

**Politics and Space Exploration**

**Shannon Valley, International Studies and Political Science Majors**

**Switzerland, full year**

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I plan to study the way in which changing political agendas have affected the types of missions space agencies conduct and the level of international participation over time.

Much of the work done on the issue of politics and space programs focuses on one time period, for example the “space race” of the Cold War, or one specific country’s contributions, like France’s de Gaulle-directed entry into technological leadership in western Europe. I aim to look at the larger system of space exploration to follow trends in the shifting goals and priorities in the industry. Walter A. McDougall holds that the space age grew out of a need for political showmanship, and that, at least of the time of his publications, space exploration was still mainly a front for power posturing.

...the universal impulse to the involvement in space was economic: the apparent technological gap that had opened by the mid-1960’s precisely because it seemed the United States had discovered the “keys to power” in state-funded research and development in critical point sectors, which sustained technological revolution throughout the economy...French spending for research and development quadrupled during the first five years of the Fifth Republic, and France continued to lead Europe toward aerospace independence in order to overcome the technology gap, ‘brain drain,’ and ‘industrial helotry’. (1033)

He rejects the idea that internationally collaborative space agencies are in any way revolutionary:

Participants often viewed cooperative programs as a means of hastening national technological *independence*, as the French and Japanese cases illustrate. Even as advanced technology united the worlds in some respects, the financial, military, and organizational demands of ‘big science’ tended to reinforce the national state as the most efficient *agent* of technological change.” (1022) “*Sputnik* I was truly the shot heard ’round the world, and its international effects were manifold; but it did not alter the nature of the international system. The national state remained supreme, cooperation remained a muted form of competition, and military rivalry incorporated the strategic canopy of outer space. The international imperative stimulated the rapid development of space technology, but it was not in turn transformed by it.” (1023)

I hypothesize that as space agencies grow beyond their uses for political and economic prestige, their focus shifts from missions that seek to further manned space exploration to those that have more immediate ecological and scientific implications. Space is not becoming more politicized and state-centric, but more like the broader scientific community: competitive within and across national lines.

I will conduct a case study on two agencies: the United States' National Aeronautics and Space Administration and the European Space Agency. These two agencies will represent the main types of space agencies: one with a long legacy rooted in the dawn of the space age and the other relatively new; one run by single state politics and the other subject to international agreements. I will discuss the changes in mandates dictated by political heads, technological emphases of their research and space missions, and level of international/interagency cooperation over time. My study will entail a review of government and agency records, political speeches and space propaganda, stated goals of the agencies as well as executive interviews with veteran and contemporary agency workers and policy makers.

Some of the records I wish to review are those that show the process of approving and allocating funds to various projects. In the case of NASA this will require the analysis of Congressional documents, in which I will be looking for the basis of the arguments for and the amount of money proposed and granted for the projects. I can also follow how closely the goals of the agency follow ideals mentioned by presidents in their State of the Union Addresses. Finally, evaluating the percentage and types of foreign

contributions to NASA's projects over time will give me an idea of how the nature of collaborations has changed.

Once the data has been collected, I will compare the types of projects prioritized (commercial satellites, atmospheric science, defense applicable research, etc) to the political mandate of the agency of that time and look for patterns. A shift in agency priorities to projects like those enhancing robotic technologies or developing a thermal map of the moon, for example, signal an emphasis on hard science. Evidence of this along with greater international collaboration in research and missions support my hypothesis. The broader data on the other agencies will be helpful in gathering an aggregate sample of the political/scientific atmosphere in each case.

I hope to study the politics behind Swiss participation in the ESA by reviewing literature on the ESA and interviewing former and current employees. I may also gain insight while interning in a science-focused agency in Geneva, such as the European Organization for Nuclear Research, as part of my study abroad program. In organizations such of these, I may be in close contact with research and programs leading that have links to ESA and European scientific collaboration, and may find people to interview there.

My course in the Introduction to International Relations has introduced me to the structure of non-governmental organizations, Political Research Methods has familiarized me with qualitative research methods and analysis, and an introductory geology course entitled "We Choose to go to the Moon" with a focus on lunar geology and the Apollo space program emphasized political impetus for and impacts on space exploration.

I have worked with Mark Robinson, my geology professor, who has made me aware of contacts working in ESA, such as Bernard Foing, and in other scientific and scholarly positions in Europe and the US. I will continue to make use of those resources for more information on my topic. I will also try to make contacts with professors in the international relations schools in Geneva.

I plan to start archival research during my first semester abroad in Geneva, with most of the work done in the spring semester, when I will participate in my internship. When I return to Northwestern, I hope to find help from the Political Science or International Studies department to develop my work into a senior thesis.

The results of this type of research is particularly salient for United States policymakers in relation to NASA prioritizing and budgeting, as the space administration is being reevaluated and revamped following the Columbia shuttle tragedy. It is important to keep in mind the overriding agenda of the space industry as a whole in setting new goals for the future, particularly in terms of redefining the culture and direction of space exploration rather trying to work towards standards of the past.

The budget should be no more than about \$400 for travel (particularly to ESA headquarters in Paris), lodging and small recording equipment.

Please do not post my proposal on the Study Abroad Office Web site and do not use it in future programs or courses, however, I am open to sharing any completed research or research experience with the program in the future.

Shannon Valley 6/13/05

### Work Cited

Mc Dougall, Walter A. "Technocracy and Statecraft in the Space Age--Toward the History of a Saltation." The American Historical Review 87.4 (1982): 1010-40. <<http://links.jstor.org/sici?sici=0002-8762%28198210%2987%3A4%3C1010%3ATASITS%3E2.0.CO%3B2-C>>.

### Also Reviewed

Aldhous, Peter. "Science Steers Around Euro-Potholes." Science 260.5115 (1993): 1734-6. <<http://links.jstor.org/sici?sici=0036-8075%2819930618%293%3A260%3A5115%3C1734%3ASSAE%3E2.0.CO%3B2-R>>.

Creola, Peter. Switzerland and Space--how a Small Country Succeeds. Vol. 15., 1999.

Lambricht , W. Henry. "The Political Construction of Space Satellite Technology" *Science, Technology, & Human Values*, Vol. 19, No. 1. (Winter, 1994), pp. 47-69. <<http://links.jstor.org/sici?sici=0162-2439%28199424%2919%3A1%3C47%3ATPCOSS%3E2.0.CO%3B2-3>>

McDougall, Walter A. "Space-Age Europe: Gaullism, Euro-Gaullism, and the American Dilemma." Technology and Culture 26.2 (1985): 179-203. <<http://links.jstor.org/sici?sici=0040-165X%28198504%2926%3A2%3C179%3ASEGEAT%3E2.0.CO%3B2-5>>.

McSweeney, Bill. "The European Neutrals and the European Community." Journal of Peace Research 25.3 (1988): 205-11. <<http://links.jstor.org/sici?sici=0022-3433%28198809%2925%3A3%3C205%3ATENATE%3E2.0.CO%3B2-Q>>.

von Preuschen, Rudiger Freiherr. "The European Space Agency." International and Comparative Law Quarterly 27.1 (1978): 46-60. <<http://links.jstor.org/sici?sici=0020-5893%28197801%2927%3A1%3C46%3ATESA%3E2.0.CO%3B2-I>>.