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## **Technology, Power, Politics, Outer Space, and Ethics: Notes towards a New Paradigm<sup>1</sup>**

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### **Abstract**

The intersection of international politics, technology, and outer space offers a rich area for speculation as well as contemporary historical review. In this paper I address several key areas: (1) the fundamentals of IR theory and paradigms that I expect to persist and to be vital to our understanding and envisioning of future outer space regimes; (2) the nature of ongoing technological revolutions and their likely impacts on key political problems of value distributions, including political stability and control; and (3) the nature of changes in beliefs and attitudes towards governance both by the governed and the governing. I conclude that it will be necessary to grow a metadiscipline that permits rich discourse across and between the philosophical, scientific, and practical politics paradigms in which we are presently embedded, if we are to transcend their limitations and prepare for and create a future that is at once complex, chaotic, manageable and desirable. I offer a few suggestions to those ends.

### **Introduction to Fundamentals of Political Theory and International Relations<sup>2</sup>**

Politics consists of the struggles in which we humans get involved to redistribute values to our benefit through collective coercive action.<sup>3</sup> International politics is about the same on a global scale.<sup>4</sup> To borrow from Lasswell,<sup>5</sup> it's all about who gets what, when, how—and about our agreements and disagreements over norms or "rules of the game" through which we expect to do this. We may be enticed by opportunities and threatened by constraints to act outside these norms or conventions. When we are, the extent to which such inducements alter normative behavior depends on a variety of factors: (1) the perceived basic needs-level (surplus or deficit) from which one is starting, relative to some equilibrium position, (2) the value and meaning of the gain or loss anticipated, and (3) anticipated consequences for alternative futures contingent on current action.

Lasswell and Kaplan (1950) further provide us with a reasonably comprehensive list of eight categories of values pursued to meet basic needs. Four refer to attributes (personal or social capacities), called welfare values; these are wealth, health ("well being"), skill, and enlightenment. Four refer to types of emotional orientations that affect compliance or non-compliance with the will of others. These he refers to as deference values, which are: affection (the spectrum of love to hate), power (in the sense of coercive influence), respect (deference to a position held), and rectitude (moral suasion based on collective or social values). All eight may be presumed to be necessary at times for meeting people's basic needs.

Maslow provides us with a prioritized list of five basic needs which are pursued both individually and collectively.<sup>6</sup> Controlling for threat level, from highest to lowest priority these are: survival ("physiological needs"), security ("safety" or anticipated survival), community identity ("belongingness"), responsibility ("self-respect"), and vision ("self actualization"). Lasswell's list of values may be interpreted as a list of means by which the basic needs discussed by Maslow may be attained.<sup>7</sup>

L.F. Richardson (1960) provides us with the core logic<sup>8</sup> by which basic needs are pursued competitively. Although his logic is applied principally to reaction curves modeling arms races, hence to survival and security, it generalizes to all of Maslow's basic needs above, and all of Lasswell's values as these may be pursued in their own right.<sup>9</sup> Four major factors are embedded in his "arms race" model: (1) fear, which impels one to allocate resources to defend a threatened basic need or value; (2) fatigue, which impels one to conserve or reduce resources allocated to defend the need or value threatened; (3) grievances, which motivate one to restitution by counterattack or simply to inflict damage as a punishment;<sup>10</sup> and (4) ambitions to grow by eliminating a competitor and/or acquiring the competitor's resources.

In L.F. Richardson's view, we normally act individually and collectively out of instinct and habit, in particular social habits and customs particular to our cultures and situations with which we are most familiar. However, he conjectures, given enough knowledge of consequences and the ability to reason, to think through our actions relative to those consequences, we can and should be able to rise above those habits and instincts, especially when we see the fruitlessness of our policies by comparison with non-habitual alternatives. Unfortunately, inability to communicate these more reasoned and less habitual alternatives effectively to ones supporters and competitors may itself result in lost opportunities and even survival, depending on circumstances.<sup>11</sup> Much of what is discussed as the irrationality of politics and political actors might be attributable to such inability to overcome the rituals and habits of thought within which we are embedded. It would seem that the history of major wars and conflicts in the last century provides startling evidence for this and related hypotheses (Stoessinger, 2004; Janis, 1982; Jervis, 1968). Our struggles with complexity seem to overwhelm us with some regularity.

Besides ritualistic (i.e., habitual or culturally conditioned) thinking interfering with situational analysis, the very facts of the situation may not be adequate to anticipate expected values, in turn encouraging ritualistic thinking. Also, "deferred gratification" may apply; it may be that trust in the future is perceived to be more important than fears in the present. Actions may also be seen as their own reward (expressive vs. instrumental, for instance satisfying the needs of a moral code (Parsons). It may also be that individual, short term rationality could compromise collective, long term rationality. The Prisoners' Dilemma and Arrow's Paradox both illustrate this difference.<sup>12</sup> Collective rationality is to pursue the collective good, and often requires sacrifice. Still, as Morgenthau has observed, if such ritual responses are not consistent with satisfying basic needs over the long term, the leadership of a society, and possibly the society itself, is increasingly less likely to thrive, or ultimately, survive. So our struggle is not only with complexity, but also multiple levels of meaning, and a degree of chaos at each level.

Theorists of political organization add another level of theoretical complexity. Theories of governance abound, and divide into two basic camps. For one camp, politics is

essentially about public administration and organization, about understanding and promoting hierarchically structured control systems in which each person occupies a social position and in which compliance is achieved through routinized distribution of values meeting basic needs, in return for which well laid out duties or functions are performed. Societies that expect very little mobility of persons across positions are "traditional," and those that expect such mobility as customary are "modern." Another school of thought focuses on understanding political organization that is far less hierarchical in its decision making structure, having greater mobility of persons with many varying customs, organizing and reorganizing themselves in multiple small associations—at different levels, a "civic culture," a "pluralistic security community," "democratic development"—yet accomplishing the same end of distributing values such that basic needs are generally met, and serving all those duties and functions necessary for the perpetuation of a society.

The last essential ingredient to political theory I'd like to mention here is theory about political stability and the means by which it is maintained. For political participants, political stability is the principle factor, the driving value, in political systems. Generally, those in power want stability; those competing for power also want stability once they get it. "Getting it" may or may not involve serving in positions of public leadership. Deutsch (1966) referred to the dimensions of power as scope, domain, weight and range (the number of issues, the population, the amount of some value, and the number of values, respectively, that are controlled). A politically influential person need not be a holder of public office. Gandhi for instance, never held public office but led a revolution and established a democratic India. He swayed millions of people on a few key issues both social and political, yet never needed formal control of an army or parliament to achieve it.

Political stability has two roots, social justice and fear. Social justice attracts support, the *politicization* of a relationship compels it (following Lasswell, *politicizing* is introducing into a relationship a threat of severe deprivation of something highly valued). Politicization induces fear. Repression is the illegitimate politicization of social relations. Is it better for the sake of political stability to be feared rather than loved? While Machiavelli concluded that it was, it would seem that if it was, it was conditioned by the political situation of Europe. Governments that rely on fear tend to be hierarchically structured and tend to do more killing of their populations than those who don't.<sup>13</sup> As mentioned earlier, politics is fundamentally about the socialization of violence

Having examined some of the roots of the political, let us turn to a brief review of the traditional way we divide up the study of international politics. We see it at three levels:

1. individual and group social psychology and decision making;
2. the social organization of humanity into states as ideal types (following Weber, any organization that effectively claims a legitimate monopoly of the means of violence in a given territory) pursuing their own survival and security through the exercise of power in an anarchic (but not necessarily uncivil) world (cf. Morgenthau and many others); and
3. the international system, wherein the distribution and change in the distribution of power and other sources of influence (cf. Lasswell's value checklist) among states as well as non-state actors (corporations, religious organizations, ethnic groups, and various other associations of state and non-state actors), is expected to be the principal set of factors influencing human history.

To this we need to add a fourth and perhaps fifth level:

4. the global political, social, natural and technological environment (geosphere, noosphere, and so on) represented well by the latest edition of the International Futures model (Hughes and Hillebrand, 2006) and the many earlier works of other global modelers and strategic thinkers in the global intelligence community. Finally,
5. outer space: the extension of the global environment into the infinite frontier, represented to us by a new generation of futurists, fellow travelers, and the level 4 folks.

It is speculated by many today that the fourth level is changing the tenor of relations among states, indeed all international actors. Essentially applied technology has speeded and increased the volume of communications of all kinds, at all levels of human interaction; and it has provided huge increases in all that is needed to meet human basic needs at the survival (physiological needs) level. Unfortunately, the world's political stratum was not prepared for this revolution. One might say, adjustments are underway. Adjustments are taking place in all areas that are known to affect political stability. The need for a new and revised global game plan has never been greater.

### **The Technology and Politics of Outer Space: Need for a New Theory?**

In considering the move humanity is making into outer space, one can raise the question, is anything fundamentally different, other than altitude and the difficulties of meeting basic needs? Are social-psychological and political-economic theories, such as those in the previous section, outdated?

Let us consider time, distance, and costs in human life and productivity—admittedly somewhat simplistically—say from low Earth orbit (LEO) distances to the moon. LEO vertical distances are actually small compared with horizontal distances traveled by humans for purposes of trade, conquest, and settlement—say 60 to a few hundred miles vertically rather than thousands of miles horizontally. Once in orbit, the costs of travel are comparatively negligible although tens of thousands of miles may be traveled in a matter of hours rather than days. To get to Earth orbit takes minutes, not hours or days. And in this area at least, current international laws apply.<sup>14</sup> To get to the moon takes days, not weeks or months. To get to Mars and back may take decades, but that was typical of earth exploration even millennia ago. Consider other factors such as financial costs, fuel, labor and so on. Costs in terms of money, fuel, preparation and duration are comparable to many an earthbound military campaign and conquest. It took less time in the Kennedy administration to put a man on the moon than it does to get a new academic unit established in a university.

One might suppose that ethical and political issues would be much different when considering the expansion of humanity into outer space, than say, if we were discussing expansion through traditional conquest and colonization. But is this really the case? Has such expansion for the last half-century provided more or different opportunities or constraints for sociopolitical experimentation in outer space that are not currently present on Earth? Has there been any indication that the nature of political power has actually changed? Do the fundamental assumptions of political thought concerning control, sociopolitical stability, and distributions of values as outlined by such mid-20<sup>th</sup> century students of politics as Easton, Kaplan, Lasswell, Maslow, Morgenthau, Organski or

Waltz for instance, actually require fundamental revision or even abandonment to take into account the new realities of outer space politics? And even if the preliminary answer to these questions is no, might we expect that to change in the foreseeable future when and if outer space becomes a colonial frontier?

My brief answer is: I doubt it. Daily briefings from the CDI certainly don't indicate a "new thought" movement of some kind.<sup>15</sup> Even in the area of CBRN (formerly WMD), it isn't new theory or even new capacity or new speed that is at issue. I have read that what sets nuclear weapons apart historically is not the capacity to kill, but the speed, yet two Hutu militia managed to kill almost one million Tutsis and moderate Hutus in about three months. At roughly 10,000/day that rivals quite a few low yield nuclear weapons, perhaps a hundred. But they did it with machetes. I know; a day isn't a few seconds, but in the larger scheme of things, it would seem that the more devastating to human and cultural relations was the machete, not the bomb.

I've also read that weaponized Anthrax can be deadly to large populations, but over time somewhere around 90-95% of all native Americans on both American continents were decimated by smallpox brought by conquering armies and settlers (Diamond, 1999). Hundreds if not thousands of cultures died, and certainly millions of people. While we might fear such an attack, the idea that it is somehow a new historical phenomenon because of our technology and therefore may need new theory to explain it, doesn't seem likely.

Consider this purely "science fiction" scenario as a mental experiment. For whatever reason all societies on planet Earth are so badly damaged by some catastrophe that they cannot recover. All but one. That one absorbs all the remaining human population and manages to begin to recover itself. How long would it last without enemies? What would be the challenge that would bind it by bonds of fear and loyalty? Built into all societies are the germs of dissent and secession. Embedded in the psyche of every human is the yearning to be free of constraints, yet also the desire for social justice which binds us to each other against sources of injustice. Maslow referred to such yearnings as self-actualization, to "be all that you can be" in the words of the Army commercial. So even if there were no enemies, we might well become such to each other, finding new loyalties to organize around, new challenges merely in each other's existence. The current loyalties or identities characterizing modern societies would in all likelihood be replaced by others, not by a single identity but by legions.<sup>16</sup>

Ultimately what is at issue aren't the weapons, the mechanisms of death and deterrence. *Ultimately, the challenge is whether we are as a species capable of transcending our current identities, so that we can collectively see what is in our very long term best interest and discipline ourselves to act accordingly (at least until we see a better long term best interest, because if there is one thing all wisdom speakers agree on it's that change is permanent).*<sup>17</sup>

Now, inevitably, since I am writing about identity politics, I must address the post-modernist and post-structuralist insights into political order and identity, insights that would seem to offer the possibility that the answer to the above questions could be, not doubt but: yes! Despite severe and well-deserved critique of some postmodernist movements on both philosophical and historical grounds, this paradigmatic shift in theoretical direction nevertheless does respond to a variety of crises of identity. Notably these include the last century's deadly world wars, the horrors of the decolonization era,

the gross misuse of military power by states against their own people, the "failed state" phenomenon, and the modern, multidimensional globalization phenomenon. These are all concerns which Gross and Levitt's (1998) critique of postmodernism doesn't seem to address adequately. Majid Tehranian's succinctly describes postmodernism in "...contemporary international relations as a process of negotiation of knowledge, power, and identity through military, economic, and cultural arsenals of influence" and compares the postmodernist paradigm with the four major paradigms operational in international relations that preceded it, *viz*: realist, liberal, Marxist, and communitarian<sup>18</sup> (Tehranian, 1997). While I do not dismiss this shift in perspective from the examination of social and political structural frameworks to a more social psychological constructivism and social criticism framework, nor discount its value, I believe we need to reassess our existing paradigms more thoroughly, not abandon them. For one thing, the tradition of social criticism is long and deep in political studies; so one can't help but wonder why it is that this tradition is all but ignored by proponents of postmodernism. For another, I have yet to read a cogent argument—one that goes well beyond mere characterizations, hyperbole and innuendo—as to just what the deficits are in the more traditional paradigms that are addressed or obviated by postmodernism (other than such canards as "deterministic," "tools of imperialism," and so on). I will leave these issues for another time, in order to return to my own critical reappraisal and assessment of our "mainstream" theories as they apply to an outer space regimen.

### **New Paradigms for New Weaponizations? A Historical Overview**

Let us begin with a broad, historical brush stroke. From the days of Sun Tzu to Thucydides, to Attila the Hun and Machiavelli, to Patton and now perhaps Barnett, what sociopolitical fundamentals have actually changed? Anyone familiar with the writings of these thinkers will see in them and their subject matter far more in common than what sets them apart from each other. Have the consequences of new communications and transportation technologies actually created possibilities for exercising political control that did not exist in previous centuries or millennia? Does the wedding of micro- and future nano-technologies with cybernetics and software design for bioengineering promise (or threaten) even greater separation of humanity from its accumulated political wisdom than has already happened? In human terms, does such technology really offer new degrees of personal and political freedom heretofore known only in fantasy?

The short answer I have arrived at to this complex of questions is that traditional politics and political theory still apply with virtually no change other than in one area, *viz.*, what might be termed the *integrity* of the sociopolitical systems that can be constructed, at least for the time being. So far as I can tell, the strategically most significant changes have been those that expand human perceptions and capabilities in both space and time, but that neither has significantly altered human passions and purposes, or how politicians organize themselves. Politics and political theory are inherently about human passions and how these passions are organized and channeled into political activity. I will review some of the work of some of the writers who together have provided comprehensive albeit skeletal theoretical structures which contribute to a paradigm for further theory building in normative, empirical, and practical (constructivist) vernaculars. First, however, we (I) need something of a poetic respite from grand theory to appreciate its value.

## **A Sojourn into Pop Culture of Politics and Strategic Thinking about Outer Space**

It is commonly feared if not believed that modern technologies have dramatically increased the power available to the knowledgeable individual to wreck havoc with society, even to bring a civilization down with a single act such as the 9/11 attack on the World Trade Center in New York City. The image of an individual with a technologically empowered desire for dominance and a lust for demolition, rationalized by some political or religious ideology foreign to us, rings true to our imagination. Never mind that 9/11 was an event which like Pearl Harbor, only made us grieve and angry. Never mind that the perpetrators died in their own dream world, powerless, impotent, and self-deluded. We still see the image, and Hollywood and Al Gezira capitalize on it again and again.

It is important to understand that issues surrounding the weaponization of outer space, while not new historically, reached deeply into national security thinking only halfway through the last century. The idea of security being threatened by attacks from the sky did not seem significant at all until the invention of the dirigible and the fixed wing aircraft. As has been said, we moved from strategic thinking in terms of massed manpower, to mobility, to The concern was chiefly how to fight war and defend oneself from attack by such weapons, especially when armed with machine guns and bombs. The "war to end all wars" echoed previous historical moments when leaders were confronted with new technologies of warfare that dramatically increase kill ratios. In the ensuing decades with the invention of the atomic bomb, similar concerns reached new heights but prevented neither their production nor deployment, and only moderately slowed the diffusion of their technology (some 44 or so states are "nuclear capable").

Popular culture over the past century has been strongly attracted to these themes of outer space colonization and weaponization. Voluminous science fiction and science fantasy writings were picked up by radio, cinema, television, and now the Internet. In the 1950s with the first beeps of the Sputnik satellite, the reality of possible weaponization of space was technologically realized. In the Cold War era this led to a diplomatic rush for assurances that weaponization of space would not happen, and NASA was created to distance somewhat the military from civilian uses of outer space. Military strategists in succeeding decades explored their earliest and darkest "what ifs" from nuclear winter to HAARP and SDI technologies. Juxtaposed against this speculative realism and actual weapons development, popular culture took up the fears expressed decades earlier in H.G. Wells 1898 "War of the Worlds" and 1938 radio broadcast, with a movie echoing the myriad UFO sighting, "The Day the Earth Stood Still," which forewarned of draconian countermeasures to the weaponization of space, from an unassailable alien alliance unconcerned with humanity's petty political peccadilloes such as wars and other misguided forms of mayhem. Multiple "Star Trek" series, followed by the "Star Wars" series, the "Alien" trilogy, several James Bond episodes with outer space themes, and hundreds of B-movies, explored everything from alien encounters to political intrigue as usual, to vaguely constructed universal governments sadly prone to Byzantine intrigue, and just plain parody ("My Favorite Martian"). The century was filled with diverse themes from Flash Gordon adventures to occult "Twilight Zone" episodes to the recent pseudoscience of "Stargate" and "Battlestar Galactica" and other series.

Scientists and religionists paralleled the above developments. A religious pundit, L. Ron Hubbard, writer of *Dianetics* and founder of Scientology, turned to science fiction to express his misgivings about the future of humanity (see his book, *Battlefield Earth*). In a more positive, social-psychological light, B.F. Skinner wrote *Walden Two* and Norbert

Wiener wrote *The Human Use of Human Beings* (a monograph), to express their views of how new technologically and psychologically sophisticated societies might develop and how we might change our politics, providing a counterpoint to the undercurrents of political and humanitarian concerns manifested in novels such as Orwell's *1984*, and Huxley's *Brave New World*.

Some post-Cold War changes in media attention to outer space have since come back closer to earth, turning to the 9/11 theme. For instance, Gov. Arnold Schwarzenegger's "True Lies" depicts crazed Islamic nuclear terrorists. Many others have followed with CBRN themes. A casual look at the current administration's call for weaponizing outer space, the UNGA's website (<http://www.un.org/News/Press/docs/2005/gadis3302.doc.htm>), USSTRATCOM's webpages (<http://www.stratcom.mil/>), and the FAS pages (<http://www.fas.org/main/content.jsp?formAction=325&projectId=9>) shows growing technological possibilities and strategic analyses, clearly indicating that the weaponization of outer space is not merely possible but practical, and in the eyes of major power competitors, necessary.

Academics today have not replaced the popular culture versions of humanity's relations with outer space, but they do take their subject matter more seriously if not less ideologically. For instance, the International Space University's (ISU's) credo declares itself to have an expansive mandate reminiscent of the purpose of humanity as caretaker of Earth in *Genesis* 1:26-30.<sup>19</sup> The ISU is

...an institution dedicated to the development of the human species, the preservation of its home planet, the increase of knowledge, the rational utilization of the vast resources of the Cosmos, and the sanctity of Life in all terrestrial and extraterrestrial manifestations.

<http://www.isunet.edu/EN/4>

This sojourn does not do justice to the variety and complexity of such literature, but it does indicate its general nature—a series of broad brush strokes “groping in the dark.”<sup>20</sup> If these are our visions of the future of outer space at the hands of poets and futurists, what of our theorists? What do they forecast? What models do they accept?

#### **IV. Paradigmatic Dissonance: Seeing through the Fog**

Researchers and practitioners actually operate within paradigms that place them, somewhat unwittingly I believe, into several acrimonious camps. These are not the political camps we are used to using as categories such as realist, liberal, Marxist, communitarian, and postmodern, but rather what should be termed "paradigmatic camps."<sup>21</sup> Science, practice (the world of the applied) and philosophy have emerged in our era as the three core paradigms around which humanity has organized its inquiries into itself and the world around it. In my field, they manifest themselves as political science, political practice, and political philosophy. The table below outlines the major specializations and features of each, along with a postmodernist adaptation to each at the bottom of the table.

## Existing Paradigms in Modern Civilization and Their Political Manifestations

Paradigms And Characteristics	Philosophy	Practice (Applied)	Science
Dissonance reduction focus; inconsistencies between:	Models of the desirable (culture) vs. the possible (theory)	Models of the desirable (culture) vs. the real (data)	Models of the possible (theory) vs. the real (data)
General orientation towards the focus of change, what type of outcome is aimed for	Transcendent – not trying to change the world directly or to test empirical hypotheses, but to improve conceptual frameworks, to invent new ways of thinking about situations, develop insights that resolve puzzles, paradoxes	Active – not trying to improve theory or philosophy, but rather to improve conditions of existence, try to achieve, to change some aspect of the world, e.g., one's place in it; "build" something	Passive – not trying to change the world or transcend it, but to improve empirical explanations of observations, to improve capabilities for control of outcomes through better understanding
Application to politics	Conceive new forms of governance, value frameworks, legal or normative frameworks, to resolve political problems	Change political behavior, outcomes, procedures through institutional arrangements such as <ul style="list-style-type: none"> <li>- Public policy centers</li> <li>- Political risk analysis</li> <li>- Other "think tanks"</li> <li>- Campaign management</li> <li>- Military strategy</li> </ul>	Improve understanding of various facets of observed political participation, governance systems, conflict and cooperation behavior, political culture, nature of politics
Major type of assumptions	Data assumed, not gathered or questioned	Theory assumed (e.g. democratic theory if trying to win office through democratic means)	Culture assumed (e.g., procedures for data collection and hypothesis testing)
<i>Postmodernist perspectives or reactions (e.g., constructivist)</i>	<i>Inventing new possibilities and ideals within a relativistic value framework</i>	<i>Constructing new sociopolitical forms, value distributions</i>	<i>Inventing new data perceptions, constructing new relations proactively, and testing their validity</i>

The scientist, political practitioner (from activist to politician to policy analyst or social engineer), and philosopher may all exist within one person, but one person cannot play all three roles effectively, simultaneously, because each makes types of assumptions—categorical imperatives if you will—which the others, following their imperatives, are likely to question. For instance, any scientist, political scientist or otherwise, must of necessity take their subculture of science for granted since it provides the normative

framework (language, customs, decision rules) which are used to pursue scientific inquiry. To object to hypothesis testing on postmodernist grounds, for instance, would simply stall progress with implementing various validation procedures, reliability testing and so on. Similarly, a politician may upon logical reconstruction recognize a formerly latent political philosophy, but whether it is articulated (or for that matter articulate) is secondary. Politicians act on their perceptions using their beliefs, and while they may reflect on the latter from time to time, such reflection would usually take the form of evaluating outcomes based on degree of success or failure of a project or plan, not questioning the belief but applying it for evaluation. The philosopher on the other hand would regularly bring up for examination both beliefs and values and scrutinize them for consistency, relevance, completeness, and so on, in pursuit of better approaches to defining and solving normative problems. By contrast philosophers would have no need for data *per se* since they are using data neither to evaluate an outcome nor test a hypothesis.

If this characterization is correct, then there is an inherent tension between these three paradigms and therefore among those who embody them. Political liberals often characterize political realists as lacking vision to develop cooperative strategies to resolve security dilemmas, when the realist is operating from an activist perspective and the liberal from a philosophical perspective distant from the realist's existential crisis. Both liberals and realists might criticize a Marxist for ignoring economic and political realities when the Marxist is actually seeking out the reasons for the perpetuation of an impoverished and undereducated laboring class (an empirically grounded, scientific investigation) and caring neither for a liberal theory of how markets should work (a philosophical inquiry) or how wars are avoided or won (an activist orientation).

In an outer space environment, as on the planet, such miscommunication can waste a great deal of time and resources in fruitless intellectual and social conflict. And I'm afraid they do. Applied scientists, focused on space weaponization, tend to look at the fruits of their labors in terms of survivability under attack, deterrence, and intimidation. Philosophers wonder where it is all leading, whether there isn't a better way than to continually bang our heads against the security dilemma--something which L.F. Richardson noted almost a century ago, impelling him as a Quaker to seek an alternative to blind escalation. Politicians, in whose hands are the budgets and the programs, listen with an ear towards constituencies at home, in bureaucracies, in corporations, and at heart, and worry about the impacts of military spending decisions on political stability (their career, party and so on).

The problem I'm raising then is one of communication and authority across paradigms, not an attractive or eye catching focus to be sure, but nevertheless at the core of the problem humanity is facing in this globalizing era. It's been said that one of the simplest yet most profound questions one can raise is: Who's in charge? Hierarchies of control are both a major source of strength and of potential conflict when it is not clear what the answer is, or how an answer can be negotiated<sup>22</sup>

Sometimes it is thought that religious differences are at the core of such disagreements. Stoessinger, for instance, claims that the war of independence that occurred at the separation of Pakistan from India was because of fundamentally different religious beliefs separating Hindus and Muslims. He notes that Muslims worship one god but Hindus many. I believe he may be right in one sense but wrong in another. First, Hindus believe that Vishnu is either *the* Supreme Being or a manifestation of the

Supreme Being (Brahman) while all the other "gods" are simply *avatars* (manifestations of the one Supreme Being for the sake of human followers). Thus the belief in the unity of god is not the actual issue, although misled if not deluded followers of both religions may fear each other as Stoessinger claimed. But more importantly, it *was actual, physical conquest* by migrating Muslims of Hindus that created animosity. One sees similar splits in the Christian vs. Muslim world as is claimed by Huntington, and with similar superficial reasoning. Similarly, one easily overlooks the fact that Hitler's Germany was Catholic and Protestant yet the Catholics and Protestants were not at war with each other as they have been until recently in Northern Ireland, and no one claimed that the root of Nazism was due to an indifferent Christianity in Germany, although some have claimed that the Catholic Church did much less than it could to resist Hitler. No one I know has claimed that Israel was settled by Ashkenazi Jews to save the Mizrahi and Sephardi Jews from Muslim Palestinians. Similarly, few claim that the war in modern Iraq is much more than the repressive Baathist Party trying to regain control of Iraq with the help of al Qaida and others, employing a long litany of anti-colonial propaganda to this end, while the US struggles to establish both a democratic order and security for oil flow to Europe and itself. *I conclude that religious differences have a long history of development and deployment by political elites in efforts to achieve political stability for themselves but rationalized in the collective interest.* To paraphrase Lasswell yet again, politicians are people who project their private motives onto public objects, rationalized in the public interest--but I might add, also to find, strengthen and support a social process that tames the use of violence to sanctioned purposes.

In the end we must ask ourselves, are we willing to shed the ahistorical fabricated myths and rationalizations of bygone political empires? If we are willing, can we muster the courage? And if the courage, the power to do so? And how? And with what would we replace them? Everywhere today, from the droning of al Qaida to the voiceless mullahs quaking in their sandals, from the American media, Bible pounding "holy rollers" to the gay priesthood subculture, from the CCP hacks to the Russian Mafia types trying (and often succeeding) to hang on to a bygone era, from the mindless bellowing of hawk engagement to the peaceniks who would unwittingly pursue peace at any price, it would seem that every conceivable type of snake oil is being tried out on the public. As Deneen (2005) has pointed out, even Americans' belief in democracy has taken on the messianic trappings of a true believer's faith. Even our state secrets classification system isn't immune. As Roberts (2005, p. 11) notes:

Is the classification within space a necessary evil, or is the culture simply embedded and difficult to change? Perhaps the space community has voluntarily hidden behind the curtain of security. After all, it is theoretically easier to defend yourself when nobody really understands what it is you do. This culture, and the processes in place to support it, must be broken down if space is ever to be fully exploited. Not only for the US, but the global community as a whole.

I sometimes think that perhaps Dawkins (1976) is right and in a mimetically driven human universe of discourse there is nothing but the selfish *meme*, forever selfishly seeking its survival. Still, I consider this, too, just another pseudoscientific snake oil. As I see it, we do not understand very well the basic paradigms within which we operate, and our misunderstanding causes confusion. I believe it is necessary to grow a metadiscipline that permits rich discourse across and between the philosophical, scientific, and practical politics paradigms in which we are presently embedded, rather

than continue the struggle for dominance that puts one paradigm above the other, then another and so on.

What all these mythologies (meaning beliefs without evidence) have in common—the religious, political and so on—is their use by prospective controllers or leadership groups, to get a new and firmer grip on the hearts and minds of their sought after publics. Those who seek authority positions in society seem to assume that most of the world's population are "supporters," easy going people-oriented folks who just want to get along, who have no particular political ambitions or desire for collective achievement and who wait to be convinced that a "controller" type is worthy of being followed. We need to move beyond this type of fighting as a means of shaping the future.

Unfortunately, careful analytical thought is hard to come by and not well supported in this field. Saaty (1999, 2001) has tried for decades—and with some degree of success—to educate people and to give them aides supporting that education, to improve the quality of their decision making. His analytic hierarchy and analytic network processes for individual and group decision making really do work (at least according to his vignettes and my personal experience) but they take time and do not come as entirely "naturally" to as many people as he might expect. If the scientific, applied practice, and philosophy paradigms can be represented in his model structures, that might at least be a start.

The reason why Saaty's core framework of goals, alternatives, and evaluation criteria, is so valuable are twofold. Envision for a moment a triangle at the corners of which are written "theory" (generating models of what is possible), "data" (generating models of the "real"), and "culture" (generating models of the desirable). The scientist's paradigm seeks to understand some aspect of the world by reducing dissonance between models of what is possible and what is real, but can only do so by assuming a culture within whose rules the exercise can be carried out. The practitioner is engaged in changing the world, reducing dissonance between what he thinks is desirable vs. what is actual, and often changing it through conflict—quite unlike the scientist whose aim is to improve understanding and hence to limit errors of judgment about what is possible. The third paradigm, the philosopher's, is concerned with managing the gap between what is possible and what is desirable, constantly seeking for ways to transcend existing conditions and thinking. For them, checking facts is far less important than transcending an apparent paradox. Each takes a different slant on a problem. Saaty's framework would clearly identify these differences in goals, alternatives, and evaluation criteria, permitting much clearer delineation of roles played by each paradigm and how they might be integrated into an "analytic network process."

The second reason stems from the fact that our world is both complex and chaotic, yet both manageable and promising a wide variety of desirable alternative futures (cf. Hughes and Hillebrand, 2006). The problem is that the complexity and chaos cannot be adequately managed effectively by existing organizational structures. We simply do not have the available collective analytic power harnessed to do the job. The USA finds itself at the pinnacle of a unipolar world and, like scholars from Kaplan (1957) to Tammen (2000) have suggested, makes its first priority domination—not meaning oppressive control of course, but rather just retaining its position. In power transition theory, war is most likely under such circumstances when a clear vision of what the international system should be is not shared by its closest rivals. To this we might add that the terrorism phenomenon brings another a new type of non-state actor to the table,

one that finds a political power resource in the oppression of peoples at the very local political level, at the substate level. Saaty's analytic frameworks have had a wide variety of applications to political problems, as even a cursory examination of his publications and websites will confirm. Yet like most innovations, the biggest barrier to application is habit, the rituals of daily life in bureaucracies, classrooms, boardrooms, and so on. One of the least amenable habit complexes in our world is how we proceed to make decisions, if we make them at all.

Well, that's at least my take on one of the problem of governance we face in the global village. Relations between the governed and the governors haven't changed much. Although the hierarchical vs. polyarchical/pluralistic structural change is significant in many ways--perhaps the most important difference being the rate at which they kill their own people--the concerns of leaders are very similar. Outer space, the new frontier, faces us with the same problems we have always had, only now there is no alien race to blame it on, no one else's god to attack, no conspiracy to blame it on. The new frontier is silent. We are left looking at each other and asking plaintively with Rodney King, "Can we get along here? Can we all get along?"<sup>23</sup>

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## Endnotes

<sup>1</sup> This paper was written for presentation at the 47<sup>th</sup> Annual International Studies Association Convention in San Diego, in the International Politics of Space section. The purposes of the panels in this section are to "...address the conceptual approaches to Space in IR; ... to think about concepts of space (as the built environment), time, processes of securitization/militarization/technologisation, space and society, and other concepts central to IR theory" and to "address pressing themes of, and in, Outer Space; ...to explore a broad range of issues including strategies, policies, conflicts and co-operations." Lastly, "In keeping with the overall conference theme of the North-South Divide, both sections seek to bring together Northern/Southern strategies and policies as well as approaches" (from the call papers and proposals on the web at <http://www.isanet.org/news/space.html> ).

<sup>2</sup> I grant that it is not popular today to review fundamentals about politics. We often write as if they were understood. It seems to me that this is an error of judgment, one that is gradually strangling the profession. We need to be engaged in such discourse for our own health as well. So I have set about in this article to dig deeply into my own intellectual history, to challenge myself and others who might find such an endeavor interesting and useful, to dig out those ideas that stood the test of time in my own teaching and research, and apply them to the subject matter of the emerging politics of outer space.

<sup>3</sup> In this analysis, politics is seen as the process by which we socialize the use of violence to redistribute values, that is, decide collectively what the circumstances are under which violence is proscribed, prescribed, permitted, and preferred (to borrow from Parsons' categorization of sanctions), by whom, against whom, and to who's benefit or to what ends. For a similar treatment, see Max Weber's theory of the state in his essay "Politics as a Vocation," or Lasswell and Kaplan (1950).

<sup>4</sup> Based on his historical studies and some speculation, Morton Kaplan (1965) has inferred the basic "rules of the game" for state actors under major types of power distributions (bipolar, unipolar, ...).

<sup>5</sup> Cf. Lasswell (1950).

<sup>6</sup> See Maslow (1943). In the listing that follows I have put his language in quotation marks. My adaptation emphasizes the meaning of these priorities for leadership responsibilities in the state. So, for instance, "esteem" or "self esteem" becomes responsibility. In the vernacular of sociology one occupies social positions which have a status (rewards for performance) and responsibilities (duties associated with the position). At the psychological, personal level, one experiences esteem when duties are performed well.

<sup>7</sup> There are some issues with this interpretation. "Belongingness" is alternately referred to as "love" by Maslow, so the distinction is somewhat blurred between Maslow's and Lasswell's frameworks. Being in a social position establishes a social identity and implies "belongingness" in Maslow's sense but the relational value is not necessarily one of love or affection; that depends on the sense of identity that one has with the position. At one extreme there might be no distinction between self and identity (as King Louis XIV is reputed to have said, "L'etat? C'est moi!"), at the other there might be a sociopathic relationship entirely devoid of emotion.

<sup>8</sup> Richardson uses differential equations to describe the logic of the processes by which escalation and de-escalation in military spending occur. The use of such equations is something of a barrier to most students of politics, but it is a barrier that is very worthwhile overcoming. It

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was a matter of some surprise to me to learn, for instance, of his "reaction curve" interpretation of the equations in his own text because the relevant graph was not even labeled! Further, Richardson has been accused of being deterministic because of the formalism of his work, but a careful reading of his Socratic dialogues scattered throughout the text clearly indicate otherwise.

<sup>9</sup> Basic needs in Maslow's sense are met by successfully pursuing and using values in Lasswell's sense. Thus power and wealth may be pursued to achieve survival and security, for instance. Morgenthau (1948) suggested that while nations may pursue many objectives, if they don't take care to attain and retain power they are not likely to succeed in the international arena.

<sup>10</sup> Cf. Schelling (1966).

<sup>11</sup> In fact this is his principal explanation for the onset of World War I, a conclusion reached also by Stoessinger (2004) albeit with quite a different explanatory framework. Similarly, in decision making experiments under controlled conditions employing the prisoner's dilemma logic, Rapoport and Chammah (1965) found that the application of reason to policy is severely limited by distrust whenever long term benefits require one to trust that an opponent will not choose the short term payoff. The result of distrust is long term loss of value to all parties.

<sup>12</sup> See Arrow (1951). While the "prisoner's dilemma" looks at decision making under conditions where long term benefits outweigh short term ones but require trust among the decision makers, "Arrow's paradox" looks at the creation of collective irrationality when three or more choices are involved among three or more decision makers, each with different priorities. Both cases suggest that under certain circumstances, adhering to prior agreements about priorities and choices is absolutely essential to minimize risk and maximize the collective good. It may be that for similar reasons, loyalty and disciplined action to a common purpose are so highly valued.

<sup>13</sup> For a general treatment of government killing historically, see Rummel's website, [www.hawaii.edu/powerkills/](http://www.hawaii.edu/powerkills/). For a well reasoned alternative future based on nonkilling governments, see Paige's website <http://www.globalnonviolence.org/nonkilling.htm>.

<sup>14</sup> For a short but thorough discussion of the international law and related military implications, see Waldrop (2005).

<sup>15</sup> See the Center for Defense Information site at <http://www.cdi.org/>. For similar news and analysis see the Federation of Atomic Scientists site at <http://www.fas.org/main/content.jsp?formAction=325&projectId=9>.

<sup>16</sup> There is an interesting book by Howard Bloom (1995) that makes this point differently, arguing that hierarchical organization, identities (e.g., national, racial, ethnic, and gender ideals to which we are bonded emotionally, or "memes"), and the logic of collective organization (societies or human "superorganisms" to use his biological anthropomorphism) combine to produce large scale competition and war--presumably without end as Morgenthau might have said. Diamond (1999) offers a similarly broad sweep of human history arguing that it was geographic serendipity (climate, mineral deposits, and plant and animal species) and the rare invention of written language that gave to some societies an energy surplus that translated into conquest. Perhaps these frameworks will someday be blended into a military strategic vision as cosmological in scope. I note, however, that both are rather backward-looking and incapable of forecasting. Neither seems to have the disciplined thinking (yes, I said disciplined) of a futurist, say like Jim Dator (for more on Dator and futurist discipline see <http://www.futures.hawaii.edu/>).

<sup>17</sup> I am not a communitarian along Amitai Etzioni's lines, although I have a great deal of respect both for him and his ideas. Every time I walk through the portals to my university, I see etched in stone the Commonwealth Club's motto: "Above all Nations is Humanity." No political movement seems ready to embrace that motto seriously, notwithstanding something similar being written into the U.N. Charter, to which most states have agreed.

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<sup>18</sup> For a detailed discussion of communitarianism as a philosophy and as a political movement see <http://www.gwu.edu/~ccps/> . For a sample critique see <http://www.quebecoislibre.org/010901-13.htm> .

<sup>19</sup> ISU's web of relationships includes my own University of Hawaii's "Hawaii Research Center for Futures Studies," (HRCFS) founded by my colleague Jim Dator who explores alternative futures ethics and politics of planetary settlements; see for example his course syllabus on [Designing a Settlement on Mars](http://www.futures.hawaii.edu/syllabi/Mars04.htm) ([www.futures.hawaii.edu/syllabi/Mars04.htm](http://www.futures.hawaii.edu/syllabi/Mars04.htm)).

<sup>20</sup> I'm borrowing from Donella Meadow's et al. book by that title.

<sup>21</sup> C.P. Snow (1993, but based on a lecture given in 1959) distinguished between the "arts and humanities" and "science" but did not get deep enough into what the key differences were in their paradigms. Hopefully my framework won't muddy the waters further. Kuhn (1962) gave us a more precise meaning of *paradigm* to refer to a subculture of practices, beliefs, and logic that characterizes the behavior and attitudes of a community as it pursues its work.

<sup>22</sup> Tammen *et al.* (2000) for instance, note that wars are most likely when one great power begins to approximate and threatens to overtake another in military capability and when they disagree on the structure of the subsequent international order. If they share a common vision, the power transition can be peacefully negotiated. If not, war is likely.

<sup>23</sup> Rodney King as quoted in [http://en.wikipedia.org/wiki/Rodney\\_King](http://en.wikipedia.org/wiki/Rodney_King). From the website, Rodney King is depicted as beaten by some police officers, then

On April 29, 1992, three of the officers were acquitted by a jury of ten whites, one Hispanic, and an Asian. The jury could not agree on a verdict for one of the counts on one of the Officers. The verdict triggered massive rioting in Los Angeles, which left hundreds of buildings severely damaged or destroyed, that totalled in 1 billion dollars. 55 people were killed, 2383 injured, and more than 8000 arrested. Smaller riots occurred in other U.S. cities. King made an appearance before television news cameras to plead for peace, saying, "Can we get along here? Can we all get along?"

The security dilemma in outer space will, we all hope, be handled better. But the problems there are easily as complex and unresolved as are the value distribution problems that enflamed the Los Angelesans and others.