Membership in the Space Club - A Tool in the Hands of Medium-Sized and Small States for Empowerment and Projection of Power
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Abstract
Incorporating the model of clubs from Sociology, Psychology and Economics to IR provides a workable and useful model to scrutinize and evaluate states' motivations for action. The primary argument of this paper is that “nation-state clubs” are part of the social interaction of states, and serve international expectations and domestic needs, similar to functions that clubs fulfill in human society. It concentrates on the motivations and preferences of states to invest valuable resources on a large-scale in national space programs and join thus join the elite group of spacefaring nations, perceived in the political discourse as the space club. The paper shows that membership in the space club is used as a tool to project power, improve instrumental capabilities, international status and prestige, strengthen self-esteem and pride of the people and reinforce political support of the regime. The paper is composed of three parts. First it depicts on the role of clubs in human society and scrutinizes the values and functions fulfilled by clubs for humans. Second it draws from the individual level to international relations, stressing similarities and important differences. Third it discusses the dynamics of the space club in the politics of space.

Introduction
This paper explores the theoretical and empirical aspects of nation-state clubs in world politics, using the "space club" as a test case. It takes an interdisciplinary approach that utilizes existing research of clubs and cliques in human society, extrapolating them to the field of International Relations, with necessary adjustments. The primary assumption is that a “club of nation-states” plays an important role in the social interaction of states in their overall struggle for power, and serves expectations and needs that are similar to the ones that clubs play in human society.

The concept of nation-state clubs also demands an integration of theories in international relations: the realist premise that a state operates out of a need and desire for power; the constructivist approach, which holds that states' perceptions of power are shaped by international norms and conventions; and the liberalist approach focusing on domestic affairs as affecting policies and decision-making.

The “space club” is a worthy choice for theoretical examination of nation-states clubs highlighting its social and political functions in space politics, for several reasons: First, carrying out an indigenous space program is not trivial; it requires a total and long-term commitment by the nation-state to invest massive resources. Furthermore, what happens in outer space affects almost every aspect of life on Earth. Second, nation-states often choose to embark on a national space program even when many of the technological applications become commodities or choose to be involved scientific or exploration projects of no direct national function or benefit. Third, although the "space club" is vague, since the Cold War

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race to space, its presence and effect on space politics is genuine; the term “space club” has been an inseparable part of space politics and jargon, and is often used by decision-makers to emphasize and glorify states' achievements in space for empowering their states.

The "space club" is not an international organization or a formal association, but it is a direct result of states' behavior and interaction. Scrutinizing and explaining space activities and policies of individual states are difficult. The theoretical model of the club illuminates behavioral pattern of states and shows that membership in the "space club" is of value in a states' struggle for power, status and prestige, beyond the mere value found in the technological achievement. By examining the logic to join the "space club", this study offers a better understanding of the motivations of smaller states to embark on large-scale national projects like space programs. It contributes to forecasting the nature of space policies adopted by states in the international system and provides a detailed examination of the effect the race to space had on smaller and medium-sized states and their part in it.

The present paper, a part of a much larger project, applies qualitative research design that examines the space policies of the two superpowers at the initiation stage of the "space club". It points out that the superpowers' behavior in the Cold War race to space shaped the "space club" and affected other powers and smaller states. It also explores the policies of four small or medium-sized states, using a focused comparison of pairs of nation-states that share many similarities but have different approaches to utilizing space. The explication of each pair highlights the differences in policies and motivations in relation to the space club. The pairs are Britain and France; Australia and Canada.

The findings verify the research assumption by showing that the space club served as a tool in the empowerment process of these states; geo-strategic or economic needs were prerequisites, but insufficient in motivating states to embark on national space programs. A critical mass of functional, social, and political needs was necessary in order for a state to develop a space program and join the "space club". The difference in the approach to space activity was not in the technical expertise and know-how. Rather, it lay in the degree of political commitment shown by the national leadership. The nation-state's threat perceptions, international aspirations, and domestic tensions together with geo-strategic conditions affected the decision-making process about space activity on the overall context of empowerment and power projection.

**Clubs of People Clubs of Nation-States**

The variety of exclusive nation-state clubs throughout history includes the European concert, the dreadnoughts club, the nuclear club, the G8, the UN Security Council, the space club, and more. These cases, although appearing disparate and unrelated at first, manifest great similarities, especially with regard to instrumental capabilities entailed, projection of power, political and diplomatic might, social standing, prestige, national pride and national esteem enjoyed by the member states.

Nation-state clubs, as presented here, play a role usually unrecognized in shaping the social structure of the international community and the interaction among states. The use of clubs allows member states and "candidates" to project a powerful and superior image, and capabilities relevant to their desired power.

While reviewing the existing literature of clubs, it occurred to me that international relations scholars have not developed a comprehensive analytical structure to identify the behavioral and theoretical aspects of this phenomenon, and almost totally disregard its significance.
Therefore, I examined the existing theoretical literature regarding clubs of individuals in sociology, psychology, and economics. After all, the process of grouping is a natural, widespread human dynamic that serves important social functions. Although the special interests of international relations have not been reflected in this literature, there is much which can be extrapolated from the case of clubs of individuals to the issue of nation-state clubs, with necessary adjustments.

The club or the clique\(^2\) is an old and well-known grouping in human society. Clubs and cliques are exclusionary by nature, as they set clearly defined borders between members and non-members. Examples may be found in high-school clubs such as the "cool" kids' club, college fraternities or sororities, Ivy-League alumni organizations, secret societies like the Free Masons. Other examples of exclusive clubs, although informal, are the "Nobel Prize winners", and the "rich people of the world". These clubs are not formally organized and strong ties do not develop between their members. However, they provide their members with exclusivity, elevated status and prestigious images.

Sociology examines clubs as part of the "status theory", rooted in the writings of Karl Marx and Max Weber.\(^3\) Weber developed the concept of "status groups", communities that are based on honor and prestige granted to their members by others. Status groups are part of the social order, because they reflect the distribution of power within a community\(^4\) (just as classes are part of the economic order).\(^5\) Exclusive clubs are status groups; club membership is a status symbol, because membership is a visible denotation of one’s social position and status. The smaller and more exclusive such a club or status group is, claims Weber, the greater will be both the economic value and the social prestige of membership.\(^6\)

In psychology, we find that the notion of clubs is part of a larger body of literature on human motivations and group behavior.\(^7\) In this respect, Abraham Maslow's hierarchy of human needs\(^8\) is a seminal work. Maslow describes a pyramid of five needs: physical, security, social-affection, self-esteem and self-actualization needs. Of Maslow's needs, "self-esteem" and "social-affection" might correspond most closely with the notion of "joining the club", suggesting that it is motivated by the desire for greater self-esteem and affection by society. Albeit membership in a club of individuals, as well as the concept of a "nation-state club",

\(^2\) A clique is a primary group, a set of actors in a network who are connected to one another by strong relations. Usually they have intimate face to face association and cooperation that result in interdependent relations See: Burt, R., (1980), "Models of Network Structure", Annual Review of Sociology, Vol. 6, p. 97.

\(^3\) The "status theory" states that all members of society are ranked according to their possession of desirable characteristics. Their behavior is characterized according to this status hierarchy. Social status can be earned either by one’s own achievements (achieved status) or by inherit position (ascribed status).


are first and foremost based on instrumental capability. Club membership, therefore, may be explained by the desire to satisfy tangible and intangible needs of Maslow's Pyramid.

Clubs were also the subject of examination and research in economics. James Buchanan, is most associated with the "Economic Club Theory", asking questions about the public good of communal partnerships. According to Buchanan’s theory, members of the same club share a certain good. The sharing arrangement may or may not call for equal sharing by each member. The manner of sharing clearly influences the utility outcome for each club member. Buchanan focuses mainly on a club’s size. His primary argument is that each club reaches its optimal size when the total cost and total benefit equalize. Several years later, other studies were conducted in an attempt to carry Buchanan's ideas forward by extending the idea of clubs to private good.

Economists Todd Sandler and John Tschirhart define a club as “A voluntary group, deriving mutual benefits from sharing one or more of the following: production costs, the members’ characteristics, or a good characterized by excludable benefits.” According to economist Henry Hansmann, clubs are status organizations, which individuals will join according to the achievements, attributes or accomplishments of the other members of the organization.

In summary, grouping in clubs fulfills essential human economic, social and psychological functions and needs of social interaction: tangible goods, elevated social status, a sense of belonging to a special interacting superior community, prestige and pride that intensify the members' self-esteem and reflect on their image and identity, all of which are important to their social or political power. In other words, club membership contributes to the external image, and to the internal perception of the “club member.”

Nation-State Clubs in IR Theory
How can the phenomenon of clubs be approached in a way useful to International Relations? What are the motives, logic, consequences of using this concept in world politics? Why join

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the club? – i.e., what makes it beneficial? The phenomenon of nation-state clubs demands integration of the most common theoretical perspectives in international relation: realism, liberalism (and their derivatives), and constructivism in explaining states' behavior. Extrapolating from clubs in human society, the starting point is constructivism, which posits that states are social entities operating in a social environment. Nonetheless, states' behavior in this context is influenced by factors of a realist and liberalist nature.

It is accepted that the overall aim of states is to achieve power. Foreign affairs of states, so claim realists, are shaped by the structure of power distribution. Nation-state clubs, in this respect, are part of the interaction and struggle among states for power. However, the politics of clubs and the rationale to join clubs only partially fit into realism. Decisions to develop indigenous capabilities in fields like space technology and nuclear energy, for example, may be explained by realists as part of states' struggle for survivability in their geo-strategic environment, by granting a variety of concrete benefits of hard power to the states that develop the expertise. Nevertheless, realists fail to explain the factors that make the international community attribute more power to certain symbolic qualities than they do to other qualities; why certain states aspire to "join clubs" while others do not. Furthermore, realism does not explain why states often decide to invest large-scale resources on projects that do not have conspicuous material benefit for their national security, like scientific missions to deep space, human space exploration missions, etc.

A constructivist approach to world politics explains how the dynamic of knowledge diffusion and learning socialize states to perceive certain qualities as more powerful than others, attribute values to those who develop those qualities, and define them as an exclusive elite group – a club. In this respect, a state behaves according to what it perceives to be expected of it and is necessary according to its identity and geo-strategic factors. States' perceptions of power and how it can be attained, aspirations, and interests are therefore, not solely affected by geo-strategic conditions or functional needs. They are also shaped by the international society of which the states are members, its international norms and conventions.

Constructivism, however, does not encompass the whole spectrum of this phenomenon. Although it better explains the question of how clubs develop, it is still insufficient in explaining what makes certain states aspire to be members, while others pass up the opportunity to do so. The mainstream of constructivism, which tends to emphasize the social fabric of the system, neglects the role and effect of domestic issues as an explanation for state's behavior. The decision to join the club is also affected by the domestic sphere of the state, emphasized by the liberalist approach: domestic politics, specific national characteristics, narratives, history, and culture affect the overall objectives and aspirations of the state or its leadership and transform it into actual preferences regarding membership in clubs.

In summary, a nation-state club should be looked at as a catch-all concept that encompasses a variety of material and economic factors, international social functions, and domestic interests and characteristics that affect states' behavior and the interaction among them. Joining a club, in this respect, is a tool in states' struggle for national and international power - it is a means not an end. By "joining clubs", states, similar to humans, wish to upgrade and glorify their achievements and instrumental abilities, win international recognition and

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prestige, be accepted by other “members,” and be identified or associated with them for tangible and intangible reasons. At the same time, they wish to separate themselves from the rest of the world, in order to attain a more lofty position and increase self-esteem and pride. Legitimizing empowerment efforts also serve as a motive, as space has strong peaceful and scientific dimensions, with clear military and defense implications. Such endeavors serve to signal a state’s overall social and political standing and project its power. Finally, it serves to fulfill a variety of social aspirations and needs which are affected by domestic demands, national characteristics and narratives.

What is a Nation-State Club?

A nation-state club does not usually describe a formal institution or a federation of states organized under one management. Rather, a nation-state club describes a dynamic concept in which the international community, influenced by a perception of power wherein it identifies a certain quality or expertise as a symbol and as a means of power, separates numerous states (two or more) that possess this specialty or expertise from the rest of the states. These states are then viewed as an exclusive group with a greater degree of power, composed of the tangible or material abilities, the image of power entailed by these abilities, and the added value that the club imparts as a closed and exclusive community.

Clubs are intuitively related to other forms of international institutions, like international regimes and international organizations, in which states often tend to group. Nevertheless, nation-state clubs, so defined (especially informal ones), differ from these well-known frameworks. Regimes are formed in order to coordinate behavior among several countries regarding a certain issue. In contrast to informal clubs, many regimes are based on a founding charter or an international treaty agreement among the founding governments; they usually have an organizing mechanism that monitors their activity and authority.

Regimes derive their authority, power, legitimacy and effectiveness from a broad consensus, and are usually based on broad accessibility. Like regimes, the legitimacy of a club to exist is also derived from a broad-based consent regarding the meaning and importance of the expertise of the club (a symbol and a means of power). The uniqueness of clubs, however, is that the club as an elite group must preserve a wide and clear gap between the haves and have-nots; only by keeping the gates closed does the halo, exclusivity and appeal of the club remains along with a sense of belonging to a special superior group. Strict boundaries are demanded to preserve its exclusivity. Easy and free access grants no significance to the achievement of joining a club.

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17 There are several unique regimes that are exclusive because their members control which state could join, such as the MTCR.

Organizations, in contrast to informal clubs, have a secretariat charged with the implementation of policies and other decisions of the governing body.\footnote{For literature on international organizations see: Rochester, M., (Autumn 1986), “The Rise and Fall of International Organizations”, \textit{International Organizations}, Vol. 40, No. 4, pp. 777-813; Keohane, R., (1989), \textit{International Institutions and State Power}, (Harvard University, Boulder, Westview Press); Finnemore, M., (Autumn, 1993), "International Organizations as Teachers of Norms: The United Nations Educational, Scientific, and Cultural Organization and Science Policy", \textit{International Organization}, Vol. 47, No. 4, p. 592; Katzenstein, P., Keohane, R. and Krasner, S., (Autumn 1998), "International Organization and the Study of World Politics", \textit{International Organization}, Vol. 52, No. 4, pp. 645-685; Barnett, M. and Finnemore, M., (Autumn 1999), “The Politics, Power and Pathologies of International Organizations”, \textit{International Organizations}, Vol. 53, No. 4, pp. 699-732.} Informal clubs like the "space club" are not structured by international arrangement or established by formal international agreements, and have no secretariat. Furthermore, unlike most regimes and organizations, a club of such kind does not have authority, and the members are not linked together. Usually, informal clubs are imagined or virtual, and with time may develop into a formal institution or organization. It should be noted that formal clubs may take the form of an international organization, and thus be similar in their characteristics to any IGO.

The Non-Proliferation Treaty (NPT) regime, in contrast to the “nuclear club”, is a fine example. Broad consensus had formed around the tangible and intangible benefits provided by nuclear capability and the risks of its proliferation. The NPT grants easy accessibility to nuclear energy to the states that follow its rules, while nuclear weapons are closed know-how and are not easily accessed by barriers put up by the international community and especially by the states possessing these weapons, i.e. the nuclear powers. Therefore, there is no club of states with nuclear energy capabilities, while there is a “nuclear club” of states that possess nuclear weapons.

**How Does a Nation-State Club form? The Case of the Space Club**

Any given era points at certain issues or qualities that are unique in their possibilities, and therefore, influence the meaning of power. These qualities are referred to as symbols and means of power.\footnote{Steinberg, G., (April, 1987), “Large-scale National Projects as Political Symbols”, \textit{Comparative Politics}, Vol. 19, No. 3, pp. 331-346.} For example, when artillery was first introduced, it had little military use. Nevertheless, cannons were perceived as symbols of power and for this reason were acquired. In the late 19\textsuperscript{th} and early 20\textsuperscript{th} century, battleships or dreadnoughts, as they were later referred to after the first HMS Dreadnought of 1906, were perceived as symbols and means of power of that time. Nations that aspired to become world powers acknowledged and admired warships and later battleships, which allowed Great Britain to become "mistress of the seas" in a way never before achieved. The nations that acquired this expertise, initially only Great Britain, France and Russia, were perceived to be a superior group, attracting others to join. Germany, for example, was determined to become a great power by building a large fleet, although it was obvious that there was no need for it to have a strong navy, because the German army was one of the strongest in the world.\footnote{Moll, K. (1965), "Politics, Power, and Panic: Britain's 1900 Dreadnoughts 'Gap'", \textit{Military Affairs}, Vol. 29, No. 3, p. 137.} Later, the United States and Japan joined as well.\footnote{Padfield, P., (1972), \textit{The Battleship Era}, (New-York: David Mackay Company).} It was, hence, a "club" of dreadnought owners.\footnote{Moll, K., (1965), "Politics, Power..., pp. 133-144.}

The dropping of atomic bombs over Hiroshima and Nagasaki in August 1945, the launch of Sputnik in October 1957, and the Apollo-11 Moon landing in July 1969, were the most...
spectacular and visible scientific events of the 20\textsuperscript{th} century. These achievements ignited the imagination of millions throughout the world, and created the axiom that advanced scientific and technological capability is a means and a symbol of superiority and political might. Decision makers, as well as the population in many countries (even small or developing) were convinced that investments in science and technology are indispensable instruments of national security, power, development, prosperity, and progress.\textsuperscript{24}

The reason expertise in nuclear energy or space technology is so highly respected in terms of power is the fact that its scope of potential has not yet been realized, and currently is still vague; developing the expertise and realizing it ignites the imagination. On the positive side is excitement regarding the possibilities of survivability, development and challenging the rules of nature, and on the negative side are the threat and destruction that such expertise may cause.

In their rivalry and competition over world superiority and control, the superpowers made endless efforts to convince other states of their superior qualities. For this purpose, they extensively used visible achievements in space because the use of space technology for improving economic, military and other activities on earth was acknowledged. Nonetheless, national space achievements were strongly linked to national interests of power, prestige and pride.\textsuperscript{25} Nation-states were socialized\textsuperscript{26} by the superpowers' race to space to observe space capability as a symbol and as a means to achieve power, competence, and glory; the one who controls space would control the Earth.

In order to attract states to their side, the superpowers initiated various projects of cooperation. Their competition, however, and the strategic implications of having space capability, led them to strictly control proliferation of these technologies and capabilities. The space race dynamics of competition and cooperation developed the perception that national space programs are symbols of, and have the practical means to achieve, power, competence and leadership. This dynamic made having this capability very unusual and exclusive. Although other nations pursued national objectives in space, only a handful of states had space programs and had acquired launching capabilities. The states that were able to demonstrate indigenous capability were glorified and perceived as members of an exclusive "space club".

The superpowers did not form a “space club” and obviously were not engaged in any activity that resembled a club; even today there is no formal organization called "space club." Nevertheless, since the early sixties, the “space club” has been an inseparable term in space politics.\textsuperscript{27}

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\textsuperscript{25} John Logsdon and later on Walter McDougall clearly show this in their comprehensive works: Logsdon, J., (1970), \textit{The Decision to Go to the Moon: Project Apollo and the National Interest} (Chicago: University of Chicago Press); and McDougall, W., (1985), \textit{The Heavens and the Earth: A Political History of the Space Age}, (New-York: Basic Books).

\textsuperscript{26} Socialization implies changing actors' preferences rather than constraining them from acting on those preferences.

The "space club" is not an international organization or a formal association. It does not have formal institutions like an acceptance committee, a central leading authority, or a code of conduct—elements that are expected in a club. The space club I refer to here is a concept or a metaphor that serves as a catch-all concept. The term encompasses many of the interests and motivations that drive small and medium-sized states in their decisions to embark on large-scale national space projects. The medium-sized and small states that are associated with the "club" are an elite group, of which each enjoys tangible and intangible benefits and identities that are associated with club membership: exclusivity, intimacy among members, legitimacy, lofty status, and glory. Nevertheless, these states do not interact in a well-organized manner, and the club is not a full-scale one. This club does, however, have almost equivalent informal substitutes. Instead of an acceptance committee, there are requirements to cross its threshold, such as demonstration of national capability to access space or to build satellites. Although it does not have a central leading authority, the superpowers in the Cold War and later the United States were the leaders and gate-keepers that largely directed its activities. Finally, although it does not have its own code of conduct, the United Nations' space resolutions, aimed at coordinating international space activity, may be perceived this way.

The wide use of the term “space club” suggests that it attributes value to the states that are affiliated with this special group of states and to the ones that wish to be associated with this group, beyond the mere practical value found in the technological ability itself. By framing it in the context of a club they wish to glorify their achievements, win international recognition, be accepted by other “members,” and be identified or associated with them for tangible and intangible reasons. At the same time, they wish to separate themselves from the rest of the world, in order to attain a more lofty position. Legitimizing empowerment efforts may also serve as a motive, as space has strong peaceful and scientific dimensions, with clear military and defense implications. Finally, such endeavors serve to signal a state’s overall social and political standing and project its power.

The term "space club" was first used in the context of states' competition over space achievements in the early 1960s, when the race to space was set in motion and the leaders of the superpowers were glorifying accomplishments in space as a symbol of power. It was used extensively by the media, and there is ample evidence indicating its use in formal statements by government leaders, state officials, and formal state documents as well.

It was the term "nuclear club" which evolved first; became part of world political jargon, and paved the way for popularization of the concept "space club." This was especially true as
there was a clear effort by the Americans to persuade states interested in nuclear capability for empowerment reasons, to shift their efforts to space activity. Nonetheless, shifting energy towards space activity did not mean rapid and unlimited proliferation of space technologies.

On July 5, 1961, Israel successfully launched the Shavit-2 sounding rocket. Media reports described this achievement as an act of joining the "meteorological rocket launching club" or the "space club". France was declared a new member of the club when it indigenously launched a French-made satellite on November 26, 1965. A few weeks later, Brazil's test of a sounding rocket was described as an entry into the space club. Japanese and Chinese efforts to launch their own satellites were no different. Interestingly, there is no evidence that Britain's first launch, in November 1971, was acknowledged as an act of joining the space club. The reason for this may be that by then, it was publicly known that the British government had decided that the project would be discontinued; making this event Britain's first and last launch.

To the best of my knowledge, the first use of this term by an official space executive was made in 1965 by Arnold Frutkin, Assistant Administrator for International Affairs at NASA. In his book, *International Cooperation in Space*, Frutkin referred to an initiative to make India's sounding rocket range at Thumba available for international cooperation, as a club:

"What began as a bilateral effort, with relatively narrow technical objectives, has grown through a process of inexorable technical and political appeal to the point where major nations, including the Soviet Union, find it important to join..."
Since then, state officials and decision makers use this framework extensively.

In a world of multiple players and multiple ways of demonstrating and measuring power, the social format of the space club is easy to understand and provides a context that allows the international community, as well as the domestic population, to encompass and evaluate tangible capabilities and achievements. Howard McCurdy best explains this in his book, *Space and the American Imagination*:

“In the realm of ideas, the strength of an image is not determined by its inherent validity but by its ability to create a workable model in the minds of the people to whom it is designed to appeal.”

By using the framework of a "space club" to describe and explain achievements and aspirations, leaders and state officials market their state's achievements to the international community and to their people, in an effort to convince them to adopt the formers' interpretation of power, status, and prestige all of which are important to their domestic politics and international power.

The "space club" serves the strong players as well as the weak ones, although large powers, possessing exclusive capability, usually do not refer to themselves as members of the space club. After all, to be associated with the club is only secondary for them. Nevertheless, acknowledgement and recognition as the leaders and even gate-keepers of the club often serves their national interests in terms of power and superiority. Therefore, they sometimes use it and its appeal to smaller states, in order to further their interests and maintain leadership.

Nevertheless, the space club is mainly a useful tool for the weaker or smaller states. Declaring club membership is an attempt to place a state in a category of higher capability, power, and prestige at the expense of the strong and powerful. Even if a certain capability in space was achieved, framing it as an act of joining the exclusive space club is an attempt to enhance and glorify the achievement, sometimes out of proportion to what it really deserves. This is done by identifying their new status as comparable to those of larger and more powerful spacefaring nations. This is the reason medium and small nation-states refer to capable and powerful spacefaring nations as members of the exclusive "space club".

### A Proposed Model of the Space Club

The space club is a “technological capability club.” Therefore, I suggest that membership is determined by a nation-state’s demonstrated indigenous capability to develop, operate, and control its own satellites. This definition also includes states operating in a collective way to develop and launch satellites, such as the members of the European Space Agency. Excluded are states that depend on other governments or commercial actors (even within their countries) for space applications. In this respect, the club is open to all; in principle there are

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no restrictions, other than possessing the national capability and political will to pull it through. In practice, other members of the club are able to impose restrictions and create difficulties in various ways, such as refusing to sell necessary materials. However, a determined country will find ways to overcome obstacles of this kind.

The members of the club are unequal in their investments, capabilities, and membership costs and benefits. As a result, their status is unequal: the "space club" is a hierarchical one. Therefore, different levels of "membership" exist. Membership at the lower level requires only moderate costs and provides moderate benefits; membership at higher levels involves high risks and costs but provides more valuable benefits. This is similar to clubs of individuals in which members are divided into groups or membership levels according to their contributions to the club. Thus, a pyramid model is the most suitable to describe the hierarchy of the “space club”, as the following graph shows. Climbing up the levels of a pyramid towards the apex is demanding and difficult, therefore, only few nations have the capability and desire to climb to the top.

![Levels of Membership in the Space Club](image)

**The Logic to Join the Space Club**

Carrying out an indigenous space program requires enormous effort, a massive investment of resources, a certain level of technology and a large scientific infrastructure. Relying on the purchase of satellites and services for space applications is much cheaper. Nonetheless, a large number of medium-sized and small states are active in this field and are interested in belonging to the “space club.” These states choose to invest in this highly demanding field and pursue indigenous programs, while others choose to rely on foreign support. Undertaking a large-scale national project like a space program merely out of the motivation to "join a club" may seem arbitrary and irrational, unless it is observed in a wider context of rationality. That is, accepting the premise that states are social entities that are socialized to perceive power in a certain way, and act according to a set of expectations unique to the era in which they operate.

The fact that space applications are useful and sometimes even crucial to daily life on Earth is universally recognized. These applications posit a material condition that sparks a demand for states to provide their citizens with the services of space applications for security,
economic, and welfare reasons. However, these applications are insufficient to fully explain why certain states adopt a space policy to create national space programs, or how and why they choose to invest in certain space projects, or the level of their involvement. Moreover, no sufficient explanation is provided for the reasons that a state chooses to refrain from embarking on national space programs.

In their work Scott Sagan (1996-1997), and Dana Eyre & Mark Shuchman (1996) argue that the spread of high technology weaponry throughout the world is the result of more than a means of achieving national security ends. The proliferation process occurs due to the socially constructed meanings that have become associated with them, signifying state modernity. "They are spread because of the highly symbolic, normative nature of militaries and their weaponry." This argument can also be applied to the spread of space technologies and the logic of policy makers deciding to develop a national space capability in their country.

In this respect, Martha Finnemore's work on the reasons for the development of states’ science bureaucracies in the 1960s is germane. Finnemore examined the existence of quantitative indicators of domestic conditions that might prompt creation of a science policy bureaucracy in a sample of forty-four countries. The indicators that were chosen were percentage of GDP spent on R&D; proportion of scientists and engineers in the population; per capita GDP; and percentage of gross national product spent on defense.

These indicators were chosen because they reflect the assumptions that the growth and strength of the domestic science community and national development will make states more technologically intensive; and that threats posed to states' power or security increase when science and technology are linked with warfare. Thus, these factors all contribute to the demand that states establish science bureaucracies to organize and support these processes. Finnemore did not find correlations that could highlight the demand-driven material explanation. Hence, Finnemore argued that international organizations like UNESCO "taught" states the value and utility of science policy organizations, even though UNESCO did not fund the new bureaucracies and did not provide them with any material benefits.

Conducting a similar test on states' engagement in space research and exploration enables a better understanding of the motivations and the material conditions that may drive states in their space policy decision-making. The test reported here examined identical indicators in thirty-three countries, which had developed a certain level of national capacity to develop satellites.

Interestingly, on this test as well, no clear evidence was found that any of these indicators could shed light on a particular explanation that drives national preferences in favor of national space programs. The only indicator that may be positively correlated to national space programs is GDP per capita. In this case a large number of countries with high levels of GDP per capita (30,000+) are involved in space activity. However, most of these

41 This group also includes the European Space Agency members, which jointly share a capability to develop and launch satellites into space.
countries are the ESA members, which have very moderate national space activity and are not very ambitious about developing full indigenous abilities to launch and develop their own satellites. By contrast, countries with very low GDP per capita, like India, Russia and China have very ambitious programs that include human spaceflight capability\textsuperscript{42} and launch capability. These results support the argument that practical material demands are insufficient to explain national activity in space.

Graph 1: R&D as a Percentage of GDP in Countries that have Developed Space Capabilities, 2000-2004

Graph 2: R&D Researchers per One Million People, in Countries that have Developed Space Capabilities, 2000-2004

\textsuperscript{42} India declared that it is interested in human spaceflight.
It is important to stress that these findings and the framework of the "space club" do not negate the important role played by national security, geo-strategic conditions, or other practical needs in the process of space policy decision-making. Rather, it completes the picture, by arguing that states' concept of power is not solely determined by geo-strategic conditions, but also by international conventions concerning the era's symbols and means of power as well as national characteristics and narratives. Domestic politics, images of power, national narratives and cultural heritage, pride and prestige are also important components in
a state’s overall political power. Integration of all of these components is required in order to attain power. The following section elaborates on this issue by analyzing the case of two pairs of similar nation-states in which each has a different approach to space.

**France, Britain and Space Club**

France and Great Britain are both important actors in the international community that share many similarities. They have similar gross domestic products per capita, their populations are similar in size, and their people enjoy a high standard of living and national economic productivity. In terms of history and culture, they are two traditional world powers that controlled parts of the new world and still maintain strong ties to the countries that emerged out of their former empires. France and Britain are both open and democratic societies that were part of the Western alliance during the years of the Cold War and hence fell under the American strategic umbrella. Each of them has nuclear weapons, they are both Security Council member states, and are also G-8 members. Nonetheless, when it comes to space activity, France and Britain have chosen different paths.

For years, succeeding British governments did not form a national space agency because they did not attribute much significance to space or having national indigenous expertise in Britain's overall strategy. This is in striking contrast to France, which perceived space as a prominent part of its grand strategy and consistently granted priority status to its space programs.

France has the most advanced national space program in Europe and is the largest contributor to the European Space Agency (ESA). It takes pride in being the third country to indigenously launch and orbit its own satellite, and has a high profile space industry. Britain, which in the 1950s and 1960s was one of the leading nations in space activities, especially in rocketry, developed a capability to launch satellites, and successfully launched one in 1971, decided in the late 1960s to discontinue its launch program. Traditionally, Britain's main effort was to make space technology more cost-effective. As a result, Britain relied heavily on the United States, ESA, and commercial companies to supply its needs.

The difference between French and British approaches to space activity is not in technical expertise and know-how. The French were not technologically superior to the British. The difference, therefore, is in the degree of commitment shown by their national leadership.

In Britain, space activity was aimed at providing direct and immediate services, while in France it was aimed at meeting social and political objectives of projecting power and boosting national identity for internal and international reasons, in addition to whatever tangible benefits could be accrued. In this respect, observing the French space effort through the prism of the "space club" provides a better understanding of the motivations of France at that period, and the political and social aspects that affected its policy making. Space was

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44 The investigation of French and British space programs is focused on the years 1955-1971.


said to have replaced war as a stimulant to technological advance. 48 One of the most important aspects of French determination to become spacefaring was to be ranked as a world power. 49 Being associated with the superpowers in an elite group of spacefaring nations (the "space club"), served French needs and aspirations for restoring its international image and influence in international forums; self-esteem; pride; and support of the French people for their country and their leaders. France wished to be recognized as a great power by the international community, but first of all by the superpowers. 50 Space club membership was a key to achieving this objective, sending them a message of capability, decisiveness and intent.

Britain, on the other hand, underwent a different process. Paul Kennedy explained that because Britain had not been badly damaged by WWII relative to other European countries, it failed to recognize and address changes beneath the surface, which eventually led to its decline. "The fact that it was undefeated, that it was still one of the Big Three at Potsdam, and that it regained all of its worldwide empire, made it difficult for people to see the need for drastic reforms in its own economic system." 51 After the war, confident in its status as a world power, Britain perceived itself as "member of the club" of the superpowers. Hence, it needed a space program to preserve its position and membership in that club. Once Britain recognized that it could no longer measure up to the superpowers nor maintain its place among the top members, it lost interest in being a significant member of the space club, and gradually gave up on space expertise. 52

Unlike Britain, France could not ignore or deny that it was a declining power. It was defeated and conquered twice within one generation and was ignored in the Potsdam discussions at the end of the war, to which de Gaulle was not invited. This was a clear message that France was no longer perceived as a member of the leading world powers. For this reason, it attributed great value to restoring its previous position among the great powers. For France, membership in the space club in and of itself was of great value for international and domestic reasons. Especially, as France suffered great difficulties controlling its spheres of influence in the post-WWII world in Indo-China and Algeria. The French public had always perceived their program as a symbol of France's independence and

48 In July 1960, the Committee on Science and Astronautics of the U.S. House of Representatives, 86th Congress, published a report entitled "The Practical Values of Space Exploration", in which it pointed out that space activity may replace the forces which had historically driven nations into armed conflicts. Furthermore, the conquest of space may turn out to be the moral equivalent of war by substituting for certain material and psychological needs usually supplied through war. House Report No. 928, (July 5, 1960), Report of the Committee on Science and Astronautics of the U.S. House of Representatives, 86th Congress, Second Session, "The Practical Values of Space Exploration", (Washington DC: Government Printing Office), p. 15.


52 In 1968, the British government's view was that development costs of ELDO (European Launch Development Organization) would far outweigh the immediate economic returns, and in consequence could not be supported. 52 In April 1968, the British government decided to withdraw from ELDO on conclusion of the program then in operation. 52 It announced that developing a purely European launcher was "nonviable", and that Europe should depend upon American launchers. 52 The Minister of Technology, Anthony Wedgwood Benn, announced that Britain would cease contributing to ELDO at the end of 1971, arguing that all government financed research programs must be cost effective and economically justifiable. In October 1971, when Britain placed its first satellite, Prospero, in orbit, it was its first and last launch. MacLean, A., and Sheehan, M., (Winter 1998), "A Hare Turned Tortoise: 40 Years of UK Space Policy", Quest, Vol. 6, No, 4, p. 18; Wright, D., (July 1999), "What Went Wrong with Dan Dare? The Failure of England's Space Program", History Today, available at:
its ability to be at the forefront of technology. The French government felt it was necessary to invest large-scale resources in spectacular programs that could evoke the pride and enthusiasm of the population.

Membership in the space and nuclear clubs allowed France to project a much more powerful image than it actually had. This was primarily a component of France's efforts to maintain control over its own destiny and assert some influence on the international system. For Britain, the aim was to provide national expertise that would be sufficient to keep Britain effectively in the exploitation of space at modest costs, and to be in a position to collaborate efficiently with other states.

Another difference between France and Britain lay in the leading political figures of the two nations at that time and the roles they played, manifested especially in the presidency of de Gaulle.

De Gaulle's aspirations to provide France with a nuclear striking force and an ambitious space program were not aimed only at increasing French prestige abroad, but at enhancing Gaullist prestige and pride at home as well. For de Gaulle, independence was meant to link foreign policy and national identity in such a way as to maximize the political efficacy of the French state, both at home and abroad. De Gaulle also used these visible spectacles of nuclear testing and satellite launching in his own favor. Thus, he marshaled the image of the first launch of a French satellite in his 1965 presidency campaign. After all, the successful launch on November 26, 1965 occurred shortly before the elections took place. Furthermore, the launch was scheduled to take place before the launch of a French satellite by the Americans. It was important to de Gaulle that the first French satellite be launched by a French launcher, and he wanted full credit for that.

The different historical experiences, national narratives and political cultures of France and Great Britain affected the way each country perceived the values of space technology and national space activity, which shaped their preferences and policies. The British perspective primarily focused on the tangible instrumental needs of space activity, and hence did not attribute much significance to demonstrating national capability. That view enabled it to relinquish the expertise it had already achieved. In fact, up until today, Britain's approach to space is rather selective. Even in the modest context of ESA, Britain does not invest in all of the optional programs. France, on the other hand, attributed great value to the intangible, political and social aspects of having a national space program. Club membership, therefore, served as a source of projecting French power and boosting its identity. It was a message that France was a world power, which should be taken into account as an essential parameter in international affairs.

58 Ibid, p. 86.
Canada, Australia and the space club

Canada and Australia are both large countries with vast territories and relatively small but scattered populations. They have a similar gross domestic product per capita, and their people enjoy a high standard of living and national economic productivity. By fostering a well-educated workforce, these two countries have developed high technology industries, which have contributed to an industrialized economy with a large service sector. In addition, both countries are heavily dependent on global trade.

In terms of history and culture, these are two relatively young countries that matured out of the British Empire and are still members of the British Commonwealth. They share a widespread use of the English language, although in each country there has been some anti-British sentiment. Canada and Australia are both open and democratic societies that, following the demise of the British Empire, had shifted to come under the American strategic umbrella. Both countries have sought to play global middle-power roles in various international affairs. Their armed forces are similar in size, and cooperate with the United States and Britain on intelligence matters, although each faces different threats and challenges.

When it comes to space activity, however, Canada and Australia have chosen different paths. There is no question that each country has a definite need for the use of space application services. Nonetheless, the different policies and programs each has pursued on its path to space raise important questions regarding the underlying motivation in each case.

Canada has been very ambitious about space, building a high-profile space industry, creating and operating an astronaut program, partnering in the International Space Station with its contribution of the well-known Canadarm and, most important of all, providing its citizens with necessary space applications of Canadian-made technology.

Australia, on the other hand, has shown no interest in having a national capacity in this field. Throughout the years, it has made no major national effort to develop an indigenous space capability. As a result, Australia relies heavily on commercial suppliers to meet its needs, and takes pride in being a “sophisticated user” of space applications.

The absence of an Australian aspiration to "join the club" compared to Canada's eagerness to be associated with this group suggests that despite their similarities, Canada and Australia are affected by significant differences that derive from different perspectives, needs, interests and priorities. These factors led them to take different paths in space.

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60 In territory, Canada is the second largest country in the world after Russia with about 33 million people, while Australia is the sixth largest country in the world with only 21 million people.

61 In Australia, this was primarily associated with the Irish Catholic Diaspora and post-WWII migration program that resulted in a diverse population less connected or attached to Britain. In Canada, it was expressed in the opposition of French-speaking Canadians to involvement in British and other foreign wars. In: Blaxland, J., (2006), Strategic Cousins – Australian and Canadian Expeditionary Forces and the British and American Empires, (Montreal and Kingston: McGill-Queen's University Press), pp. 254-256.

62 Many Canadians view their country’s membership in the British Commonwealth (especially the English-Canadians), and other international organizations such as La Francophonie, as a means of asserting a national identity that is distinct from that of the US. Australia also attaches symbolic importance to its affiliation to the Commonwealth despite the demise of the British Empire.


64 A robotic arm developed by Canada for the American space shuttle and international space station.

One of the eminent differences between Canada and Australia is their geographic and strategic location. Geographically, their different locations result in different climatic conditions that concomitantly raise different solutions to similar problems. Having to communicate in the Arctic north forced Canada to develop a scientific infrastructure that later served as the foundation for its space activity. Australia’s milder climate and the fact that its population was scattered around the midland emptiness allowed more alternative ways to communicate.66

Strategically, while Australia is almost totally isolated in the southern hemisphere, Canada is located between Russia and the United States. This substantial difference has several facets:

The advantage of neighboring the United States: Since the early days of the Cold War, Canada’s closeness to the United States put it in a better bargaining position, providing the United States with strategic depth. This proximity and kinship allowed Canada to take advantage of the American space activity. This was especially possible because the Americans perceived Canada as a natural ally with a similar nature and interests. The U.S. therefore, more easily opened up to Canada and shared its know-how.67 This also allowed Canada greater confidence in developing its own capacity, as well as encouraging it to catch up. Australia did not experience such ties with the United States nor did it enjoy American funds for scientific research the way Canada did in the 1950s.68 Australia had to work harder to win American friendship.69

The advantage of being remote over the burden of being nearby: American security interests do not affect Australia nearly as directly as they affect Canada, which perceives itself as responsible for U.S. security (especially in the Cold War years).70 Unlike Canada, Australia is geographically remote from its European/Western partners, leaving it with a sense of relative isolation that result in fewer concerns about its sovereignty.71 Australia's perception has been that it would not be economical to develop national capabilities. Hence, it preferred procurement over indigenous development.72 Furthermore, Allen Gyngell and Michael Wesley argue that the security of distance provided Australia with the psychological capacity to take risks with fewer consequences than others would find comfortable.73 This observation may explain why Australia allows itself to not have a national space program or national space capacity, which many middle powers or regional powers pursue. The difference is especially noticeable when compared to Canada’s geo-strategic situation, which made it perceive national space capability as so vital.

Living next to an Elephant: Canada's proximity to the United States is a traditional Canadian concern that constitutes another significant difference between Canada and Australia. For

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66 Ice melting in the north is another major issue of sovereignty for Canada that Australia does not face, and requires the use of space applications.
68 Interview with Prof. Gordon Shepherd, October 30, 2008, Toronto, Canada.
69 For this reason, Australia allowed the United States (and also Britain) to operate parts of their space and nuclear programs on its territory and sent troops to participate in the American effort in Vietnam, while Canada did not. Hymans, J., (2006), *The Psychology of Nuclear Proliferation*, (Cambridge: Cambridge University Press), pp. 123-124.
70 Interview with Dr. George Lindsey, November 2, 2008, Ottawa, Canada.
Canadians, in spite of all the advantages, it is important not to be seen as the U.S.'s younger sibling; they are intent on preventing a "brain-drain" to the United States. This notion often affects its foreign and security policies. The fundamental fact that Canada lives directly next to its major trading partner and ally, and is almost overshadowed by the United States on the international stage, has certainly added to Canadian angst and its desire to project its imprint on world politics and seek a high position among the nations of the world. A visible space program that strives for a great deal of exposure and recognition as an independent and meaningful contributor to international endeavors serves this desire and provides inspiration to Canadian youth.

A Homogenous society vs. A Heterogeneous Society: Another striking difference between Australia and Canada is the divided and dualistic culture produced by the French majority in Canadian Quebec. This has an effect on Canadian foreign and domestic policies that cannot be ignored. Canadian concern about national identity-building is in contrast to the somewhat homogenous nature of Australian society; Canada has an interest in forging an independent identity distinct from both the British Commonwealth and the United States. For example, Canada adopted a distinctively Canadian maple leaf flag while Australia’s flag, which has the Union Flag in the corner, indicates its origins in the British Empire. With respect to space, the Canadian space program and especially its visible elements, for example the Canadian Astronaut corps and the Canadarm, are used to enhance Canadian pride and self-esteem, as well as inspire and encompass all aspects of Canadian society. This need does not exist in Australian society.

Different roles in global politics: While Canada is seeking a global role and impact on world politics, Australia shows less interest and is more focused on its region – Asia. It perceives itself as an important force in the Pacific, as a bridge to Asia, and as a source of development. As a result, Canada finds it important to participate in international space ventures such as the ISS, even if such participation does not provide immediate concrete benefits to its citizens, while Australia sticks to tangible concrete services.

Finally, Australia's and Canada's different national narratives and political cultures affect the way each country perceives the values of space technology and space activity. The Australian perspective is mainly focused on the tangible instrumental needs that space activity provides, and hence does not see much significance in demonstrating national capability. Canada, by contrast, acknowledges the intangible, political and social aspects of having a national space program; "club membership" serves as a source of political and diplomatic power and an identity booster.

Conclusions

One of the most important aspects of this paper is in the fact that club politics provides a workable and useful model to scrutinize and evaluate states' motivations and behavior.

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75 Several years ago, Australia changed its immigration regulations, opening its doors to immigrants from Asia. This changed somewhat the homogenous nature of the society.
77 On June 30, 2008, Ipsos Reid published the results of a broad survey in which Canadians were asked to choose 101 things that best define Canada. The Canadarm came in fifth with 4,689 votes. IPSOS REID – Defining Canada: A Nation Chooses The 101 Things That Best Define Their Country. June 30, 2008.
Membership in a nation-state club, like membership in a club of humans, is an instrument used to fulfill needs and expectations of national power and identity. Joining a club, therefore, is a means, not an end in the quest for greater power within a given context.

By joining the space club, states empower themselves by attaining tangible capabilities and expertise; they improve relations with other spacefaring nations, upgrade their international status and prestige, and develop and improve their image as powerful, based upon the club's exclusive nature, and by connecting to other states that share this ability; or deterring others by placing themselves at parity with them. Furthermore, the rhetoric of clubs in high-level political discourse and the media serves primarily as a legitimizing mechanism to justify particular claims of empowerment by the state or its leadership, for international and domestic objectives. Finally, states upgrade the self-esteem and national pride of their citizens and reinforce political support of the regime, so as to increase the state's power in both the international community and domestic politics.

Joining the space club is a way of communicating messages to the international community. As a public demonstration of capabilities and achievements, it is a credible message of deterrence and decisiveness. Nonetheless, it may also be an attempt to cheaply project power by placing a state in a higher category of capability and power than the one to which it actually belongs.

The analysis of the case studies show that geo-strategic conditions and international discourse of power combined with intra-state domestic political discourse, narratives, history and culture, affected the level of space activity that individual states chose to pursue. States were socialized to acknowledge space expertise as a symbol and as a means of power, but a critical mass of geo-strategic and domestic needs modified this perception and affected its transformation into actual preferences and priorities regarding space policy.

France and Canada, which were more ambitious about joining the "space club", suffered from an intense perception of threat or political instability, as a result of geo-strategic conditions and domestic factors. Canada was concerned by its position as a bridge between the Soviet Union and the United States and by being overshadowed by its giant neighbor. Furthermore, societal and political turmoil threatened the very existence of the Canadian identity and political stability. France feared a Soviet invasion of Europe during the Cold War. Its perception of threat was reinforced by memories of WWI and WWII in which it was overrun by Germany. Additionally, France, which suffered political unrest, perceived the American strategic umbrella over Western Europe as a threat to European and French identity and independence in decision-making.

These states aspired to be placed in powerful positions in the hierarchy of nations, and project power that would assure their survivability and contribute to their identity. Developing space expertise was part of this process. Although each had its own unique characteristics and reasons, they both aspired to be associated and identified with the spacefaring nations. They wished to be taken seriously in international forums and arenas. Claiming membership in the "space club" served as a message of intent, capability and decisiveness aimed at adversaries, and even more so aimed at allies, especially the United States, the unofficial leader of the "club". France and Canada aspired to gain legitimacy and acknowledgment of their efforts for empowerment, by taking on the burden of large-scale investments in a national space program.
Domestic and political factors were also of significance to the space policies of France and Canada. In France, the space effort was aimed at restoring the people's confidence in the state and its political system. In Canada, the space program served important social and political needs to boost a coherent and unified Canadian identity, and also served as a factor distinguishing Canada from the United States. To further this point, it should be noted that political factors were also important. For example, De Gaulle timed the first launch to gain greater political support only days before the national elections.

These arguments are supported even more strongly when the space policies of France and Canada are compared with the highly pragmatic policies of Britain and Australia. Both states concentrated on the use of space applications rather than on national development. As shown above the difference is not in technical expertise and know-how. Rather, it is in the degree of political commitment shown by the national leadership of the respective countries.

The comparison of France to Britain and of Canada to Australia shows that geo-strategic or economic needs were prerequisites, but insufficient in motivating states to embark on national space programs. Social, political and strategic aspects of space programs were no less important than material, geo-strategic and scientific factors. The different historical experiences, national narratives and political cultures of these states affected the way each state perceived the values of space technology and national space activity, which shaped their preferences and policies. Thus, a critical mass of functional, social, and political needs is necessary in order for a state to develop a space program and join the "space club".

The use of the space club framework highlights the aspirations of medium-sized and small states. It extends the prism, which traditionally focused on the superpowers' space race. Space exploration and use was not solely driven by a competition between two superpowers over leadership. The concerns of other states that were seeking to exploit this sphere for their aspirations and use, as well as to fulfill their own expectations, also had an impact. The superpowers had to gain support and legitimacy from their allies and from others; their actions in space were not solely aimed at their counterpart.
To further stress this point, observing states' behavior through the prism of the space club shows that states' actions are not solely directed toward deterring adversaries. States also seek legitimacy, recognition and support from allies and friends. Either way, small and medium-sized states are willing to carry heavy burdens in order to project power and project a message of capability and intent. Hence, their rationalization of empowerment is not cost effective in the traditional sense.

**Final remarks for future research**

This paper has taken up the discussion of the "space club" from its inception point and focused on a small sample of states. Further research should expand and include other space programs, especially of non-democratic states and developing states. Furthermore, due to its limited scope, this inquiry has intentionally refrained from examining the dynamic of space politics in the post-Cold War era. Nevertheless, this period demands comprehensive attention in future research, especially because the space club is facing new challenges, with the rapid increase in the number of developing states that publicly aspire to become spacefaring nations, expansion of the space market, institutionalization, along with new developments that may lead to militarization and weaponization of space.

Today's rapidly changing space environment raises important questions regarding the future of the "space club": What role would newly spacefaring nations like China and India play? How will other states, which aspire to join the club as launching states, affect the dynamic among existing club members? Will the proliferation of technology and applications lead to the demise of the club and loss of its exclusivity, or would it bring the current "leaders" and members of the club to preserve its exclusivity by setting higher boundaries? Will space expertise continue to be a symbol and a means of power? Will the growing dependence of human life on space systems demand regularization and institutionalization processes in space activity, which would result in an official space club or organization? In that case, would the framework of a club remain applicable? Certainly, the future space environment and interaction among states would require greater sophistication and creativity.

Finally, although this research is focused on the case study of the "space club," the model can be applied to other areas as well, especially those that are considered to be symbols and means of power. The fast pace of technological development along with the on-going need of states to improve and preserve their relational power justifies the assumption that the phenomenon of grouping in nation-state clubs would expand and improve. The potential of destruction implanted in advanced technology further intensifies this facet. In a world of multiple players and multiple ways of demonstrating and measuring power, the format of the club provides a context that allows the international community, as well as the domestic population, to encompass and evaluate tangible capabilities and achievements in a non-violent way.

This research provides the initial infrastructure of the concept of nation-state clubs; nevertheless, it is not yet full-fledged. In order to evaluate its applicability and utility as a theoretical framework, and improve it as an analytical tool in international relations, further examination, review and evaluation must be conducted, especially by applying the concept to other international domains that manifest club politics and those that are yet to emerge.