

Mass Communications of China's Astronaut Program

Morris Jones

School of Communication and Creative Arts

Deakin University

Geelong, Victoria, Australia (morrisj@deakin.edu.au)

ABSTRACT: In 2003, China became only the third nation to launch an astronaut on its own space launch system. The Shenzhou human spaceflight program represents one of China's greatest industrial and technological achievements. But mass communications strategies for the program have failed to promote Shenzhou to the same extent as Russian and American space programs.

This paper will examine how a mixture of secrecy, politics, nationalism and parochialism have influenced the communications of Shenzhou to the world.

In October 2003, Colonel Yang Liwei boarded the Shenzhou 5 spacecraft and blasted into orbit for roughly a day before returning safely to Earth. He became China's first astronaut. News headlines around the world heralded the achievement. Only three nations on Earth have the capability to independently place humans into outer space. China had joined a highly exclusive club, outperforming the major industrialized nations of Europe and Japan with this mission. The significance of China's astronaut program in demonstrating technological prowess and elevating national pride is high. Furthermore, it is a matter of global significance. But generally, the international media has failed to give much coverage to China's ongoing astronaut program.

The issue of publicizing China's spaceflight achievements is complex. China seems to be unsure of how to promote its program to the international community, or how it wishes the program to be perceived. Access to information, personnel and infrastructure for Shenzhou is tightly controlled. The mechanisms behind China's tight information policies are often opaque.

Conversely, the international community has arguably failed to effectively utilize the material supplied by the Chinese. Coverage of the Chinese space program has also suffered from public indifference, ranging from a disinterest in scientific issues to excessive parochialism.

Improving the overall state of media coverage and public perceptions of China's space program will not be easy. It would require major changes in policy from China's government and military. The complexities of China's geopolitical relationship with nations such as the USA add to the problems.

But greater access to Chinese space facilities and the adoption of more traditional media management policies for specific missions would certainly improve coverage and perceptions of the Chinese space program.

Background of the Program

China launched its first satellite in 1970. During the next decade, an attempt was made to develop a Chinese space capsule for a single astronaut. But a lack of financial and political support caused this program to be suspended. China continued to develop rockets and satellites, building up a mature stable of space hardware. During the 1990s, plans were secretly drawn for a more sophisticated crew-carrying spacecraft. The Shenzhou, or “Divine Vessel” spacecraft, is capable of carrying up to three astronauts. It is launched into orbit by a Long March 2F rocket, which is a modified version of the Long March rockets used for uncrewed satellite launches.

Shenzhou is a capsule-type spacecraft that is not designed to be reusable. It strongly resembles the Russian Soyuz spacecraft, which was first flown in 1967 and is still in use today as the primary means of launching crews to the International Space Station.

At the end of the mission, one of Shenzhou’s three modules, containing the crew, re-enters the atmosphere to make a parachute landing in Inner Mongolia, a flat, steppe-like territory in northern China (1).

The first test mission of Shenzhou was made in 1999. Three more test flights, carrying experiments and dummy astronauts, were made during 2001 and 2002. Finally, Shenzhou 5 was launched on October 15, 2003, carrying China’s first astronaut on a 14-orbit mission.

China then experienced a hiatus of roughly two years before its next Shenzhou mission. Shenzhou 6 was launched on October 12, 2005, with Fei Junlong and Nie Haisheng as crew. The two-man flight remained in space for five days before returning successfully.

According to current schedules, China is expected to launch the Shenzhou 7 mission in late 2008. This mission is expected to carry three astronauts and produce China’s first spacewalk. Further missions are scheduled for 2010, which will feature space dockings (2).

Filling a Media Vacuum

The Shenzhou program was developed in secrecy. Chinese officials made no official disclosure of its existence until November 19, 1999, when the uncrewed Shenzhou 1 mission was launched. Even then, China did not release statements or images until the Shenzhou 1 capsule had made a safe landing on Earth, slightly less than a day after launch.

But the world had already experienced hints that China had developed a crew-carrying spacecraft. Photographs of the Long March 2F rocket, used to launch Shenzhou, were leaked onto the Internet in mid-1999. The photographs were blurry and appeared to have been digitally modified. Aerospace forums on the Internet, and some members of the aerospace media, seized the images as potential evidence of a hitherto classified spacecraft. But generally, the media were guarded in their response. Concerns were raised that the images could have been fabricated, and the alleged Chinese space program was a hoax (3). This distrust of unconfirmed material is understandable, given the often spurious content that circulates on the Internet. But the original “leaks” match the true appearance of the Long March 2F rocket and the infrastructure of the Shenzhou launch site at Jiuquan in central China. To this day, the real origin of this curious leak in an otherwise well-concealed program remains a mystery.

Photographs of the rocket launch, and the Shenzhou re-entry capsule, were released to the Chinese and international media, together with a few rudimentary details on the mission.

But access to the program was highly restricted. Technical information on the spacecraft was not supplied. But China had clearly stated that this was an uncrewed test of a vehicle that was designed to carry astronauts. This suggested that although China had not launched an astronaut, they had at least developed the capability to do so. A real astronaut launch could not be too far away.

News of the flight of Shenzhou 1 appeared in media outlets around the world. Coverage was observed in Australia’s major newspapers. But the story was not presented on the front or earliest pages. Coverage was extremely limited. *The Age*, a major Australian newspaper, carried just a short paragraph on page 11, among other brief news reports (4).

One reason for this low-ranking coverage is the channel of transmission. The Shenzhou 1 launch was transmitted to Australian news outlets through a syndicated wire story and placed alongside other syndicated stories in “World” news sections. Parochialism in the overall strategy for managing most forms of international news, coupled with the mechanical aspects of delivering this story, would ensure that Shenzhou was not a major lead story.

The short wire story itself was based on translations of Chinese media reports. With little access to first-hand sources, or extensive information, there was little to write about.

The importance of China’s imminent debut as a human space faring nation was not lost in specialized media dealing with aerospace matters or strategic issues. But in these media outlets, writing was mostly confined to commentary rather than direct reportage.

The next few days would see follow-up statements appear in the Chinese media, as the returned capsule was featured in an opening ceremony in Beijing. Flags of the PRC, Hong Kong and Macao were extracted. Aerospace analysts noted these events, but the general media ignored them.

It was fair to say that the debut of the Shenzhou program was treated as a relatively minor “spot news” item. Once photos of the rocket had filled one issue of the papers, the story simply disappeared.

Coverage of subsequent Shenzhou test missions (Shenzhou 2, 3 and 4) was minimal. The best stories in the mainstream media were wire feed stories with a few key facts, and some comments on the overall shape of the vehicle. Placements and story length suggest that the news value was not regarded as high. Some stories were brief entries similar to the minimalist treatment given by *The Age* to Shenzhou 1.

From the perspective of mainstream news judgments, this is understandable. Shenzhou had already made its debut as a test vehicle. There would be no novelty added to the program until an astronaut actually flew. Due to the long gap between Shenzhou 1 in 1999 and Shenzhou 5 (with an astronaut) in 2003, mainstream news coverage of Shenzhou was generally dormant for a few years.

Spot News and Silence

The flight of Shenzhou 1 was obviously the start of a long-term program that would lead to China’s first human spaceflight, and other feats. As previously stated, this was treated as spot news in initial reports, when there was no background or track record of previous events. But even as the program developed, coverage of Shenzhou in the mainstream media still resembled a widely spaced sequence of “spot” news events rather than regular, continuous coverage of an ongoing issue.

The principal source of the lack of continuous coverage is the frustratingly slow pace of events in the Shenzhou program itself. More than 12 months passed between the launch of Shenzhou 1 and Shenzhou 2. During the hiatus, official statements on the expected wait for the next launch were vague, and little new information on the program was provided. The supply of official information was so threadbare that some analysts (including this author), speculated that the program could have been terminated (5).

Information on Shenzhou was also supplied as “spot news” from its original source. A minimalist, fact-based style of writing was used in official Chinese media statements. There was not much scope for other forms of journalism to apply to Shenzhou. Feature writers did not have much material to go on. The lack of access to the program made it difficult to develop Shenzhou as a “round” for a reporter. Despite the fact that the program was continuing, the lack of updates and data made it look like an isolated event. The media could report on the launch of Shenzhou 1 as a brief news story. It could not really report on Shenzhou as a gradually evolving, continuous project and topic.

Traditional journalism could not work effectively with such an absence of material. So coverage of Shenzhou in specialized media was often focused on speculation, rather than hard reporting.

The Significance of Shenzhou

Specialized science or aerospace reporters were quick to understand the potential implications of a Chinese astronaut program. Spaceflight is a generally expensive and complex undertaking. Dozens of nations operate satellites and space research programs. Rockets capable of placing objects into orbit are routinely launched by the USA, former Soviet states such as Russia and Ukraine, India, Japan and the European Space Agency. But only the USA, Russia and China have the capability to launch astronauts using their own space hardware. Human spaceflight is one of the most exclusive technological feats in this modern age. For roughly four decades, it was the sole domain of the world's two superpowers. The USA and the Soviet Union both achieved their first human space missions in 1961. Other technological feats such as microchip manufacturing and nuclear weapons have proliferated extensively in recent years. So the importance of human spaceflight as a yardstick for demonstrating national prowess has been magnified.

China, presumably, expects the Shenzhou program to serve as an indicator of its status as a Great Nation, or a newly emerging superpower. The pride of its own citizens is certainly a factor in this planning, but China would also presumably hope to generate respect from the international community.

The Cold War saw spaceflight used as a geopolitical and propaganda tool. The launch of Sputnik and Yuri Gagarin by the Soviet Union was a shock to the United States. The Soviet Union, previously dismissed as industrially and technologically inferior, had achieved spaceflight before the USA. Space was also seen as a "new ocean", with potential strategic significance. Dominance of space could contribute to dominance of the Earth for a power bloc. The shock generated by early Soviet space achievements, and the fears of their geopolitical influence on non-aligned nations, prompted the USA to invest heavily in its own space program. Landing astronauts on the moon was seen as a goal that would challenge Soviet domination of space, and the "space race" raged throughout the 1960s, until Neil Armstrong and Buzz Aldrin landed on the moon in 1969.

China's leaders were exposed to these events, and may have expected that a robust Chinese space program could have a similar influence on China's prestige and power.

Apart from political posturing, Shenzhou is also expected to produce technical, scientific, economic and military benefits. Advanced technologies developed for the program could be adapted to Earth-based industries. Experiments could be conducted in space. It has been confirmed that Shenzhou has already been applied to military purposes, principally in the field of intelligence-gathering from orbit through photography and signals interception.

Thus, the program was intertwined with a variety of newsworthy issues. But direct releases from China did not address these in depth. Some aspects, such as the potential military implications of Shenzhou, were not discussed much at all. But most regular

reporters apparently failed to understand or communicate these points. Many journalists are too young to remember the heady days of the race to the moon or Sputnik shock. They also lack an understanding of spaceflight technology. Pressed for time, reporters are becoming increasingly dependent on material supplied to them by public relations teams, who can sometimes supply the equivalent of a finished story. A lack of spoonfeeding to journalists meant that story angles, and the real news value of some stories, was missed.

The Invisible College

Publications and reporters with the interest, background, and editorial brief to cover the Shenzhou program in depth were mostly restricted to scientific publications, the aerospace media, and foreign policy journals. The usefulness of greater coverage of Shenzhou was understood. But coverage was hampered by the lack of direct access to the program. Seeking to close this information gap, the media participated in the promotion of an “Invisible College” of commentators on the Shenzhou program.

The “Invisible College” was a small collection of space analysts, some of them practicing journalists. These individuals were globally scattered across Europe, North America, South East Asia and Australia. Journalists seeking sources for in-depth coverage of Shenzhou would inevitably discover members of the College through Internet searches, which revealed articles and home pages dealing with Shenzhou. Commonly known members of the Invisible College include James Oberg (USA), Chen Lan (Singapore), Philip Clark (United Kingdom), Sven Grahn (Sweden) and Brian Harvey (Ireland). Morris Jones, the author of this paper, was also sometimes included in this College.

College members were usually no better supplied with direct access to the Shenzhou program than the reporters who interviewed them. But their knowledge of spaceflight and interest in the Chinese program made them “expert witnesses” who could offer informed speculation of what was happening behind closed doors.

Although members of the College know of each others’ work, the group did not officially band itself together to present a united source of information about Shenzhou. But the frequency of references to a small group of individuals made it appear that way.

The Invisible College would become a commonly used source for journalists trying to cover the program. This was partially because they were willing to communicate with the media, but also because there was an absence of equivalent commentary from official sources. The use of direct quotes from a College member also helped to colour hard news stories and balance impersonal lists of figures.

The irony of the College reached its zenith in the lead-up to the launch of Yang Liwei in 2003. Reporters for Agence-France Press and other international bureaux in Beijing found themselves unable to access Chinese sources for their stories. The author was in Sydney at the time, and found himself fielding emails and telephone calls from these reporters, who were physically closer to the story than he was, but unable to find out what

was happening. Stories filed by these reporters would make extensive use of College sources.

Coverage Inside China

China's state-run media represented the primary source of direct information on Shenzhou, not just for China's own citizens, but for the outside world. Members of the College, as well as other specialized journalists, would glean most of their hard facts on Shenzhou by sifting through the stories that periodically appeared in the Chinese media. Often, this was done by simply reading the Web sites for these publications. Shenzhou coverage appears sporadically in places like the English-language site for the Chinese news agency Xinhua (www.chinaview.cn), China Daily (www.chinadaily.com.cn) and China.org.cn.

China's media coverage of its own space program is more prolific than that of any other country. The issue of newsworthiness due to proximity is an obvious factor, but editorial policies within China's state-run media are also geared to promoting the achievements of the nation. Much of this material would not meet the news thresholds or editorial agendas of other publications, except for the aerospace media. Short reports would comment on how tasty the food was for the astronauts, or how young Chinese engineers had foregone offers of work for high salaries at dot-com firms for the prestige of working on Shenzhou. Such stories were often devoid of any information that would help external analysts to understand the technology or the program. The English syntax used in these reports was sometimes so vague that the concepts being discussed were unintelligible. This could have been due to language difficulties, but it is also possible that the obfuscation was deliberately planned to avoid revealing sensitive information.

Stories released by agencies such as Xinhua would sometimes appear unmodified across several different Chinese news sites.

Much of the external reporting on Shenzhou would draw on these original Chinese sources as raw material. Key facts or revelations would be extracted, and commentary and speculation would be added. The limitations of this form of reporting are obvious. But in the absence of other sources, the global Shenzhou Watch had to make do with whatever it could get.

Sealing Leaks

Gaining inside sources and unofficially disclosed information is a standard tool of journalism. It is also common place in the aerospace media, to the extent that the journal *Aviation Week and Space Technology* is commonly known as "Aviation Leak".

The author of this paper has never had special access to the Shenzhou program or a Chinese "Deep Throat" anonymous source to confirm speculations. Other College

members seem to be similarly bereft of real inside information. The Shenzhou program is frustratingly hermetic.

The Road to Nowhere

China's astronauts blast off from a space launch complex at Jiuquan in central China. The region is geographically isolated from China's major population centres. Access to the space centre is heavily restricted. Journalists from the international media have not been permitted to visit the launch site during any Shenzhou liftoff.

But one tour of Jiuquan was conducted for the benefit of the international media in 2004. A group of wire reporters based in Beijing traveled overland for several hours to the site. Upon arriving at Jiuquan, they were allowed to inspect the complex's swimming pool, greenhouses and other mundane facilities, but were denied access to the vehicle assembly building, rockets or any Shenzhou spacecraft. Reporters subsequently produced some surreal reportage on the onerous bus trip which produced little newsworthy results (7). The author is thankful that he was not invited to join this tour.

China made a second attempt at opening access to its space program in June 2006. Journalists were given a tour of its mission control centre near Beijing in 2006, which also featured an appearance by Yang Liwei (8). The entire tour lasted just 90 minutes, with roughly 15 minutes of exposure to China's first space traveler. It seems apparent that this brief but rare opening of a Chinese space centre was not primarily aimed at the media or the general public. The timing of the tour coincided with Chinese diplomatic overtures aimed at gaining access to the International Space Station (9). Thus, the real target was the US Government.

Fear of Failure

The launch of China's first astronaut in 2003 was unquestionably the highlight of the Shenzhou program (so far). But China was surprisingly reluctant to show it. Plans for live television coverage of the launch were scrapped at the last minute. Authorities were apparently concerned that the launch would fail, and did not want this to be broadcast. A delayed telecast of the successful launch was later released. The launch of Shenzhou 6 in 2005 was covered live on television, albeit under the control of Chinese authorities.

A policy of avoiding any negative reports on Shenzhou by the Chinese media has been apparent to anyone observing the program. It has also hindered the disclosure of facts to the world in general. The test flight of Shenzhou 2 was covered well by the Chinese media as it progressed, but coverage abruptly changed after the landing of the re-entry capsule. A brief statement was issued, saying that the mission had ended successfully. But the photography of the landed capsule that has appeared for every other mission was absent. It is rumoured that the Shenzhou 2 capsule experienced problems during its descent and crashed, damaging the capsule. The failure of a test mission such as this

should not be a potential cause of embarrassment to the Chinese authorities. NASA launches still fail regularly, and this is openly admitted. But the political sensitivity of the Shenzhou program, coupled with Chinese policies of information management, seem to make any such disclosures unpalatable. Fear of witnessing a failed launch is probably a major reason why Western media crews have been prevented from attending Shenzhou launches.

The Military Angle

Another restriction on media access to Shenzhou originates with the program's military roots. The Chinese military is heavily involved in the production of the rocket and spacecraft. Furthermore, Shenzhou has been integrated into China's overall military strategy. China is actively working to introduce more high technology to its armed forces. It has watched the USA use space technology extensively for communications, navigation, surveillance and targeting in all its recent wars. Shenzhou is not purely a military vehicle, but it is doubtful that the program would have been approved if it did not have a military component. Shenzhou missions have carried cameras and other surveillance equipment. It is suspected that the crew of Shenzhou 6 spent much of their time photographing strategic locations around the world. The sensitivity of Shenzhou's military role thus plays a role in limiting access and disclosure.

Shenzhou Celebrities

For all the lack of concrete access to most aspects of the program, China has often given lavish promotions of its space achievements in ways that maximize hype at the expense of detail. China's astronauts have become celebrities. Yang Liwei even made an appearance at a concert in Hong Kong, and sang with actor Jackie Chan! The crew of Shenzhou 6 made appearances at Hong Kong Disneyland. Such high-profile appearances in the Hong Kong SAR seemed to be timed to boost support for pro-Beijing candidates and policies in Hong Kong's Legislative Council. In China, the Shenzhou 6 astronauts have appeared in television extravaganzas alongside celebrities such as Li Yunchun, winner of China's equivalent of the international Idol singing shows. Astronauts and cosmonauts from other countries also enjoy celebrity status, but their appearances are usually managed in a more conservative fashion. Hollywood-style galas are not on the agenda.

Foreign Parochialism

Despite the difficulties of access to the Shenzhou program, it is possible that some non-Chinese media outlets would still ignore it if they were given better material. Despite its extensive interaction with the world, cultural and linguistic barriers still seem to keep Chinese news out of the Western media. Public perceptions and interests are also similarly muted, perhaps as a consequence.

Coverage of the Three Gorges Dam, one of the major engineering projects of our time, is difficult to find in the Australian media. This is despite the availability of material on the project.

In the USA, the Staten Island Ferry, an iconic New York attraction, experienced a fatal crash on the same day as the mission of Shenzhou 5. This event also served to eclipse coverage of the launch due to parochial news values in the USA.

Familiarity with Spaceflight

Despite the small number of nations that operate crew-carrying spacecraft, coverage of Shenzhou is also probably tempered by a perception that spaceflight has lost its novelty. The first astronauts flew more than 45 years ago. More than 35 years have passed since astronauts first walked on the moon. A cynical perspective of the Chinese space program would suggest that they are merely catching up to what other nations have mastered for a long time. This suggestion is reinforced by the general lack of coverage in Australia of ongoing activities on the International Space Station, which is crewed by Americans, Russians and other visitors. Access to information on the Station is actively encouraged by NASA, but media outlets generally ignore it, or only give brief reports on new crew transfers.

Geopolitical Concerns

The rise of the Chinese space program has also coincided with a sequence of problems for the US space program. The Space Shuttle *Columbia* was destroyed on re-entry in 2003, shortly before the launch of Shenzhou 5. NASA has struggled to return the Space Shuttle to operation, and has announced plans to retire it by 2010. A robust Chinese program potentially challenges US supremacy in outer space. This sensitivity to the geopolitical and strategic implications of Shenzhou could also deter coverage of the program in the Western media.

The Dichotomy of Selectivity

The curious media strategy applied to Shenzhou is, in some ways, symbolic of the broader social and political dilemmas facing contemporary China. The Chinese Communist Party is juggling a delicate balance between freedom for its citizens in some aspects of their lives and strict control in others. This strategy may have compromised the potential influence that Shenzhou could have on the Chinese population at large. But its greatest effect has been to extensively compromise publicity and interest in the program outside of China. This has diminished the potential returns in terms of kudos and respect that China could generate from this marvelous project. By restricting access to so many aspects of the program, and being artificially selective in what is disclosed, China

presumably hopes to promote coverage of the program that is favourable and consistent with the nation's geopolitical objectives. The failure to manage an external media sphere that plays by different rules to an authoritarian control system has, ironically, often produced the opposite results.

China should accept greater scrutiny of its spaceflight activities if it wants to achieve the recognition it desires, even if it means the exposure of some problems.

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