences, the lack of dialogue, the vacuums in the film, evoke the memory of the Holocaust. For Klein,

Kubrick's immersive blank also feels weirdly nostalgic, like the architectural 'voids' inserted throughout Daniel Libeskind's Jewish Museum in Berlin. Those voids stand in for the generations of Jews who were never born due to the Holocaust [...] The closest void to *2001* in Libeskind's Jewish Museum is a blank room that is air-conditioned to a chill. There you pretend in darkness to await death, or await never being born.⁶⁰

Kubrick's voids were also evident in sound. Piers Bizony has pointed out how, sometimes Kubrick left the soundtrack out altogether, 'allowing the audience to listen to the terrifying silence of deep space, to the vast inhuman nothingness between worlds'.⁶¹ These voids are signalled by funerary markers. As Michel Chion states that the 'monolith is a symbol of

burial'.⁶² Indeed, the monolith resembles many Holocaust (and other war) memorials, often blank slabs mourning the dead. Certainly, the excavated pit in which the monolith is discovered resembles an archaeological dig or a crime scene, perhaps the site of a mass grave (as is seen later in *Full Metal Jacket*), what HAL refers to as 'rumours about something being dug up on the moon'. The monolith, we learn, has been 'deliberately buried', hidden on the moon where its traces would not be immediately discovered; tracks are being covered here. Yet, the visitors take souvenir snapshots (not unlike those taken in Namibia and during the Holocaust, as well as by visitors to death camps today) and this act of uncovering, and exposure to photography, triggers an ominous alarm signal.

HAL as JAM

HAL substitutes for the crew's absent parents. HAL and the crew become a replacement or virtual family for the ones they are forced to abandon by the terms of their mission. There are various references in the film to absent families, especially parents, partners and offspring such as when Dr. Frank Poole (Gary Lockwood) receives birthday greetings from his distant parents on Earth. The sequences of the various spacemen in parts two, three, and four eating reinforce this invocation of the family that is at the heart of Jewish life whether religious and secular. HAL is the paternal authority. HAL controls all systems aboard the *Discovery*, plots and maintains the ship's course, monitors the condition of all its thousands of working parts and automatically performs a multitude of additional functions. As Poole puts it, 'There isn't a single aspect of ship operations that's not under his control'. When Poole challenges the performance record of the 9000 computer series, as Randy L. Rasmussen points out, 'HAL dismisses Frank's concern in the manner of a parent reassuring a child with a pat on the head'.⁶³

For Michel Chion, HAL is ‘on the side of the maternal’.⁶⁴ HAL began life as female, her initial name was to be ‘ATHENA’ – the Greek goddess of wisdom, war, and fertility. Kubrick wrote to Caras, ‘Acknowledge criticism of name “Athena”. We plan to change it’.⁶⁵ ‘She’ was also to speak with a woman’s voice. Alexander Walker speculates that this idea was abandoned because ‘the feminine tones would have inserted misleading sexual implications into its relationship with the astronauts’.⁶⁶ After all, Kubrick informed an interviewer that it was common for NASA engineers to ‘talk about machines as being sexy’.⁶⁷ Instead, Kubrick hired Douglas Rain to voice HAL but from whom he coaxed a ‘patronizing, asexual quality’.⁶⁸ Nevertheless, as the brain and nervous system of the *Discovery*, which is female, HAL can also be read as female. Furthermore, in the novelization of the film, the *Discovery* is described as the ‘mother ship’, making HAL the brain and nervous system of this mother. Since HAL is also the caretaker of the ship, HAL is responsible for caring for the crew. Randy L. Rasmussen points out how the ‘*Discovery* is literally everything to its occupants’ and Boylan states that HAL’s ‘purpose is to take care of humans; he sees to their every need (well, perhaps not all, sex being markedly absent from the film)’.⁶⁹ Rasmussen and Boylan here precisely point to the maternal role HAL plays: HAL is the nurturing mother figure, caring and cooking for his figurative children but whose relationship to the crew does not exceed its proper bounds. Indeed, many of the images in this section of the film suggest birth or ‘abstract uterine imagery’, as when Poole ‘emerges from his space pod like an embryo – a tiny creature born into the sea of space’.⁷⁰

HAL’s status thus feminizes him, magnified by his sexual ambiguity. HAL has been described as the world’s first gay or ‘fag’ computer.⁷¹ Charles Camplin of the *Los Angeles Times* referred to ‘a rather epicene talking computer named Hal’; Michael Williams wrote of ‘the (gay?) voice of Hal the computer’; while *Newsweek*’s Joseph Morgenstern felt HAL ‘carries on like an injured party in a homosexual spat’.⁷² Unlike the initial suggestion of

ATHENA, the name HAL certainly lends him an ambiguous quality, particularly in sexual terms. Arthur C. Clarke noted that HAL 'had been living a lie'.⁷³ In another of Kubrick's sly jokes, when HAL refers to Bowman as 'Dave' rather than 'David', this has the effect of indicating friendship and familiarity, even intimacy, between man and computer, and later even hints that HAL goes awry because he is a jealous homosexual lover.⁷⁴ HAL comments that he has 'a stimulating relationship with Dr. Poole', while Bowman feels, 'I can't put my finger on it, but I sense something strange about him'. Kubrick, however, denied all of this. When asked by Joseph Gelmis if HAL's undertone of sexuality was intentional, he replied: 'No, I think it's become something of a parlour game for some people to read that kind of thing into everything they encounter. Hal was a "straight" computer'.⁷⁵ Yet, as Patrick Webster points out, 'even Kubrick's insistence of Hal being "a straight computer" would appear to imply Hal at last had a sexuality of some kind'.⁷⁶

HAL has been described as more human, emotional and sympathetic than any of the astronauts in the film. HAL is, in theory, capable of emotional responses indistinguishable from those displayed by his human counterparts but many have commented that HAL appears more human, rounded, and sympathetic than the astronauts.⁷⁷ For example, when Poole receives birthday greetings from his distant parents on Earth, he appears to be bored. Furthermore, we experience events from HAL's subjective point of view; in fact, we are even invited inside HAL's mind and memory, learning of his 'childhood' and 'birth', as well as physically entering his 'brain'. As a consequence of this personalization and individuation, 'the audience feels sympathy for HAL when he is finally disconnected. None of the other characters in the film is ever presented with this degree of empathy'.⁷⁸

It also, and somewhat stereotypically, codes HAL as the unit's mother figure further feminizing him. HAL's proverbial apron strings tie him to a long tradition of Jewish humour, much of which is food-related, and many of these jokes are concerned with Jewish mothers.

At the same time as these jokes denigrate the mother figure, however, they are also laced with reverence for her cooking. She is known by the Yiddish term as the '*baleboosteh*' which means a 'praiseworthy mother'. The '*Yiddische mama*' is a positive, nurturing, long suffering, earth mother-like figure. HAL combines element of this character together with the stereotype of the Jewish American Mother (JAM) that began to emerge in post-war American Jewish literature at in the mid-1950s. In 1955 Herman Wouk's best-selling novel, *Marjorie Morningstar*, produced a stereotype that would be much copied over the coming years. Unlike her pre-Second World War counterpart, the Yiddische mama, who was viewed with affection, the JAM was not. She was presented as meddlesome, domineering and controlling.

Many films also have played with the stereotype of the Jewish mother, especially in her modern American incarnation, in which she is presented as an over-eating, over-caring, and overbearing matriarchal figure who stuffs her children with far more than they can possibly digest. As the poet Isaac Rosenfeld famously put it in 1949, 'the hysterical mother who stuffs her infant with forced feedings (thereby laying in, all unwittingly, the foundation for ulcers, diabetes, and intestinal cancer with each spoonful she crams down the hatch) is motivated by a desire to give security to her child'.⁷⁹ By the end of the 1950s, the Jewish mother became an object of literary ridicule, as evidenced by Philip Roth's *Goodbye Columbus* (1959), a template which, in many ways, fitted HAL.⁸⁰

HAL ensures that the astronauts have enough to eat; like the stereotypical JAM, HAL prepares more than they possibly can consume. Yet, like a *baleboosteh*, HAL also takes care of their emotional needs and welfare. Further coding HAL as the JAM, HAL is also chatty and verbose unlike the laconic humans. HAL does not just sound emotional, but over-emotional. HAL is described in drafts of the screenplay and the novelization as 'neurotic' and 'hypochondriac', experiencing anger and guilt.⁸¹ Note how Roger Caras had earlier described HAL as 'nervous'.⁸² HAL is also paranoid and so over-anxious HAL spies on Frank and

Dave. Indeed, HAL suffers from a nervous breakdown! These were all traits assigned to the stereotypical JAM. If, as has been suggested, Frank and Dave relate to each other ‘like an old married couple who no longer need to talk to each other’, then HAL is the anxious mother(-in-law).⁸³ And when HAL is being disconnected by Bowman, HAL sings the song ‘Daisy, Daisy’ to Dave, ‘I’m half crazy, all for the love of you’ it could be read as the dying pleas of a desperate mother. The discarding of the name Athena further opened up the possibility of reading HAL as Jewish by not anchoring the computer in classical Greek mythology. Only *Mad Magazine* has recognized this construction, suggesting that HAL was like the stereotypical JAM. In its spoof of the film, as Dave deactivates HAL, the computer complains – in a stereotypically Jewish fashion, ‘Pick up a phone and call me once in a while – you may forget me but I’ll always carry a picture of you in my memory circuit. Goodbye I gave you the best years of my expected life. My son the big deal astronaut’.⁸⁴

HAL as Kubrick

Is there some self-reflexivity in the creation of HAL? Clarke recalled Kubrick’s ‘mild hypochondria’:

One of Stanley’s few personal idiosyncrasies is a rather exaggerated fear of illness; amateur psychologists would instantly link this with the fact that his father is a doctor. Anyone with a bad cold is liable to be treated like an advanced case of leprosy, and conversed with at a range of not less than twenty feet.⁸⁵

Chion points out how subjective shots are exclusively reserved for HAL through whose eye we see.⁸⁶ Thus when we observe events from HAL’s point-of-view, presumably it is also from that of Kubrick, watching through the lens. Indeed, when Dave climbs into HAL’s brain, the hand-held camerawork was done by Kubrick himself.⁸⁷ ‘Kubrick irradiates the setting with the colour he himself most enjoyed working in: the infrared light of the

photographer's darkroom'.⁸⁸ Sybil Taylor and Ulrich Ruchti add, 'To a director who spent his youth as a professional photographer, the flat red light without shadow that bathes the man and the machine must have had a retrospective importance'.⁸⁹ Listening to the tape of an interview between Jeremy Bernstein and Kubrick in 1965/66, one hears HAL crossed with Quilty at times. In fact, as 'the camera rolled, HAL's responses at times came from the voice of Stanley Kubrick at his electronic outpost via the microphone and speaker hookup. The actors responded to HAL's lines, delivered in the director's irrepressible Bronx accent, which would later be rewritten and dubbed by Douglas Rain'.⁹⁰ Thus, like HAL, Kubrick was 'noplacement', a disembodied voice, watching, ubiquitous, but not seen. Kubrick resembled the Over-mind of Clarke's *Childhood's End*, a vast alien intelligence directing and dictating the action. When HAL is being interviewed by Martin Amer of the BBC, one can certainly imagine Kubrick being asked the same question as HAL 'despite your enormous intellect, are you ever frustrated by your dependence on people to carry out actions?' Indeed, one can picture Kubrick in the draft novel's description of HAL:

The computer's memory was enormous – equivalent to a great library. It could recall, and display on reading screens, most of the great classics of literature, as well as thousands of technical and scientific works. [...] Also stored in the cells of this vast electronic memory, to help the crew relax when off duty, were thousands of hours of music and several hundred of the best movies ever made, right back to the great Chaplin comedies.⁹¹

Thus, Vincent LoBrutto's use of metaphor in his chapter on *2001*, intentional or otherwise, constantly compares the director to a computer: 'His capacity to grasp and disseminate information stunned many who worked with him. Like a human computer, Kubrick filed everything into the synapses of his brain'; 'Kubrick's mental computer accessed perpetual information banks'; 'Kubrick's gluttonous data bank'; 'Stanley Kubrick's intensity remained

constant. As he watched and supervised every minute detail, he rarely blinked, his eyes trained like a laser'; 'The logical computerlike mind of Stanley Kubrick employed reason to solve every problem in front of him. His emotional life was more difficult to interpret'.⁹² Production designer Ken Adam, who worked on *Dr. Strangelove*, also felt 'he's like a human computer'.⁹³ HAL plays chess, defeating Poole. In fact, the game they play is based on a real-life analogue played in 1910 between Roesch and Willi Schlage, with HAL reprising Schlage's role as Black. Perhaps it was out of a form of identification with HAL that Kubrick gave HAL what Jerome Agel calls 'the best and funniest line of the entire movie'⁹⁴: 'I know I've made some poor decisions recently, but I'm feeling much better now'. Agel glosses: 'Pretty rich stuff, coming from a megalomaniac paranoid depressive who's just committed multiple murder'.⁹⁵ Since 'Hal's emergence as a major player was surely Kubrick's doing',⁹⁶ he made HAL the 'only genuine character in the film'.⁹⁷

Other little gestures on board the *Discovery* point to Kubrick's interests. The name Athena recalls a mural of the goddess at Columbia University which Kubrick photographed for *Look* magazine over 1947-48 and where Kubrick later audited classes. A ping pong table was placed on the ship – reflecting the opening of *Lolita* – and Poole shadowboxes as he jogs echoing Kubrick's photography and films *Day of the Fight* (1951, Kubrick) and *Killer's Kiss* (1955, Kubrick). Kubrick's use of *The Blue Danube* waltz, in name and nature, points to his Central European origins and, as Michel Ciment notes, 'adds a dash of Kubrick's characteristic nostalgia for a period when Johann Strauss's melody cradled revellers on board the Big Wheel in Vienna's Prater'.⁹⁸

In other self-reflexive gestures, Kubrick had even shot scenes on the moon base featuring his family. His daughters Anya and Katharina are shown painting pictures while a woman talks to Dr. Heywood Floyd (William Sylvester).⁹⁹ A costume list in the archives titled 'Women' refers to a 'Lady Artist' who is played by 'Mrs. Kubrick'.¹⁰⁰ Although this

scene was ultimately discarded, Kubrick's youngest daughter, Vivian, remained in the film, as Floyd's six-year-old daughter, 'Squirt'.¹⁰¹ Floyd calls by videophone from the space station, asking her, 'Do you want anything special for your birthday?' She pauses and replies, 'A bush baby'. This ninety second scene has been interpreted as evidence of the tender connection between Kubrick and Vivian, the daughter most likely to follow in his footsteps, and acts almost as a kind of home video.

The focus on Floyd's pen may even point to what Christiane called his 'lifelong love affair with pens, pencils and markers' which he 'always acquired [...] in multiples as if the supply was about to dry up'.¹⁰² A picture of Kubrick, aged eight, shows him with such a pen.¹⁰³ In the *New York Times*, Renata Adler described the whole film as 'the fantasy of a precocious, early nineteen-fifties city boy'.¹⁰⁴ She continued, 'The whole sensibility is intellectual fifties child: chess games, body-building exercises, beds on the spacecraft that look like camp bunks, other beds that look like Egyptian mummies, Richard Strauss music, time games, Strauss waltzes, Howard Johnson's birthday phone calls'.¹⁰⁵

Kubrick even makes three 'appearances' in *2001*. We hear Kubrick's own respiration in two extended sequences and he also appears 'by accident', according to Cocks, when his image holding a handheld camera can be seen for two seconds in the visor of one of the astronauts inspecting the monolith on the moon.¹⁰⁶ However, given that a similar 'accident' had occurred during the opening of *Lolita*, when a spectral figure is seen exiting the set during a transition, one wonders if it was indeed unintentional. David Denby even compared Kubrick to the film's famous monoliths themselves: 'Kubrick is like the black slab in *2001*: a force of supernatural intelligence, appearing at great intervals amid high-pitched shrieks, who gives the world a violent kick up the next rung of the evolutionary ladder'.¹⁰⁷ If that is the case, then Kubrick makes a total of seven appearances in the film.

HAL's Jewishness can also be read in terms of Kubrick's use of colour. Historically, red was a colour used to demarcate Jewishness via circles cut out of red cloth, red overskirts, tabards, and wheels in the fifteenth century. HAL has a single Cyclopean red eye and as Bowman shuts HAL down, the brain room is suffused in red light. HAL's androgynous, 'equivocally gendered', and 'oddly asexual' qualities that all play into the stereotype of the 'queer' or 'sissy' Jew, as do his other traits, including superior intelligence, chess-playing skills, and mimicry.¹⁰⁸ All three of these have been historically coded as stereotypically Jewish signifiers. In this respect, it is significant that Kubrick considered Jewish voices for HAL. He suggested to Jeremy Bernstein that 'maybe it [HAL] ought to sound like [rabbi-cum comedian] Jackie Mason'.¹⁰⁹ He later recorded Jewish actor Martin Balsam (who had appeared in *Twelve Angry Men* (1957, Sidney Lumet) and *Psycho* (1960, Alfred Hitchcock)),¹¹⁰ but rejected him because, according to Vincent LoBrutto, his vocal quality was 'too American and overly emotional'.¹¹¹

Conclusion

In *2001*, through the character of HAL, Kubrick continued his exploration of his signature concerns: The Holocaust and Jewishness. He did so in his customary way: through subversive humour but also in troublingly conflating Nazism and Jewishness – a characteristic which marked his previous two films. If HAL can be read as a metaphor for the IBM machines that expedited the genocide of European Jewry with such lethal efficiency, then what does it also say that HAL can simultaneously be read as Jewish through Kubrick's casting choices, pre-production, self-reflexivity, and other decisions, all of which captured and reflected contemporary stereotypes of Jewishness being disseminated by Jews? This is an important question because HAL is not only *2001*'s proverbial heart of darkness, but also because *2001* marked a significant watershed and a major turning point in Kubrick's oeuvre. Kubrick cut

his physical ties to the United States, relocating permanently to Britain, where he was to stay for the remainder of his life. He transferred his entire base of operations from NYC. This new environment gave him full creative autonomy with almost no interference, allowing him to experiment with new ways of film-making. With *Lolita* and *Strangelove* under his belt, he was under no pressure to produce another immediate hit. He had the luxury of time, which doubled in the making of *2001*. He also abandoned his clean-shaven, black suit, tie, and white-shirt fifties New York intellectual look in favor of scruffier, hippie sixties one. *2001* was also his first solely-helmed film in color; while he had worked on *The Seafarers* (Kubrick, 1953) and *Spartacus*, he lacked total control on both projects. *2001* set the benchmark for Kubrick's future films. This case study of construction and possible readings of HAL has, it is hoped, opened up new avenues of inquiry. A full scrutiny of the available archival resources has moved the debate on in new directions to illustrate that there are still fruitful avenues of inquiry in which to explore the films of Stanley Kubrick but also that there is still so much more to understand. If HAL is the key to unlocking the secrets of *2001*, then perhaps *2001* is the key to unlocking the secrets of Kubrick's entire canon.

Endnotes

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