

On the Legitimation and Legitimacy of Manned Space Travel – the German View¹

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1.0 From the moon-landing to the “moon hoax”: Space travel as the politics of remembrance

I was there! On 20 July 1969 two Apollo 11 astronauts landed on the moon, and a day later Neil Armstrong was the first person to tread on the surface of a foreign celestial body. Or at least that is what the history books say. And I am sure that I was able to observe all of this on television as a child – together with the feeling of actually ‘somehow’ being there myself. A media experience which I believe has had a lasting effect on my life up to the present day. But what was it exactly that I was present at?

Only a few years after the apparently so successful Apollo 11 mission, Bill Kaysing and Randy Reid published a thin volume entitled *We Never Went to the Moon*, in which they attempted to expose the first moon-landing as an elaborate ploy carried out by NASA and the US government (Kaysing/Reid 1976). It then took a few more years before the conspiracy theory developed by the two authors, which is today generally known as the “moon hoax”, aroused greater public attention, the “evidence” presented for a sham moon-landing at that time (for example anomalies on the official NASA images) determining the parameters of the debate between supporters and critics of the ‘moon landing hoax’.

In order to make things clear from the start: In my view the scientific evidence for the moon-landing (both qualitatively and quantitatively) rules out a “moon hoax” – at least with regards to the fact of the moon-landing itself. The question of why more and more people today, especially in the USA, believe that it never took place – at least in the form that we know today, is therefore raised all the more.

On the one hand, one reason for this is surely that conspiracy theories of any provenance have an increased chance of media circulation (see Schetsche/Schmied-Knittel 2004; Schetsche 2005). On the other, two concrete causes for the success of this specific conspiracy theory can be named which are directly related to the development of the manned space mission:

(1) In the face of catastrophic accidents (such as the explosion of the space shuttle Challenger in 1986 or the crash of its sister-ship Columbia in 2003), many people in retrospect (no longer) believe that NASA was able to have carried out such a spectacular mission as Apollo

11 successfully. Files released in the meantime show how at the end of the 1960s some of those responsible for the mission had doubts about the feasibility of the project right up until its end. The chances of success were estimated to be "fifty-fifty" at the very most, the US president's obituary of the "brave astronauts" was apparently already written. As far as the technology available and risk management was concerned, the Apollo project was without doubt a "mission to the heavens" in both senses of the word from today's point of view. Furthermore, the undertaking would actually be unthinkable today if considered from the point of view of NASA's current safety philosophy. Knowing that such risks would not be taken *today* is only a short step to the idea that they – under immense political pressure – would also not be taken *then*. This feeds the suspicion that the moon-landing was only a staging by the media, a ploy to make the impossible at least appear possible.

(2) The Apollo program was both the result and the means of the conflict between the USA and the USSR for supremacy in space – and consequently also for political-military dominance on earth. Four years after the "Sputnik Shock" (the launch of the first man-made satellite orbiting the earth in 1957, evident to people in the west, demonstrating the technological-strategic capabilities of the USSR), US President Kennedy declared in a message to Congress that the USA would have to play a leading role in "conquering space" in the future. In this message he also announced a manned space flight as early as before the end of the decade. Of primary importance for the Apollo mission was not scientific goals, but much more the public demonstration of technological superiority of the USA. (Welck 1986: 12; Logsdon 2004). This political-historical context allows it to at least appear thinkable in retrospect that the moon-landing was only simulated. It was really, after all, not about installing measuring instruments on the surface of the moon or bringing back rock samples. What counted was solely the *belief* that the USA was technically capable of this great feat, and for this purpose a staging by the media of a faked moon-landing would have been more than enough.

Such considerations lead us directly to the realities of post-modern conspiracy theory: *Simulation is more real than reality* (Baudrillard). The moon-landing was perhaps the first really global media event – but in any case a virtual event, in which the unverifiability of media reporting was taken to an extreme. It is precisely this special status of media reality which opens the way to conspiracy thinking (Rosenfeld 2003). This is even more the case as the media event of the moon-landing was subject to political priorities: It was a staging of power politics directed at the leadership of the Soviet Union as well as at people in both the east and the west. Scientific experiments and visionary rhetoric served only to legitimate the actual symbolic-political act.

With the end of power politics after the collapse of the Eastern Bloc, manned missions into the "depths of space" became just as superfluous as their legitimisation by future visions of

men in space. And because people *should* not believe in visions of this kind any more, they no longer have to believe that these would previously have actually been able to be conducted. From an ideological point of view the moon-landing does not have to have taken place any longer because its scientific (and other) promises have become obsolete. In this sense the idea of a "moon hoax" (even if the supporters of this conspiracy theory do not see it this way) is a functional element of a politics of remembrance in the service of the re-orientation of space programmes: 'Return to earth!'.

The Apollo programme and the moon-landing certainly had (as in any good staging) spiritual effects going far beyond the short-term political goal and which, in retrospect, must be seen as an unintentional side effect of the "arms race in space". The actual legitimacy appeal to a will to explore, wanderlust and the pride of conquest triggered lasting and very real yearnings and visionary impressions – and not only for the generation who was 'there' live around the television: "The Apollo mission opened up a fundamentally new perspective of the earth and mankind to people. Shortly after these first, and still unique, flights to another celestial body, the Club of Rome presented their report on the Limits of Growth, organisations such as Greenpeace were founded, James Lovelock formulated the Gaia hypothesis." (Marsiske 2005: 183) In a rather unintentional way, Apollo made people in many parts of the world conscious of the fact that they are not only inhabitants of this one, ultimately indivisible world, but rather also inhabitants of the cosmos – a collective change in consciousness which remained largely absent from later political revision.

2.0 From earth to space: The ambivalence of the foreign

That which the Apollo mission provoked in relation to human consciousness is directly connected to what man believes he will see and discover in space. Those "endless expanses" confront us with *three dimensions of foreignness* (see Schetsche 2004), which offer themselves as projection surfaces for hopes and fears, but also for those 'ultimate questions' about the sense of our existence. These three dimensions simultaneously ask us three questions closely linked with the problem of legitimising manned space travel: (1) *What* is the attraction of space to man? (2) *What* will he bring back with him? (3) *Who* could he meet there?

2.1 Dimension one: Space as territory

The political scientist Stephan Freiherr von Welck (1986) characterises the aims of American space politics since the 1950s using three interrelated concepts: conquest, exploitation, domination. What is described is the process of dealing with space as a (initially symbolic, potential but also very real) appropriation of a territory beyond the earth. The most visible expression of this was the (media-effective) running up of the US-American flag at the

beginning of each manned moon-landing. The geopolitical and therefore also cosmopolitical claim to leadership by the US as a nation was thereby symbolised before the eyes of the world by an act traditionally reserved for the appropriation of a piece of land.

This attempt at a political-symbolic appropriation of space is, however, only one of two endpoints of the broad continuum when dealing with the foreign. This is, after all, not only foreign territory (and therefore something which can potentially be conquered), but also the space which is collectively unknown to us as mankind – and its dangers as well as its uses are correspondingly difficult to assess. What must also be noted here is that the greater the dangers, the slimmer the chance of an economically calculable and politically acceptable use. The priority of the latter means that the most important task of space travel is space research and exploration. Apparently knowledge which seems to serve scientific ends, for example about the effects of weightlessness or the consequences of cosmic radiation, also always represents basic knowledge on the control of space and the later use of its resources (see Welck 1986: 14). What is foreign about space is thereby changed into an entirely practical challenge: The transformation of ignorance about external space into knowledge of its properties and utility. The result is a territorialisation, and thereby a transformation of an abstract (because it is unknown) space into a concrete (known) ‘place’ which is available for future political-military and economic operations. In this sense the de-alienated space is the point of reference for every legitimisation of space travel.

2.2 Dimension two: Things we will find in space

Objects which we (could) find as part of this de-alienation of space are simultaneously fascination and fear-provoking. The history of space research bears witness to this ambivalence, as do descriptions in science fiction of its possible future. It is always concerned with the area of tension between hope and risk, bound up with the ‘things’ which we take from ‘up there’ to us ‘down here’.

It was therefore the most important (both real and legitimate) scientific goal of the Apollo mission to bring back rock samples to earth. The hopes placed in these samples by scientists was virtually limitless: The Nobel prize-winner for chemistry, Harold Urey, reputedly said before the moon-landing: “Give me a piece of the moon and I will tell you how the solar system came into being”. This promise was, however, to remain unfulfilled. Similar expectations today give rise to unmanned missions which are supposed to bring material back from space (for example the automatic “Mars Sample Return Mission”, planned by the European Space Agency [ESA] for the coming decade).

Bound up with all these scientific hopes for trail-blazing leaps in knowledge through the terrestrial examination of foreign materials there is, however, an imaginary (or perhaps even real) risk which this research strategy entails: After returning from the moon, the Apollo 11

crew, and also the samples they had brought back, had to first go into quarantine. The reason for this was the fear that unknown substances or extra-terrestrial organisms had been brought back to earth. And even today NASA has a "Planetary Protection Officer" whose job it is to prevent micro-organisms from space becoming a danger for the terrestrial biosphere.

It is certainly no accident that a book appeared in the same year as the first moon-landing that gave a literary form to the fears of 'infection' of the terrestrial biosphere by extra-terrestrial organisms. In *The Andromeda Strain* by Michael Crichton, a space probe brings strange microbes to Earth which prove to be so compatible with human biochemistry that they trigger off a deadly disease. The beginning of the novel is astonishingly similar to the real events surrounding the Genesis space probe, which collected solar wind particles and was supposed to bring them safely down to earth in a hermetically sealed container. The space ship crashed on its return in 2004 and the container was severely damaged. If this had been contaminated with micro-organisms, these would probably have escaped into the terrestrial environment. As this example shows, a legitimisation of space travel via the topos of the appropriation of the foreign has always carried a 'seed' of failure within itself.

2.3 Dimension three: Looking for the 'other'

Looking at the astronomical results from research in the last few years there is no longer any doubt that our galaxy is teeming with planets of the most amazing variety. At the same time the supposed conditions under which life can exist on the earth have expanded immensely. It is therefore only logical that the question of intelligent extra-terrestrial life is being posed with great urgency nowadays – in a very practical sense, for example, as part of the SETI project (SETI = Search for Extraterrestrial Intelligence), which is searching for signals from extra-terrestrial civilisations using a variety of technological means.

The frequent cultural changes in the perception of such extra-terrestrials (see Watson 2004) reflects the continuing ambivalence between fascination and fear which has already been able to set off the imaginary confrontation with them in us. From an existential philosophical or depth psychology perspective the fictional extra-terrestrials serve as an external measure by which we measure ourselves and with whose help we are able to better identify ourselves as human (see Schetsche 2004).

This is, however, only *one* aspect of the search for the 'absolute other'. Space research can – even if the vast majority of SETI researchers want to rule this out – bring us into a situation in which we are confronted with a real 'other' (see Schetsche 2003). What ought to cause concern here is *where* we will meet the extra-terrestrials. Cultural anthropology shows us (see Bitterli 1986) that whenever the first contact between human cultures takes place on the territory of one of them, the roles are predetermined right from the start: For the "discoverers" the discovery far from their own home proves their own superiority – for the "discovered",

the fact of being confronted with aliens on their own territory proved their inferiority. The cultural, or even physical, destruction of the civilisation which feels itself to be inferior, a destruction which can be seen many times over, was not normally the result of a military-technological superiority utilised by the discoverers, but rather a mass-psychology consequence of the "being discovered": A collective existential shock causes the collapse of religious and cultural conceptions, which in turn leads to disintegration of the economic and social system (see Rausch 1992; Müller 2004).

We cannot know if it is the same for extraterrestrial civilisations in this respect – for mankind, the first contact with them may be one of the most defining events in our collective history (see Hoerner 1967). The culture on whose territory the meeting takes place will be existentially threatened. As the mass-psychological 'neutral zone' of humanity is only likely to begin at the edge of our solar system, it is of great importance that the first contact is established 'on the outside' and not within the earth's orbit, let alone on the earth's surface. That would, admittedly, be a truly 'cosmopolitical' reason for stepping up manned space travel. It is, however, questionable whether this reason can be used to legitimate manned space travel in the face of such contact being regarded by most scientists as largely improbable.

3.0 From legitimisation to legitimacy: Space travel as a civil society project

Let us once more slightly change the first question above: *Why* should mankind travel out to space at all? The answer to this question of the legitimisation *and* legitimacy of manned space research appears to me to be central for the success or otherwise of any initiative for again taking up any space travel which is worthy of the name.

At the beginning of the space age everything was very simple – power politics was the dominant factor. The demonstration of supremacy in space served to secure terrestrial power; all talk of "scientific exploitation" was little more than public legitimisation for the immense financial expense and the not inconsiderable risks to the environment. Supremacy in space, which has remained a declared goal of all US governments to the present day (see Rötzer 2003), has, however, been able to be assured with significantly less expense and effort since the fall of the Soviet Union. The motto "back to earth!" stands for a political re-orientation of space travel rather than a scientific-technical one: Searching for material resources, monitoring the economic and ecological consequences of its exploitation, surveying political-military activity around the world. This change in space politics makes the scientific legitimisation necessary for Apollo superfluous today. And, as a matter of fact, science itself has in the meantime taken apart the myth of the scientific sense of manned space travel – for example the *Deutsche Physikalische Gesellschaft* in its decision (*Deutsche Physikalische Gesellschaft* 1990) to drop all scientific-technological reasons for such activities.

As far as politics is concerned, financial-political reasons were suddenly put forward after the end of the "space race" for doing without any further manned space travel. Typical here is the radical criticism made by the former German research minister Edelgard Bulmahn (1992) of all claims to state support for manned space travel. These made neither scientific nor economic sense after a cost-benefit analysis, and were therefore unjustifiable as a state project. "There are more important goals for mankind than the satisfaction of the desire for adventure and expansion and fulfilling obscure cosmic missions." (Buhlman 1992: 604) This conclusion, on closer examination, proves itself to be not so much a case against manned space travel as such, but much more against the previous practice of allowing politicians to decide on its "sense" or otherwise – who, as we saw in the example of the USA, did not really support manned space travel for any scientific, or similarly 'noble', reasons.

In the face of the scientifically supported and politically decreed abstinence, the question is raised whether manned space travel, if it is to make any sense at all, would not have to be placed within a completely new context of justification. An initial suggestion might make use of one such differentiation: Space *research* is a scientific project, whilst space *travel* is a cultural one. On this understanding the state could, and should, largely pull out of manned space travel because although space *research* (like all basic research) would still be seen as a task for governmental authorities, space *travel*, however, would be viewed as primarily a cultural project, and therefore one for civil society. The missions would be financed through donations and sponsoring, space tourism or the sale of media marketing rights. In order for this to happen, however, psychological, aesthetic and cultural-ethical justifications would have to be compete with the original political functionalism and the subsequent scientific-economic delegitimation of space travel.

It may well be irritating at first sight that such a new reasoning differentiates itself from scientific space research – but this does, after all, provide an answer to philosophical-existential problems. The insights obtained therefrom are just *one* way of answering the question of the individual as well as collective 'where from' and 'where to'. And there have always also been other answers to this, such as spiritual-religious or artistic ones, which may be similar to scientific ones, but cannot be identical with them (Wetz 1994: 453). What fascinates people so much about the pictures from the Hubble telescope or probes from Mars, Jupiter and Saturn is not their scientific significance (which is, after all, only understandable to a few), but rather their aesthetic and transcendental qualities – such as the "orderliness, beauty, perfection" of the cosmos, qualities longed for just as much as assumed (Wetz 1994: 429; Marsikse 2005: 7).

The question of whether the scientific exploration of space takes place by means of earth-based observation, unmanned space probes or manned spaceships will now, more than ever before, be decided according to cost-benefit calculations. Other factors, such as mankind's

discovery mentality (which can be seen as an anthropological constant), will prove to rather be a factor which gets in the way of economic considerations. Whilst the latter is about getting information as economically as possible, the former is about the de-alienation of space via direct observation, direct inspection and manual handling. Such direct impulses of the immediate, however, will turn into the helpless rhetoric of incorrigible “space enthusiasts” in the face of (un)cultural economic considerations if they are not recognised for what they actually are: the civilising and noble pleasure in the foreign or the strange and its sensual, cognitive and emotional appropriation which stems from the originally vital effort to understand the environment.

The scientific-economic arguments which dominate today neither do justice to this anthropological depth dimension of space travel (the challenge of the different dimensions of what is foreign), nor is it possible to tackle this dimension by argumentative means. From this new perspective space travel is not a project concerned with power politics, economics or even primarily scientific goals. Rather it is much more a cultural project, or perhaps more correctly in its best sense one concerned with civilising because it concerns the standards of civilisation. Its motto is “return to mankind” – because it is precisely man, and not space, that would be at the centre of space travel justified in this way.

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a. Parliament is the sole repository of legitimacy and may not delegate governmental authority to regional or local units. b. no final action may be taken on a bill until all members of parliament have had an opportunity to speak either for or against it. c. members of the government are not allowed to take part in the.Â a. priority system for assigning floor space to delegation at the UNO. b. selective system for assigning locations to foreign embassies in. Washington. c. procedure of mediation of disputes between nations. d. maintenance of liaison between the USA and the former USSR. Notes deregulation "the act or process of removing government restrictions and regulations.