

The Nomos of the Eye

An Integrative Image of China's First Nuclear Test on October 16, 1964

Abstract

On October 16, 1964, a revolution of the eye unfolded. 36,000 kilometres above the Pacific Ocean, the first geostationary satellite, Syncom-3, received a transmission from the Tokyo Olympics and relayed the broadcast on to Europe via Relay 1. That same day, an optical double flash was registered in the ionosphere above Lop Nur, Xinjiang. As the fireball's surface was rapidly overtaken by an expanding hydrodynamic shock wave, the front acted as an optical shutter, hiding the extremely hot and bright early fireball behind an opaque ionised shock front. Earth became eye, rising in a plasma toward the ionosphere. A few hours later Radio Beijing began broadcasting the news to the entire world.

In the summer of 1950, Carl Schmitt, the German jurist, wrote to 'the question of a new nomos of the earth.' Against the idea of a free-floating jurisprudence, purified from the historical events that make law possible, 'human thinking again must be directed to the elemental orders of its terrestrial being here and now. We seek to understand the normative order of the earth' (Schmitt, 1950, p. 39). But what, when the earth becomes an eye? In the intense fireball, the nomos undergoes a dialectical revolution: one divides into two 一分为二, the nomos fissions with the noos, creating the eye as a primordial surface for technical man (sic) and its machines to probe and colonise like the surface of a moon. The primary research question of this project draws on the work of Joseph F. Fletcher and his model of 'integrative history' to ask: how might this image of October 16, 1964 speak historiographically?

Introduction

Hot noise

In August 1958, ‘a select group of officers and men from the People’s Liberation Army garrison at Shangqiu, in Henan province, boarded a train that took them west. All that their superiors had told them was that they would be roaming the western part of China in search of “appropriate locations for a secret facility”. Their first stop, ten days into their journey, was at Dunhuang in northwestern Gansu province. They examined parts of the Gobi Desert to learn what it would be like when they began their search in earnest. After a week, they returned to Dunhuang, sat in a movie theatre, and discovered that their real mission had two parts: to choose a location for a nuclear test site and then to build it’ (Richelson, 2007, p. 140). I was curious of how this moment in the film theatre might have unfolded. In *The Hot Noise of Open Air Cinema*, Jie Li (2020) writes of how the Chinese revolution was a media revolution, thousands of film projection units fanned out into the Chinese countryside, cinema arrived as the ‘hot and noisy’ (renao) event, people would speak of ‘watching hot noise’ (kan renao)’ (Li, 2020, p. 2).

Chinese mobile cinema, Li notes, ‘created an electrifying environment that radiated outward, entangling viewers in a centripetal fashion - like a disco ball.’ ‘Old peasants tried to light their pipes at the projectionist’s light bulb’, the screen ‘swayed in the wind like a flag lighting up a dark firmament’, the screen magnified tiny insects, starlight scattered overhead. Sometimes the man pedalling the generator would tire, the current would drop and the sound on screen slur, well known arias fell distorted, distant thunder warned rain, dogs barked at approaching thieves amidst cicadas, croaking frogs, mosquitos smacking thighs, feet shuffling the cold. At the heroic peak of the film, the man on the pedals might speed up, throwing the film and its audience into fits of laughter. A projectionist at the Qinghai Film Gazetteer would remember many Tibetans riding their horses for tens of kilometres to listen to the movie team’s phonograph, the lon lon sound of the generator,

draining the skies of thunder and lightning (Li, 2020, pp. 14-15). That night in Dunhuang, was there a mobile theatre across the road from the military men, showing a different film, Xie Jin's 女篮5号 maybe? Parallel lines and secret arcs mark the surface.

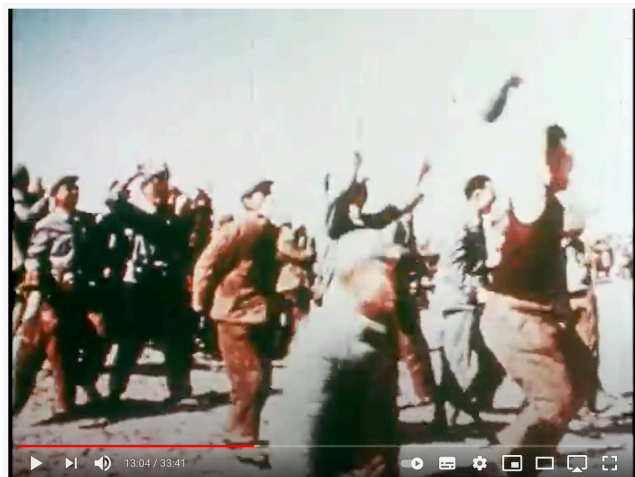
In *Reunified through Radio: Media, Technology, and Politics in Modern China 1923-1958*, John Alekna opens with a scene, April 19, 1958: 'the alleyways and courtyards of Beijing stirred far earlier than usual. Shuffling and whispers penetrated the predawn darkness as people lumbered toward their combat posts—awake but in near silence. Standing at the municipal radio station, Wang Kunlun, acting as chairman of the Encircle and Suppress Sparrows Headquarters Committee, gave the signal to attack. Two-hundred ninety loudspeaker networks, spread like a web across the capital, shouted as one, bringing Wang's instructions to key junctions of the city, each garrisoned by speakers. Three million Beijingers began to shake the sky with a thunderous clatter. The biology of a small bird, the common sparrow, lay at the root of this strange event [...] Noise washed over the birds from all directions. For four hours that morning they were kept in the air by sound, flying about without a place of refuge in the 8,700 square kilometres of the city' (Alekna, 2020, pp. 1-2).

Magnets

Isabelle Stengers writes of historical transition 过渡: 'like the Amur or the Yukon rivers, history filters, abandons, retains, returns, forgets, lazes around, freezes, or seems to sleep among multiple tracteries and suddenly, without our being able to foresee it, brings about a linear flow, a straight line, irresistible, nearly permanent, as if immortal. History flows, but other historical possibilities "dry up", incapable of resisting the grand narrative taking shape, and it is all those absent histories, all the questions that weren't asked or were left unanswered, that delineate the true space of percolation (Stengers, 2010, p. 237). Du Fu writes, 玉露凋伤枫树林 / 巫山巫峡气萧森 / 江间波浪兼天涌 / 塞上风云接地阴 / 丛菊两开他日泪 / 孤舟一系故园心 / 寒衣处处催刀尺 / 白帝城高急

暮砧. On the river surging waves rise to meet the sky, Above the pass wind and cloud join the earth with darkness.

Were there Indian Ocean transmission lines, the day the test magnetised their existence? The Chinese revolution was a media revolution. The Americans were peering in, there were telephone lines, connecting overseas bureaus in a vast looking web, Corona spy satellites launched off the east coast, flying their orbital arcs over Lop Nur, releasing their cartridges above the Pacific Ocean, Hawaii to be caught, there were underground seismic devices in the Himalayas, the corroborated material of a Scottish engineer travelling overseas, primed also listening for hot noise, at an interscale qualitatively different and yet, bridging the earth with darkness, meeting the river's eye with a sky, larger than known places. The psychological effects of being a big nation with big deserts, the Gobi Desert and the Los Alamos, Trinity mirrors. Coronil writes, the state was a magnanimous sorcerer in those early days, a magical state, seizing eyes through the spectacle.



‘FEYNMAN was standing twenty miles from the Trinity site when he was handed dark glasses. He decided he wouldn’t see anything through the dark glasses, so instead he climbed into the cab of a truck facing Alamogordo. The truck windshield would protect his eyes from harmful ultraviolet rays, and he’d be able actually to see the flash. Even so, he reflexively ducked when the horizon lit up with a tremendous flash. A full minute and a half after the explosion, Feynman finally heard an enormous bang, followed by the rumble of man-made thunder. “The big boom came about 100 seconds after the Great Flash—the first cry of a new-born world. It brought the silent, motionless silhouettes to life, gave them a voice. A loud cry filled the air. The little groups that hitherto had stood rooted to the earth like desert plants broke into dance”’ (Bird and Sherwin, 2007, p. 149). In the National Archives and Records Administration, a 16mm film under the title: Chinese Film 1966 ARC Identifier 72247 / Local Identifier 342-USAF-50534, gathering dust.

Literature Review

Joseph Fletcher would describe the project of integrative history as the search for, description and explanation of interrelated historical phenomena. ‘However beautiful the mosaic of specific studies that make of the “discipline” of history may be, without a *macrohistory*, a tentative general schema of the continuities, or, at the least, parallelisms in history, the full significance of the historical peculiarities of a given society cannot be seen’ (Fletcher, 1985, p. 40). Brian Massumi writes of a history that moves: ‘in order to grasp what animates and moves history, it is necessary to move to a more abstract level. For the force of history is more abstract than what it resolves into in its concrete expressions. It is a radically abstract force [...] A philosophical analysis of the historical field is tasked with evaluating the power expression. To do so, it must think as best it can the immanent and ulterior limits of the field of expression: the polarities bounding its furthest reaches and the differential engine everywhere at its heart’ (Massumi, 2015, p. 50).

Massumi writes of searching for the exceptional event. Foucault would likewise write of an effective history as a total description, ‘drawing all phenomena around a single centre in contrast to a general history that deploys the space of dispersion’ (Foucault, 1972, p. 24). The proposition of the integrative image locates in Joseph Fletcher’s call for an integrative history an arrested moment with which to trace the parallelisms of two transmission lines, a geostationary and a terrestrial relay, they were the polarities at its furthest reaches, and the differential engine at its heart, a radical power expression of a U.S. technological zenith-point and the chaser closing distance.

江间波浪兼天涌, 塞上风云接地阴. W.G. Sebald writes of a Roche limit in memory, ‘the rings of Saturn consist of ice crystals and probably meteorite particles describing circular orbits around the planet’s equator. In all likelihood these are fragments of a former moon that was too close to the planet and was destroyed by its tidal effect (→ Roche limit)’ (Sebald, 1995, ii). Roche limit calculations would have unified the nuclear scientist and the space telemetrist on October 16, 1964 staring out at oblique and vertical space. Memory similarly functions in tides and fragments. Researching in archives follows something of a nuclear test site logic, corroborations, cubist elisions, perspectival matchings proceed by floodlight, the optical shutters click, measurements are gridded on a desert surface, searching for an intelligible shape, the call from the tower, the light, Thomas Pynchon describes the Berlin night: ‘blasted dry-docks, charcoal ribs of warehouses, cylindrical chunks of submarine that never got assembled, go ripping by in the darkness. Separations are proceeding. Each alternative Zone speeds away from all the others, in fated acceleration, red-shifting, fleeing the Center’ (Pynchon, 1973, p. 798).

In his 1963 polemic *Theory of the Partisan*, Carl Schmitt would recite one of Mao’s poems, “Kunlun” (1935) imagining taking a sword to split the world into three pieces: “one inherited by Europe, one presented to America, and one left to China.” Schmitt would describe the difference

between Lenin and Mao as one marked by a difference in telluric magnets. ‘The differences lie not only in the internal structure of the group but also in the relationship to the soil and the people they seized [...] the Russian bolsheviks of 1917 belonged, from a national standpoint, to a minority “led by a group of theorists the majority of whom were emigrants,” while the Chinese communists under Mao and his friends had by 1949 been fighting for two decades on their own national soil with a national opponent, the Kuomintang, on the basis of a horrendous partisan war (Schmitt, 1963, p. 40).

The splitting of the atom hung in the air in a controversy in Beijing in the summer of 1964, Yang Xianzhen spoke of two uniting into one as the primary law of dialectics. Ai Siqi and Mao countered, *he er er yi* would invalidate the inevitability of internal contradictions after unity is obtained. If two combined into one, *unity* and not further struggle defined the course of societal transformation, the dialectical machinery of the permanent revolution breaks down. The magnetism of splitting matter held the river’s eye surging to meet the October sky, as wind and cloud below joined the earth with darkness.





Methodology

I visited the National Archives at Kew Gardens on April 28, taking a train westward across London, arriving at Kew shortly after midday in an overcast sky. I'd requested ten documents, not realising each was a world onto its own. I sat at Seat 34B, watching the reflective light of the overhead beams merge in across the treeline. I brought a camera, turning the pages carefully and photographing each, some fell in the Roche limit of time passing, strands of light caught in the laminated sheet protecting originals. I'd chosen three electives this term that I imagined might inter-weave, Chinese Frontier Societies, Comprehensive African Studies and South and Southeast Asian studies, I found in the archives, elements of each. See Document A: On the Sino-Soviet split and frontiers policy of China according to Khrushchev.... Document B. African reactions to the first nuclear test; Document C. Southeast Asia and the perception of British foreign office of the psychological effects of the nuclear test events. *Closed until 1995*, in a green sticker on the holding box.

Document 1: FO 1110/2312 : China Topics YB 269-YB 294. (Described at item level)

Document 2: FO 1110/2299 : Unattributable Printed Briefs B 733-B 765. (Described at item level)

Document 3: FCO 95/2135 : China Topics YB 473-YB 483. Described at item level

Document 4: FO 1110/2335 : PR Series: communism. (Described at item level)

Document 5: FO 1110/2314 : China Topics YB 333-YB 358. (Described at item level)

Document 6: FO 1110/2335 : PR Series: communism. (Described at item level)

Document 7: DEFE 5/148 : Nos 38 - 66. (Described at item level)

Document 8: FCO 168/1285 : Information Research Department: first detonation of a nuclear device by China

Document 9: FO 1110/2316 : China Topics YB 389-YB 408. (Described at item level)

Document 10: FO 371/175941 : Nuclear

Document 11: FO 371/180327 : West Irian

Document 12: FCO 95/2136 : China Topics YB 484-YB 491. Described at item level

Reserve document 1: FCO 21/482 : Nuclear weapons and tests

Reserve document 2: DO 182/163 : China as a nuclear power

Reserve document 3: PREM 11/4672 : China exploded nuclear bombs: UK and US statements

On August 26, 1964, a China Topics Memo (YB 276 (Int. Res. - Africa - 5) circulated entitled - *China's scheme to dominate Africa: Burundi and Congo are the stepping stones*; October 9 (YB280 (Rectification - 1) *People under criticism in the present socialist education campaign*; October 15, *'The minorities issue revived in the Sino-Soviet dispute'*, October 22, *The new dream of the Red Chamber*, detailing the criticism of a writer, Ouyang Shan. They would form a crystalline structure to other research and papers this term, an essay on China-Africa nuclear energy cooperation, nuclear legacies via the work of Gabrielle Hecht. There was little trace of the geostationary satellite, signalling overhead nor Kafka's puzzle, 'there is infinite amount of hope in the universe, only not for us.' Comments in ink pen traced running thoughts across corridors, meetings, follow ups of British foreign office personnel and intelligence operatives with names like Pemberton-Piggott.

EMERGENCE OF CHINA AS A NUCLEAR
POWER, COUNTER-PUBLICITY
THEMES

Intel No. 19 of February 19 (copy attached), which deals with the above subject, had its origin in a meeting held in the Foreign Office last October, the purpose of which was:

- (a) to discuss what action should be taken, before and after the Chinese succeed in testing an atomic bomb, to mitigate those effects on Russian opinion that would work to the disadvantage of the West; and
- (b) to consider what consultations with other friendly Governments were required and they should be carried out.

The meeting agreed that after the Intel setting forth our own views on counter-publicity themes had been produced, A.E.D.D. should invite Australian, New Zealand and American representatives in London to a meeting to exchange views on possible lines of action. This has now been done and a meeting, at which the C.R.O. will be represented, has been arranged for Monday, April 13, at 3 p.m. Room 25 in the Downing Street building has been booked for the meeting.

3. I do not suppose that we shall have much more to say than is contained in the two Intels. The purpose of the meeting is to hear what the others have to say and then see if we need to revise our ideas on tactics.

4. Would any of the Departments to whom this minute is addressed who wish to be represented at this meeting please tell Mr. A.F.R. Harvey (Auto. Extension 481).

(A.D.F. Pemberton-Pigott)
March 24, 1964.

Mr. Barclay.
I think you will agree that we should fairly be represented. So, we can say much now and begin considering, immediately after Easter, should go (w/ you to go yourself?) & brief we shared with us.

in places like Thailand
ment of their positions while the

SECRET

FOREIGN OFFICE,

S.W.1.

June 1, 1964.

You will remember that Foreign Office Intel Number 19 of February 19 of this year about the emergence of China as a nuclear power contained suggestions for counter-publicity themes for use by our posts abroad when the subject of Chinese nuclear development might come up.

2. We have for some time been considering in I.R.D. the desirability of initiating some unattributable propaganda on this subject: a) by inspiring articles on the themes suggested in the Intel and b) by some stories from time to time that China was getting ready for a test explosion in the near future (on the basis that we believe that China is not in fact likely to be ready for some time and that the failure of the explosion to materialise could be "shown-up" as evidence of China not being as ready as she was, meeting with difficulties, etc.); the object of both exercises being to "condition" public opinion, generally, and particularly in Asia, so that, when the explosion comes, people have got used to the idea.

3. These suggestions were discussed at a meeting held under the auspices of Atomic Energy and Disarmament Department with American, Australian and New Zealand representatives on May 7, at which it was agreed that they should be pursued, with, of course, all due caution and discretion.

4. The purpose of this letter is to let you know about this, and to ask whether you can give our people here any further help with material on which to base their campaign. What is needed is information or deductions about the degree of Chinese nuclear development, places at which such development is known or believed to be taking place, testing sites, etc. This information would be released unattributably, i.e. in such a way that the British official origin would remain concealed. We would also be grateful for any material about the great difference between exploding a bomb and possessing an effective military weapon.

5. We should be grateful for any help that you can give us in this undertaking, in which the Americans are also interested and to which they have been urging us for some time.

(P.G.F. Dalton)



SEO LE E2 S85 BE H2 H



Tokyo Olympiad dir. Kon Ichikawa, 1965

Findings

Are integrative images space images? A star twinkles next to the title of Fletcher's essay, *Integrative History: Parallels and Interconnections in the Early Modern Period, 1500-1800*, in a footnote, 'although Mr. Fletcher did not write this for publication as it stood, the ideas presented in it remained central to his scholarship, and he hoped to revise and publish it before he died. (Editors). He would die a month short of his 50th birthday from cancer in 1984. The summer of 1984 would be the first appearance of the PRC at the Olympics since 1952. Xu Haifeng would win gold at the 50m pistol event, claiming China's first ever medal, Li Ning, the Prince of Gymnasts, would soar above the beams, winning three gold, two silver and one bronze. On August 7, Long Beach, California, Lang Ping would leap to hit the winning spike against the USA, 15-9 and 3 sets to nil in the final. Fletcher would close his essay on an abstract optical metaphor describing something of a magnetic telluric tapestry under the earth:

Our plane now begins its descent...the horizontal continuities (the weft of the web) run from left to right. From top to bottom run the various vertical continuities of successive societies (the warp). Light is shining toward us from behind the web. We note that each of the translucent threads of the warm is made of a distinct and different kind of fibre, so that, if we run our eye along a yellow translucent thread of weft, for example, it looks green where it crosses the blue thread of the Ottoman system of land tenure, and it looks



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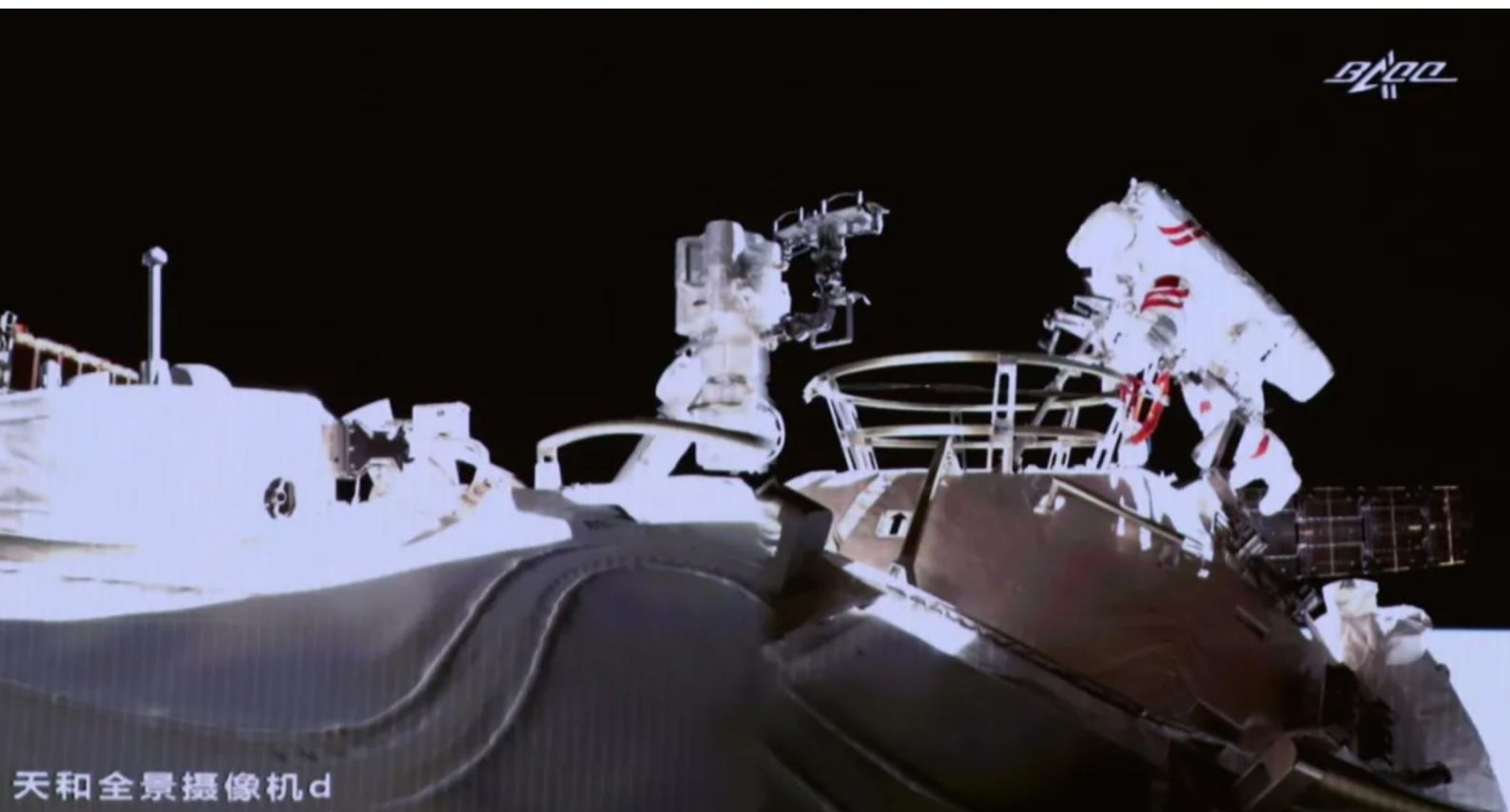
orange when it crosses the red thread of the system of monastic landed property in Tibet.

If the web were even a touch more closely woven and if we could not see tiny bare segments of the weft between intersections, we would recognise no continuities at all in the series of differently coloured cross-hatchings. Finally, to complicate the structure further and, more important, to create the pattern of the needlepoint itself, is the thicker and more brightly coloured yarn of the historical interconnections running in all directions through the web: the lavender of Jesuit missionary activity around the world (as distinct from the historical continuity that produces it), the puce of European maritime trade, the magenta of food crops from America, the silver of Spanish bullion, the chartreuse of shifting patterns of trade, the beige of coffee and tea-drinking. The subtle translucent hues of the warp and the dazzling colours and patterns of the needlepoint yarn almost totally conceal the horizontal continuities of the weft. But without the weft we have no needlepoint at all. Only a bag of threads' (Fletcher, 1985, p. 64).

Where Fletcher describes the weft of the world, Pierre Bourdieu would write in *The Weight of The World* a two page opening commentary, *The Space of Points of View*, 'it is not enough to explain each point of view separately. All of them must be brought together as they are in reality, not to relativise them in an infinite number of cross-cutting images, but, quite to the contrary, through simple juxtaposition, to bring out everything that results when different or antagonistic visions of the world confront each other', irreconcilability is the dominant reality (Bourdieu, 1999, p. 4). The possibility of the integrative image is its mobilisation of a way of engaging Science and Technology Studies in the field of visual history and a social diagram of the Rashomon grid elite technical planners and thinkers are captured in. In 1964, the archives pointed to a China under an intense microscope in the domain of its nuclear programme, an optical fishbowl. Monitoring devices peering in, U2 planes flying from Taiwan overhead, seismic devices buried in the Himalayas,

memos circulating in Washington of preliminary strikes on ‘Chicom’ nuclear facilities, plans for a Third Front, deep, hidden in the interior of China.

An integrative image of October 16, 1964 and its parallel transmission lines of a geostationary, Olympic and terrestrial, nuclear relay would also trace technical and psychological symmetries across time: the geostationary belt, earth-moon lagrange points, nuclear force modernisation, Olympic broadcasts and terrestrial television, deep space, ocean and land probes, capture in technical plans, parallel telemetries and weighings of distance and time, chasing technological zeniths, and other spaces, below the pass where wind and cloud join the earth with darkness. On July 3, 2021, Liu Boming and Tang Hongbo performed China’s first tandem spacewalk, working for seven hours on the outside of the new Tiangong station in orbit around Earth. The video would gather 200 million views on China’s Twitter-like platform Weibo within hours of release as they elevated a panoramic camera outside the Tianhe core module and tested the station’s robotic arm. Liu, leaving the cabin, would remark: “Wow, it’s too beautiful out here.” (AP, 2021). Out here, in noiseless, cold, magnetic, space, a zenith, runged out on a ladder, levelling past the ghost of Syncom-3.



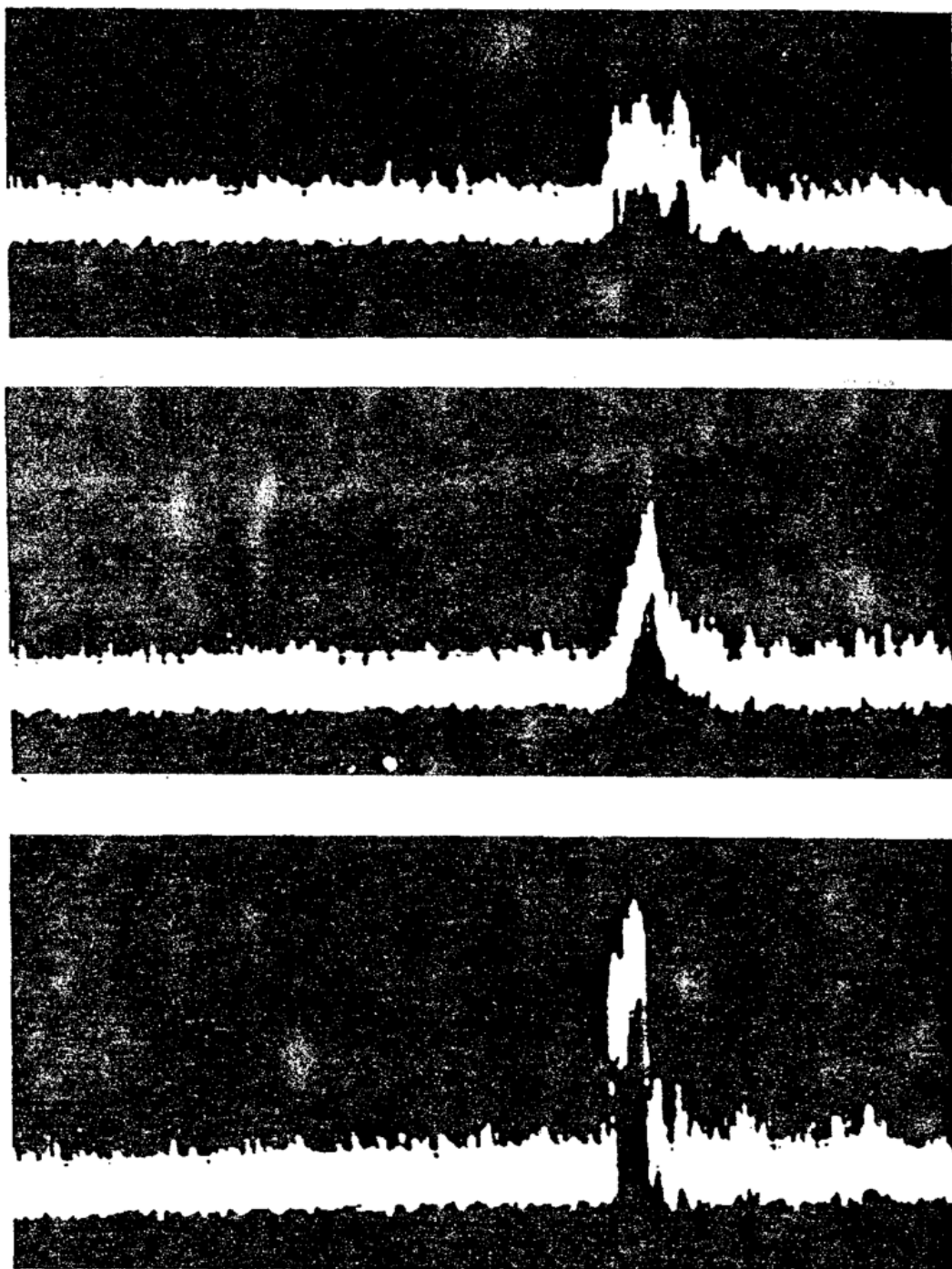


FIGURE 1. Oscillograph traces of three consecutive pulses spaced 20 seconds apart. Each transmitted pulse was 800 microseconds long. The top trace shows considerable lengthening of the trailing edge. The middle one shows degradation of the rise time. The bottom trace most closely resembles the shape of the original transmitted pulse.



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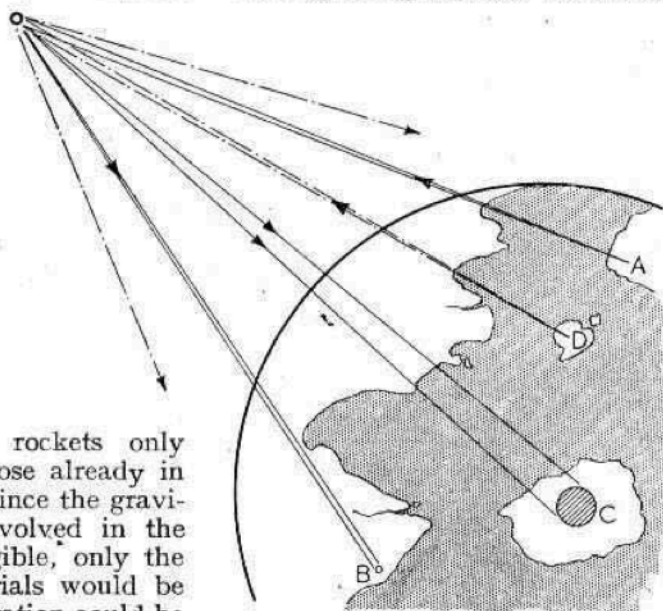
Extra-terrestrial Relays—

earth's equator, would revolve with the earth and would thus be stationary above the same spot on the planet. It would remain fixed in the sky of a whole hemisphere and unlike all other heavenly bodies would neither rise nor set. A body in a smaller orbit would revolve more quickly than the earth and so would rise in the west, as indeed happens with the inner moon of Mars.

Using material ferried up by rockets, it would be possible to construct a "space-station" in such an orbit. The station could be provided with living quarters, laboratories and everything needed for the comfort of its crew, who would be relieved and provisioned by a regular rocket service. This project might be undertaken for purely scientific reasons as it would contribute enormously to our knowledge of astronomy, physics and meteorology. A good deal of literature has already been written on the subject.²

Although such an undertaking may seem fantastic, it requires

Fig. 2. Typical extra-terrestrial relay services. Transmission from A being relayed to point B and area C; transmission from D being relayed to whole hemisphere.



for its fulfilment rockets only twice as fast as those already in the design stage. Since the gravitational stresses involved in the structure are negligible, only the very lightest materials would be necessary and the station could be as large as required.

Let us now suppose that such a station were built in this orbit. It could be provided with receiving and transmitting equipment (the problem of power will be discussed later) and could act as a repeater to relay transmissions between any two points on the hemisphere beneath, using any frequency which will penetrate the ionosphere. If directive arrays were used, the power require-

ments would be very small, as direct line of sight transmission would be used. There is the further important point that arrays on the earth, once set up, could remain fixed indefinitely.

Moreover, a transmission received from any point on the hemisphere could be broadcast to the whole of the visible face of

necessary evidence by exploring for echoes from the moon. In the meantime we have visual evidence that frequencies at the optical end of the spectrum pass through with little absorption except at certain frequencies at which resonance effects occur. Medium high frequencies go through the E layer twice to be reflected from the F

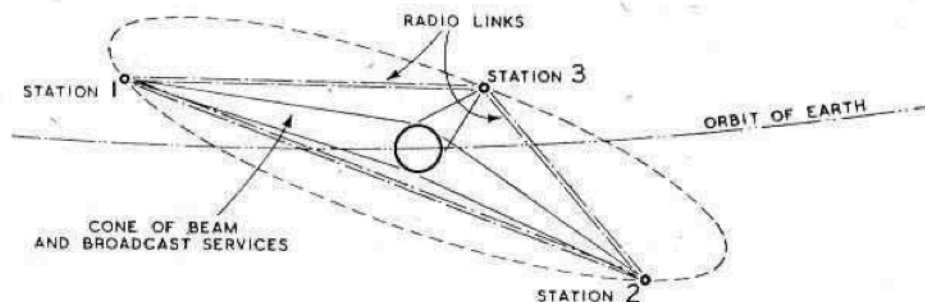


Fig. 3. Three satellite stations would ensure complete coverage of the globe.

the globe, and thus the requirements of all possible services would be met (Fig. 2).

It may be argued that we have as yet no direct evidence of radio waves passing between the surface

layer and echoes have been received from meteors in or above the F layer. It seems fairly certain that frequencies from, say, 50 Mc/s to 100,000 Mc/s could be used without undue absorption in the atmosphere or the ionosphere.

A single station could only provide coverage to half the globe, and for a world service three would be required, though more could be readily utilised. Fig. 3 shows the simplest arrangement. The stations would be arranged approximately equidistantly around the earth, and the following longitudes appear to be suitable:—

- 30 E—Africa and Europe.
- 150 E—China and Oceania.
- 90 W—The Americas.

The stations in the chain would be linked by radio or optical beams, and thus any conceivable beam or broadcast service could be provided.

The technical problems involved in the design of such stations are extremely interesting,³ but only a few can be gone into here. Batteries of parabolic reflectors would be provided, of apertures depending on the frequencies employed. Assuming the use of 3,000 Mc/s waves, mirrors about a metre across would beam almost all the power on to the earth. Larger reflectors could be used to illuminate single countries or regions for the more restricted services, with con-

of the earth and outer space; all we can say with certainty is that the shorter wavelengths are not reflected back to the earth. Direct evidence of field strength above the earth's atmosphere could be obtained by V2 rocket technique, and it is to be hoped that someone will do something about this soon as there must be quite a surplus stock somewhere! Alternatively, given sufficient transmitting power, we might obtain the

In 1967, China conducted its first hydrogen bomb test, a year earlier completing its first surface-to-surface missile. In 1970 Dongfanghong I was launched, the first satellite, carrying a radio transmitter that broadcast the national anthem for 20 days while in orbit. The *Two bombs, One Satellite program* would not be immune from the Cultural Revolution. In 1968, Yao Tongbin, one of China's foremost missile engineers, was beaten to death. In Washington in 1967 a secret paper, *Moon Bounce ELINT*, would circulate detailing a way of 'monitoring Soviet radars by way of the lunar surface.' It noted the problem, 'except for a very few specialised over-the-horizon devices, all radars operate on wave lengths which are too short to be reflected back to earth by the ionosphere but pass through and are generally lost in outer space' (Eliot, 1967, p. 5).

In 1964, the U.S. Navy would make its first successful intercept of a Soviet radar signal via the moon. The paper was marked, *SECRET, No Foreign Dissem.* In 1973, Pink Floyd would release their album *The Dark Side of the Moon*. That same year, Deng Xiaoping would be rehabilitated, returning from a tractor factory in rural Jiangxi and setting about establishing the Political Research Office exploring approaches to political and economic reforms. On January 3, 2019, the robotic spacecraft Chang'e 4 landed on the dark side of the moon, becoming the first spacecraft in history to do so, bouncing an image back via a relay satellite Queqiao, orbiting Lagrange point 2, of the lunar surface. The probe landed within a crater called Von Karman, named after Theodore von Karman, the PhD advisor of Qian Xuesen at Caltech, the founder of the Chinese space program. The craft also carried six live species from Earth, including cotton, potato, rapeseed, yeast and a flowering plant called arabidopsis and set about to plan a mini-garden on the moon (Moskivitch, 2019).

An integrative image of October 16, 1964 illuminates an optical curvature in time and a way of writing an integrative history in colour that unifies the study of science and technology studies with a visual anthropology and a geopoetics of tracing the technical plans and transmission signals that captured elites on all sides of the cubed world's oceans. The magnetism of light and sound, and the

places beyond the optical source, where wind and cloud joined the earth with darkness. In 1976, as Deng Xiaoping emerged to propose the *Boluan Fanzheng* program, Robert Jervis would publish on the other edge of the Pacific, *Perception and Misperception in International Politics*, reilluminating the inertia of the earth in eyes unable to meet eye to eye across space. The Rashomon effect. A volleyball game in *infinis*. An integrative image mobilises a geopoetics of relation. Edouard Glissant, the Martinique poet, would explore like Bourdieu a concept of opacity, a lack of transparency, untranslatability, unknowability, in the Other, that should be allowed to be opaque, to not be completely understood, and to simply exist as different. An integrative image in this sense is an incomplete image, a doppler effect, of parallelisms: of the same time but different space. The plural of *nomos*, *nomoi*, is a trap or an arc.

In 2015, the Two Bombs, One Satellite Memorial Museum was opened on the Huairou campus of the University of the Chinese Academy of Sciences in northern Beijing. An integrative image of October 16, 1964 might speak historiographically by tracing open a technical story of the U.S. and the P.R.C. and by drawing closer together the spaces transmissions inhabit, 36,000km above the Pacific Ocean, 6000m below the lunar surface. In 1945, the English science fiction writer, Arthur C. Clarke would lay down the characteristics of geostationary orbit, including a map, 'showing the simplest arrangement of satellites approximately equidistant around the earth and at the following longitudes: 30E - *Africa and Europe*; 150E - *China and Oceania*; 90W - *The Americas*.' The stations in the chain would be linked by radio or optical beams to provide 'a true broadcast service over the whole globe.' 19 years later, the Tokyo Olympics would be beamed across the night sky. An integrative image of October 16, 1964 might speak by locating new parallelisms and a mode of historiography attuned to the weft of revolutionary optics in the second half of the 20th Century and the warp of vertical continuities, emergent in the telluric order of the earth. Magnetic light might also tell a story of human fascination with the cosmos that is not of this earth, separating dusk.

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Images

Pages 4 and 7: Stills from “*Chinese Nuclear Testing Film*” (1966), National Archives and Records Administration, Records of U.S. Air Force Commands, Activities, and Organizations, 1900 - 2003, Chinese Film 1966, ARC Identifier 72247 / Local Identifier 342-USAF-50534. Accessed at <https://www.youtube.com/watch?v=Pq6yMDBOcuI&t=1621>

Page 8: Author’s photographs of the National Archives at Kew Gardens, April 28, 2021

Pages 10 and 11: Author’s photographs of Records, *FCO 168/1285: Information Research Department: first detonation of a nuclear device by China*

Page 12: Stills from Syncom Satellite, accessed at: https://www.nasa.gov/multimedia/imagegallery/image_feature_388.html; and *Tokyo Olympiad* (1965) dir. Kon Ichikawa, accessed at: <https://www.youtube.com/watch?v=WHt0eAdCCns&t=394s>

Page 13: Stills from “*1984: China x USA*”, accessed at: https://www.youtube.com/watch?v=AWYl5pxC_Q8

Page 15: Stills from “*Astronauts at China’s new space station conduct first spacewalk*” (The Guardian, 4 July 2021) Accessed at: <https://www.theguardian.com/world/2021/jul/04/astronauts-at-chinas-new-space-station-conduct-first-spacewalk>

Page 16: Still from “*Moon Bounce Elint*” (Eliot, 1967) <https://nsarchive2.gwu.edu/NSAEBB/NSAEBB479/docs/EBB-Moon11.pdf>

Page 17: Still from “*China lunar probe sheds light on the 'dark' side of the moon*” (Moritsugu, January 3, 2019) Accessed at: <https://phys.org/news/2019-01-china-probe-side-moon-state.html>

Page 18: Still from “*Extra-Terrestrial Relays: Can Rocket Stations Give World-wide Radio Coverage?*”, *Wireless World* (Clarke, 1945). Accessed at: <https://www.gr.ssr.upm.es/docencia/grado/csat/material/extraterrestrial-relays.pdf>

Postscript



I found Chris Marker's film *Sunday in Peking* (1956) months later.

Saturated colours, a gymnast gyreing blue sky, the dissonance opening out between a history as plot and a history as poetics in full refraction of dusklight. Separations proceeding, red-shifting, fleeing the Center. Diaphanous, blue square.



北京的星期天 Sunday in Peking 1956 GBR BluRay REMUX 1080p AVC FLAC



14:35 / 19:18





北京的星期天 Sunday in Peking 1956 GBR BluRay REMUX 1080p AVC FLAC



7:45 / 19:18



北京的星期天 Sunday in Peking 1956 GBR BluRay REMUX 1080p AVC FLAC



6:54 / 19:18





北京的星期天 Sunday in Peking 1956 GBR BluRay REMUX 1080p AVC FLAC



6:06 / 19:18



北京的星期天 Sunday in Peking 1956 GBR BluRay REMUX 1080p AVC FLAC



5:45 / 19:18

