

**Defending Hierarchy from the Moon to the Indian Ocean:
Symbolic Capital and Political Dominance in Early Modern China and the Cold War**

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and

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Abstract: Why do leading actors invest in costly projects that they expect will not yield appreciable military or economic benefits? We identify a causal process in which concerns about legitimacy lead them to attempt to secure dominance in arenas of high symbolic value by investing wealth and labor into unproductive (in direct military and economic terms) goods and performances. We provide evidence for this claim through a comparative study of the American Project Apollo and the Ming Dynasty's treasure fleets. We locate our argument within a broader constructivist and practice-theoretic understanding of hierarchy and hegemony. We build on claims that world politics is a sphere of complex social stratification by viewing constituent hierarchies in terms of social fields. Our specific theory and broader framework, we contend, provide tools for understanding the workings of power politics beyond military and economic competition.

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In 1961, President John F. Kennedy committed the United States to “landing a man on the moon and returning him safely to the earth.”¹ Fulfilling that pledge, the Apollo project landed six manned spacecraft on the lunar surface between 1969 and 1972. Yet in 1972 President Richard Nixon terminated the program, scaled back the National Aeronautics and Space Administration’s (NASA) budget, and limited U.S. manned space ambitions to near-Earth operations, where they have remained. Several centuries earlier, another powerful government’s project of costly expeditions played out similarly. In 1405, the Yongle emperor of China’s Ming Dynasty authorized several massive naval expeditions to the Indian Ocean. After a final voyage under the Xuande emperor in 1433, the expeditions ended forever.

For space-exploration advocates, China’s decline after the Ming treasure fleets demonstrate what happens to great powers when they stop exploring.² For anti-isolationists in China and elsewhere, the end of the expeditions serves as a marker for the Ming Dynasty’s inward turn, supposedly causing China’s eventual ‘century of humiliation’ at the hands of more adventuresome western powers.³ Critics contend that the real lesson of the Apollo and treasure-fleet voyages was that they were pointless: “The Chinese ceased voyaging to the coast of Africa for the same reason the United States stopped sending men to the moon—there was nothing there to justify the costs of such

¹ John F. Kennedy: "Special Message to the Congress on Urgent National Needs," May 25, 1961. Online by Gerhard Peters and John T. Woolley, *The American Presidency Project*. <http://www.presidency.ucsb.edu/ws/?pid=8151>

² Smith and Davies 2012, 140-141, and Zuber, Maria T., testimony before Committee on Science, Space, and Technology, U.S. House of Representatives, 22 September 2011, https://science.house.gov/sites/republicans.science.house.gov/files/documents/hearings/092211_Zuber.pdf.

³ E.g., Barr 2012, 45-53; Zakaria 2012, 49-51.

voyages.”⁴ Yet this more sophisticated argument raises an even larger puzzle: why did either power ‘go there’ in the first place?

In both cases, we argue, leaders embarked on costly endeavors to legitimate their claims to leadership—Emperorship or American hegemony. We find little indication that the Ming expected the Treasure Fleets to yield military or economic awards. Similarly, Kennedy and his advisors saw the Apollo project as a colossal waste of resources if measured in direct economic or military terms. Yet evidence suggests that both leaders made this choice to secure dominance in arenas that they viewed as symbolically critical to that leadership and their security. For the Yongle emperor—a usurper in an insecure dynasty—that meant demonstrating that other rulers in the ‘known world’ acknowledged their status as his tributaries. For Kennedy, this meant securing a successful ‘first’ in the science-and-technology field in order to eclipse the Soviet ‘firsts’ like Sputnik and Gagarin’s orbit. Kennedy believed continuing failure in this arena threatened American hegemonic leadership. In both cases, when the apparent crises passed—in part because the projects achieved their goals—the projects ended.

We locate this argument within a broader social-constructionist understanding of hierarchy and hegemony. We cash out the wager that world politics is a sphere of complex social stratification⁵ by viewing constituent hierarchies in terms of *social fields*. The possession of field-relevant capital positions actors in various relations of super- and subordination within fields.⁶ Per hegemonic-order theorists, military and economic capital plays a major role in establishing overall position in political

⁴ Goldstone 2000, 177.

⁵ Bially Mattern and Zarakol 2016.

⁶ See Alder-Nissen 2008; Pouliot and Mérand 2012; Bourdieu and Wacquant 1992, 101.

systems—in part because of their greater fungibility, as possessing capital in those fields can also help actors secure privileged positions in other fields. Within that general framework, specific fields may—for socially and historically contingent reasons—not only emerge but also take on ‘outsized’ significance in relations of political dominance. Relevant resources—tangible goods, tokens, or even performances—become, in Bourdieu’s term, *symbolic capital*.⁷ The Ming court and the Kennedy administration spent significant economic resources on, respectively, the Treasure Fleets and the Apollo Project *precisely* to acquire what they saw as symbolic capital critical for maintaining political dominance.

This framework integrates relevant theoretical perspectives and strands of research. Hegemonic-order theories posit that dominant actors craft political order and, in doing so, allocate status and prestige.⁸ These theories imply that dominant actors will seek to legitimate their position, but they face trouble in accounting for, first, when they make exceptionally costly investments in acquiring symbolic capital and, second, the particular *kinds* of goods and performances that dominant actors pursue.⁹ The cases here—in which dominant actors saw *economically and militarily unproductive investments* as appropriate responses to critical security threats—prove particularly challenging.

Theories of status competition and conspicuous consumption do expect actors to demonstrate social dominance by purchasing prestige goods or engaging in expensive performances. Still, they often struggle to explain *variation*—not only among the choice of prestige goods and performances, but also in terms of the relative value of those goods and performances with respect to other forms

⁷ Bourdieu 1986.

⁸ See Gilpin 1981.

⁹ Go 2008.

of capital. Social-constructionist approaches, which stress historically and socially contingent dynamics, help explain this variation.¹⁰ Turning to field theory synthesizes these insights—and integrates them into more general accounts of hierarchy in world politics. In particular, a focus on social fields provides a way of theorizing how processes of social construction create *strategic contexts* through which actors pursue power politics.

Hegemony, Hierarchy, and Social Fields

Recent years have seen the rise—or, more accurately, the reinvigoration—of hierarchy-centric scholarship. As Bially Mattern and Zarakol argue, participants hold that “hierarchies are ubiquitous features” of international relations that “generate social, moral, and behavioral dynamics that are different than those created by other arrangements.”¹¹ A focus on hierarchy, they claim, resolves enduring puzzles or overturns existing conventional wisdom. Many attempt to rope together a range of older work and situate it in conversation with emerging research.¹² For example, Lake suggests that aspects of American foreign relations become less puzzling when viewed as taking place within a zone of interstate hierarchy.¹³ McDonald argues that the democratic peace is as an artifact of a zone of great-power hierarchy that simultaneously reduces military conflict and produces similar regime types.¹⁴

¹⁰ Gilady 2006. See also Eyre and Suchman 1996.

¹¹ Bially Mattern and Zarakol 2016, 624.

¹² Hobson and Sharman 2005.

¹³ Lake 2009.

¹⁴ McDonald 2015. See also Barkawi and Laffey 1999.

What is hierarchy? Social and political systems are hierarchical to the extent that they are stratified along a series of asymmetric rankings or positions. That is, hierarchy refers to any pattern of super- and subordination. Status hierarchies are stratified by rankings of honor and prestige, class hierarchies by economic roles, and so forth. These stratifications matter to the extent that they translate into relations and practices of social dominance. Much of international-relations scholarship—from work on global governance to theories of great-power politics—examines the causes and consequences of various forms of super- and subordination.

Major research agendas—including hegemonic-stability and power-transition theory, world systems theory, dependency theory, and the study of empires—take some kind of international hierarchy as a basic fact of world politics. But, by the 1990s, much of the focus of international-relations theorizing shifted decisively toward debates over the nature and consequences of international anarchy.¹⁵ This change owed much to the emergence of structural realism as a focal point for theoretical debates. For structural realists, anarchy represents not only the central fact of world politics, but also justifies the study of international relations as a distinctive area of inquiry. In Waltz's formulation, "parts of domestic political systems stand in relations of super- and subordination. Some are entitled to command; others are required to obey. Domestic systems are centralized and hierarchic." In contrast, "the parts of international-political systems stand in relations of coordination. Formally, each is the equal of all the others. None is entitled to command; none is required to obey. International relations are decentralized and anarchic."¹⁶

¹⁵ Major exceptions can be found in post-Marxist and critical international-relations scholarship. See Agathangelou and Ling 2009; Barder 2016; Galtung 1971; Wallerstein 2004. The centrality of anarchy may, in fact, cut off lines of engagement with other fields, per Baron 2014.

¹⁶ Waltz 1979, 88.

Much hierarchy-centric scholarship makes a critical point: once we shift from assuming anarchy to focusing on patterns of super- and subordination, we need to attenuate—if not abandon—the assumption that relations among states are fundamentally distinctive from relations within them. For example, the absence of a clean distinction between “international anarchy” and “domestic hierarchy” undermines warrants for dismissing the importance of legitimacy and authority in international politics. Theories developed to handle relations among actors in other contexts can be applied to international settings.¹⁷ Mechanisms and processes that hold *within* polities may also operate *among* and *across* them.¹⁸ We compare the Apollo Project—where interstate concerns involving hegemonic influence and a revisionist power played a key role—to the Ming Treasure Fleets—where concern involving legitimacy within imperial structures predominated—in part to highlight this implication of hierarchy-centric theory.

Hegemony and Hierarchy

Focusing on the hierarchical dimensions of world politics generates its own problems. As Donnelly argues, “hierarchy provides almost as poor an account of the structure of international (and national) systems as anarchy. It simply states that the pattern of stratification is not flat.” We need an approach that tells us “*how* a system is stratified—or anything else about the (many and varied) ways

¹⁷ Butt 2013, 579-80; Cooley 2005; Lake 2009; Nexon and Wright 2007. Scholarly practice often runs ahead of international theory, insofar as productive research traditions—bargaining theories, constructivist theories, and so on—in the field routinely do just that.

¹⁸ Cooley 2005; Hobson and Sharman 2005; Wendt and Friedheim 1995.

in which international systems are structured.”¹⁹

Hegemonic-order theories offer one solution. They also illustrate the varied character of hierarchy in world politics. Hegemonic-order theory describe a broad class of international hierarchies: those involving a preeminent power that manages the relations of subordinate actors. For power-transition theorists, “relations within... [the] power hierarchy are not anarchical despite the absence of formal rules and enforced international law.”²⁰ Gilpin maintains that world politics are anarchical and hence distinctive from domestic systems, but that “it is possible to identify similarities in the control mechanisms of domestic systems and international systems.”²¹

Hegemony describes “the mobilization of leadership” to order relations among other actors.²² Such understandings of hegemony²³ involve a polity using its superior economic and military capabilities—its position atop interstate hierarchies *in these domains*—to create an *international order* “manifest in the settled rules and arrangements between states that define and guide their interactions.”²⁴ These can involve rules and norms of conduct, the topography of formal international institutions, the (related) allocation of status and prestige, and even who ‘counts’ as an international actor.²⁵

¹⁹ Donnelly 2015, 419-420.

²⁰ Lemke 2002, 22.

²¹ Gilpin 1981, 28.

²² Barder 2016.

²³ On a major alternative—neo-Gramscian hegemon—see Burnham 1991.

²⁴ Ikenberry 2011, 12. See also Butt 2013. Lake (2009) distinguishes his account of hierarchy from classic hegemonic-stability theory.

²⁵ Gilpin 1981. 29-38.

These elements of international order highlight additional patterns of hierarchy, such as those created when actors vary in their compliance with norms of conduct,²⁶ garner differential status through the extent that they demonstrate their military prowess,²⁷ or enjoy positions of super- and subordination in international forums.²⁸ As noted above, *any form of differentiation*—from national performance on educational standards to the possession of culturally-significant landmarks—can become, or contribute to, politically-relevant hierarchies. Hegemonic ordering operates, in no small measure, by influencing both *how much* these forms of differentiation matter and by shaping the *distribution* of relevant assets, relations, and practices.

Hegemons are not necessary for international order. International order can be created and upheld by great-power cartels or generalized consent among states—or as emergent properties of the interaction of polities.²⁹ Even in hegemonic systems, international order enjoys relative autonomy from the leading power. Thus, hegemony describes a specific form of leadership—one that rests on occupying a position of some combination of military and economic superiority—that helps generate, interacts with, and shapes other patterns of hierarchy.

Social Fields, Capital, and Hierarchy

Establishing the relationship between hegemony and hierarchy clarifies, without resolving, Donnelly's concern about mapping hierarchies. How to proceed? Some deploy network-analytic

²⁶ Adler-Nissen 2014; Towns 2009; Zarakol 2011.

²⁷ Renshon 2016.

²⁸ Pouliot 2011.

²⁹ Bukovansky 2002; Koivisto and Dunne 2009; Reus-Smit 1997

measures to tease out variation in prestige hierarchies or forms of political domination.³⁰ We adopt another alternative: treating world politics as composed of a variety of social fields.³¹ Patterns of super- and subordination within these fields reflect the possession of field-relevant capital—that is, resources and performances that confer status and commensurate power within a particular social context.³² Those with more field-relevant capital occupy a higher position than those with less. Various forms of capital serve as both the objective and currency of power—in Berling’s terms, capital is “the most important criteria for defining an agent’s position in the hierarchy in a field.”³³

Bourdieu defines capital as “accumulated labor (in its materialized form or its ‘incorporated’ embodied form which, when appropriated on a private, i.e., exclusive, basis by agents or groups of agents, enables them to appropriate social energy in the form of reified or living labor.”³⁴ The best known typology of capital involves Bourdieu’s broad tripartite distinction between economic capital, social capital, and cultural capital³⁵, although he also added new kinds as fitted his empirical concerns, such as “academic capital.” Broader forms of capital have subtypes, or subspecies—such as derivatives, stocks, and cash for economic capital—whose value varies in time and space. Although we can understand the relationships produced by fields and the allocation of capital in general terms, the social fields that define any particular kind of capital are historically and socially contingent: we can only know them through empirical study.

³⁰ Renshon 2016; Nexon and Wright 2007.

³¹ Go 2008.

³² Bourdieu 1986; Bourdieu and Wacquant 1992, 98.

³³ Berling 2012, 455. See also Bourdieu and Wacquant 1992, 101.

³⁴ Bourdieu 1986, 81.

³⁵ Bourdieu 1986.

Field-theoretic approaches fit well with social-constructivist and related sensibilities.³⁶ In English-School terms, much of world politics takes place within international hierarchical “societies” that locate actors in positions of super- and subordination.³⁷ These locations are not driven solely by military and economic capabilities, but also by the possession of other socially valued assets, such as cultural capital, social capital in the form of relationships with other actors, and the ability to engage in related performances. As Adler-Nissen argues, “A field is a historically derived system of shared meanings, which define agency and make action intelligible and the agents in a field develop a sense of the social game. The stratification of a field is based on different forms of capital... and the efficacy of the capital depends on the contexts where it is used.”³⁸

Field theory treats agents as behaving *strategically* with respect to the socially-constituted field in which they operate. Fields each have “their own ‘stakes’ around which contestants struggle and jostle for position... agents are conditioned in their strategic behavior by their location in the competitive, game-playing character of the field.” They “compete, collude, negotiate, and contest for position.”³⁹ Thus, “Field is an inclusive concept orienting analysts to both objective positions and cultural meaning, to both objective positions and cultural stances.”⁴⁰ For example, in modern academic life publications, citations, the ranking of home institutions, and other familiar factors constitute subspecies of academic capital.

With respect to world politics, international-relations scholars generally assume, reasonably, that, in

³⁶ See Finnemore 1996; McCourt 2016.

³⁷ Bull 1977; Buzan 1993; Clark 2009.

³⁸ Adler-Nissen 2008, 668.

³⁹ Savage, Warde et al. 2005, 39.

⁴⁰ Go and Krause 2016, 9.

an overarching field of interstate relations (the ‘international system’), military and economic resources serve as critical field-relevant capital. But those are not the only possible metrics. Towns shows that actors can also differentiate themselves through ‘standards of civilization’ marked by, for instance, the socio-political position of women.⁴¹ Similarly, racial hierarchies in world politics reflect the construction of membership in different ‘racial groups’ as field-relevant capital for states and other actors.⁴² The possession of colonies—and the performance of imperial management—became important capital in the field of great-power competition during the nineteenth century.⁴³

Particular capital endowments often become important to position in particular fields via their investment with specific symbolic importance. According to Zhang, “objective capital can be expressed and represented through symbolic capital, as it will always have a symbolic form.” But “symbolic capital can exist independently of objective capital: for instance, the word ‘progress’ may carry symbolic capital, but by itself it has no form of objective capital.” When “the symbolic capital contained in the term ‘progress’ is married to something objective, such as tools (a form of economic capital), social networks (social capital), or specific building styles (cultural capital), this infusion of symbolic capital will change their nature and increase their capital.”⁴⁴ The constitution of particular weapons-systems—say, nuclear weapons—as ‘prestige goods’ involves the translation of particular subspecies of military capital into symbolic capital representing great-power status and attendant technological prowess.⁴⁵

⁴¹ Towns 2009.

⁴² See Vitalis 2015; Vucetic 2011.

⁴³ Barnhart 2016.

⁴⁴ Zhang 2004, 7.

⁴⁵ See Eyre and Suchman 1996.

Field-theoretic approaches regard world politics as composed of multiple forms of stratification. There are as many potential hierarchies as there are social fields; the same actors may occupy different positions in different social fields. Actors may try to create fields—or subfields—in which they enjoy advantages in field-relevant capital. For example, some states punch above their economic and military weight in international sporting fields, while others underperform in various diplomatic fields.⁴⁶ The logic of “status compensation” strategies entails wagering that states may deal with status immobility in some fields by seeking a superordinate position in others.⁴⁷

Some fields prove enduring, others ephemeral. Capital that once enjoyed great symbolic importance for competition among great powers and great-power aspirants—diplomatic priority at the papacy, the possession of colonies—loses its significance as the terms of field-relevant capital shifts. The relationship between fields also varies over time. In Bourdieusian terms, the “rate of exchange” between different forms of capital is not only mutable, but also shapes and reflects the hierarchy of fields. The resulting hierarchy—how fields relate to one another—constitutes an important dimension of international order.

This creates analytic difficulties. How do we identify a field? How do we map its boundaries? There “are often several fields that intersect or relate, but they are [still] relatively distinct.”⁴⁸ Capital in one

⁴⁶ Sometimes actors are sufficiently entrenched that they do not mind falling short in other fields. Harvard cares much less than other institutions when its sports teams fare poorly in intercollegiate play, since its position in other fields guarantees it hegemonic or quasi-hegemonic influence anyway.

⁴⁷ See Larson and Shevchenko 2010.

⁴⁸ Go and Krause 2016, 10.

field—say, science and technology—can become important in another field because of its fungibility, or it can emerge as symbolic capital relevant to that other field. For Bourdieu, “the limit of a field is the point where the effects of its actors and institutions cannot be found,” which places a high burden on careful empirical analysis.⁴⁹ This is harder to operationalize in studies of world politics than in well-bounded social spaces, such as community theater troupes or video-gaming guilds.

Such challenges are most pressing for attempts to catalog or schematize the universe of fields in world politics. This is not our aim here. We take up the more limited task of identifying the existence of relevant fields, the nature of field-relevant capital, and why they mattered to the maintenance of legitimate leadership. Thus, in the Apollo case, we provide evidence that, first, American decision makers perceived a distinctive field of science-and-technology competition, second, space constituted a critical subfield of that competition, and, third, that important audiences and rivals agreed with those assessments.⁵⁰ In the Ming case, we provide circumstantial evidence consistent with these claims and inconsistent with other plausible arguments. But there we have the advantage of being able to point to long-standing understandings of field-relevant capital for establishing the legitimacy of individual and dynastic rule.

Hegemony and Social Fields

Hegemonic-order theory’s central propositions translate into field-theoretic terms.⁵¹ Hegemonic-order theory presupposes at least one international field—akin to what Go terms a “global field”⁵²—

⁴⁹ Neumann and Nexon 2018.

⁵⁰ See the online appendix for more on their historical development.

⁵¹ For a more comprehensive treatment, see Neumann and Nexon 2018.

⁵² Go 2008.

constituted by the distribution of economic and military capital.⁵³ These forms of capital are sufficiently fungible that they allow for the ‘purchase’—or accumulation—of other assets, such as diplomatic, social, and cultural capital. Hence, when a single actor garners a large enough quantity of (some combination) of military and economic capital, it can then use that super-ordinate position to reshape fields themselves.

A dominant actor may do so deliberately—for instance, by rewarding greater conformance with liberal democratic governance norms and thus transform markers of liberal democracy into symbolic capital. Or it may structure international organizations so that holding certain positions—such as a seat on the United Nations Security Council—becomes a form of diplomatic capital that states ultimately struggle over. Or it may do so inadvertently. For example, by creating a close association between possession of aircraft carriers and great-power status such that some states decide to pursue them for reasons beyond military efficacy.⁵⁴

Such dynamics can manifest in terms of specific performances. Consider Lake’s understanding of “symbolic obeisance” as “costly acts that do not involve direct compliance with commands but are nonetheless public, often collective displays of submission that acknowledge and affirm the authority of the ruler.”⁵⁵ For Lake, such acts provide evidence of international hierarchy. Thus, when

⁵³ In most hegemonic-order theories, economic capital is the bedrock for military capital. Hence, uneven growth provides the primary motor for power transitions, but military capital remains more salient for the immediate balance of power. In turn, the deployment of these capabilities to order international politics derives additional “material benefits”—that is, as long as the hegemon isn’t overextended, it begets additional economic and military capital. See Lemke 2002, 22.

⁵⁴ Pu and Schweller 2011; Neumann and Nexon 2018.

⁵⁵ Lake 2009, 165.

small states committed to provide military resources to the International Security Assistance Force (ISAF) in Afghanistan, they signaled to the United States that they accepted its superordinate position. In practice, as field theory would expect, such behaviors also followed an instrumental and strategic logic. For weaker states, they provided a way to seek higher status in the eyes of Washington, which might later lead to economic, military, or diplomatic support.⁵⁶ Or consider the politics of legitimacy in early modern Korea and its connection to Chinese suzerainty, and the use of “ritualized” unequal interaction to sustain that relationship.⁵⁷

Conceptualizing world politics as an arena of social fields does not exhaust all aspects of political order—international or otherwise—but it does provide important analytical leverage. Order finds reflection in the nature of fields, the relationship among them, the terms of exchange of field-relevant capital, and, importantly, the complex hierarchies generated by them. Actors compete, collude, and jostle within those fields; attempt to change their terms and relationship, or even create new ones.

Dominant Actors and the Pursuit of Symbolic Assets

Taken together, the preceding discussion implies that actors who sit atop social hierarchies can remain bound by those hierarchies.⁵⁸ Thus, we propose that:

⁵⁶ Indeed, American officials sometimes told countries seeking closer ties to the United States to contribute, even in token ways, to ISAF. Nexon and Cooley 2015.

⁵⁷ Lee 2016 and 2013.

⁵⁸ For example, Ottoman rulers long practiced fratricide in order to secure the throne rather than attempt to rewrite succession rules. See Barfield 1989, 134-138.

Superordinate actors will invest in acquiring field-relevant capital connected to political dominance. During periods of acute status uncertainty or ambiguity,⁵⁹ they may even divert significant military or economic capital to accrue economically and militarily unproductive, but symbolically valuable, assets.

This proposition parallels Barnhart's discussion of European powers' acquisition of African colonies in the late nineteenth century. She argues that "many important, seemingly puzzling instances of international behavior are best understood largely as assertions of status, often at the cost of immediate strategic or material interests"⁶⁰ and that "states are likely to engage in status competition if their status has been called into question by an instance of disrespect or by a humiliating event ... to signal that they possess characteristics and capabilities that distinguish them from lesser powers" and to demonstrate that they can "exercise the prerogatives associated with their desired status."⁶¹

We propose a more general account. The underlying dynamics may spring from humiliation or an affront, but more calculating, strategic agendas may predominate. As Go argues, "as powerful states seek symbolic capital to win 'trust,' they do so through.... 'strategic' and 'pragmatic' legitimacy, aiming for symbolic capital as a strategy of power amidst their struggle in the field."⁶²

We further argue that:

⁵⁹ On status ambiguity as a source of conflict, see Volgy and Mayhall 1995; Wohlforth 2009.

⁶⁰ Barnhart 2016, 385.

⁶¹ Barnhart 2016, 386.

⁶² Go 2008, 208.

The nature of the capital that actors pursue depends on the interrelationship of social fields. That is, attempts to legitimate dominance normally involve the acquisition of field-relevant capital, which is itself often historically and socially contingent.

Many scholars argue that actors will engage in policies—and costly ones—designed to secure or enhance their standing and hence their claim to legitimate dominance over other actors.⁶³ Others argue that states divert resources into highly visible goods as a form of “conspicuous consumption.”⁶⁴ Pu and Schweller note that “some projects” including “space programs” are “intended as costly signals of great-power status, for they require enormous capabilities and resources that most states do not possess.”⁶⁵ Early argues that “space capabilities” serve “as important symbols of national pride and indicators of status to other countries in the world.”⁶⁶ Gilady argues that the “high cost of ‘Big Science’ turns it into a credible test of status by imposing considerable intrinsic restrictions that work as effective gatekeepers.”⁶⁷

Existing approaches sometimes struggle with *variation* in the relative importance of different assets—capital—for social dominance and hierarchy. Thus, they often point to invariant reasons why a form of capital matters, or invoke the characteristics and assets of leading powers.⁶⁸ But these invariant reasons explain why states expend resources on *some* enormously expensive projects but not others. Classifying such expenditures as simple waste or extravagance also undersells the motivations at

⁶³ Onea 2014.

⁶⁴ Gilady 2006, 5-12; Pu and Schweller 2011, 151.

⁶⁵ Pu and Schweller 2011.

⁶⁶ Early 2014, 56. On the distribution of space capabilities during the Cold War, see Peterson 1997, 245-246.

⁶⁷ Gilady 2006, 243.

⁶⁸ For an elaboration of this point, see Gilady 2006, 26-30.

work if such projects provide not simply markers of status but also strategies of addressing perceived existential threats.

Field-theoretic approaches, however, expect that particular projects only acquire such importance to the degree that they become ‘infused’ with symbolic significance—and that depends on dynamics within and across fields.⁶⁹ This can result from long-standing and deeply institutionalized forces—or reflect more contingent and short-lived perceptions of dominant actors. The “largely arbitrary reasons why some yardsticks gain political prominence... stems from contingent politics and practices....”⁷⁰ These conditions may be difficult to specify ex-ante, but they are not random: they emerge from the content of fields and the conduct of actors who inhabit them. Thus, one empirical implication of our argument: we can expect to see similar effects with respect to deeply sedimented *and* more ephemeral fields and field-relevant capital.

Finally, we address a tendency to focus on revisionist challengers or second-tier states. Such work implicitly assumes that hegemons and other superordinate actors are ‘field makers’ rather than ‘field takers.’ But although leaders—such as militarily and economic dominant actors—exercise some ability to shape other fields, that ability remains limited. They find it comparatively less expensive to ‘purchase’ assets that fit within existing fields than to use, say, economic and military capital to rewrite those fields. Moreover, dominant actors face significant risk if they attempt to do so. They owe their position of social dominance to having accrued significant capital under the existing rules of the game. Changing the basic terms of social priority—turning revisionist against their own order—is an extremely risky move. Furthermore, holding that leaders can rewrite the rules of the game at will assumes that dominant actors can somehow stand outside their social habits, practices,

⁶⁹ Arnoldi 2007, 52.

⁷⁰ Pouliot 2011, 199. See also Neumann 2011.

and dispositions. In some cases, trying to overhaul the rules of the game will even seem simply implausible.

This suggests that:

Superordinate actors—whether hegemons, empires, or their leaders—will find themselves limited with respect to how they maintain and pursue social dominance through the acquisition of field-relevant capital in general, and symbolic capital in particular.

Rulers cannot usually simply abandon long-standing criteria of legitimacy without risking political instability or even overthrow. Leaders of hegemonic states often face similar constraints with respect to their position in fields of great-power competition.

Case Justification

We first surmised a link between our cases because of their frequent connection in popular and even scholarly contexts. However, our justification for studying them derives from specific methodological and theoretical considerations. We pursue an “uncommon foundations” strategy of “identifying causal mechanisms in widely different cases....”⁷¹ Our cases involve enormous differences. Even ignoring cultural, technological, institutional, regime, military, economic, and social differences, the United States of the 1950s and 1960s was a sovereign state facing a significant international competitor across multiple international fields. The greatest challenges faced by the Yongle emperor emerged from perceptions within the empire that his rule was illegitimate. If similar

⁷¹ McAdam, Tarrow et al. 2001, 83. See also Hui 2005, 8.

analytics and causal mechanisms provide explanatory leverage *despite* these differences, then the uncommon characteristics of the case give us greater analytic confidence.⁷²

Despite such surface differences, both involve political hierarchies with transnational dimensions. The Yongle emperor and President Kennedy contended with both “domestic” and “international” audiences. Ming rule simultaneously encompassed both a state-like core but also a broader network of tributary states and peripheral areas. Treating even Ming “domestic” politics as akin the domestic politics of a sovereign-territorial state is a category error: neither Ming authority in particular, nor imperial strategies of rule in general, reflect a clean division between “international” and “domestic” politics.⁷³ The hierarchical nature of the Western order circa 1961 meant that President Kennedy, like other post-war American presidents, played a similar dual role as both the chief executive of the U.S. government and the titular “leader of the Free World” sitting atop a globe-spanning network of alliances and partnerships.⁷⁴ Some even compare the two systems.⁷⁵

⁷² See Nexon 2009, 65; Tilly 1995 and 1997.

⁷³ See Musgrave and Nexon 2013; Nexon and Wright 2007.

⁷⁴ On the rhetorical importance of “the leader of the Free World”, see McNamara’s comments during the Cuban Missile Crisis at FRUS Volume XI, Document 34 (“Minutes of the 505th Meeting of the National Security Council”) or routine uses of the phrase, such as the Portuguese Foreign Minister’s declaration that “Portugal had the highest respect and consideration for the President not only as the leader of the Free World but also as a person and an individual”; FRUS Volume XIII, Western Europe and Canada, Document 354, (“Memorandum of Conversation”, 2 August 1963). The “Free World” was not just a poetic metaphor but a routine part of the bureaucratic imaginary; see, for instance, National Security Action Memorandum 3, Bunkering of Free World Ships Under Communist Chinese Charter, Papers of John F. Kennedy. Presidential Papers, National Security Files, JFKNSF-328-004.

⁷⁵ Khong 2013.

However one comes down on the specifics, the cases help vet a key wager of hierarchy-centric scholarship: that we should be able to find similar dynamics across ‘domestic’ and ‘international’ hierarchies. Table 1 summarizes the key conceptual and theoretical elements of the cases.

<<TABLE 1 ABOUT HERE>>

Main Alternative Explanations

The most plausible rival theories for why states invest massive amounts of resources into given performances derive from *military security* or *economic* incentives. The close relationship of the Ming treasure fleets to the imperial military and the presumed dual-use nature of much space exploration technology in the U.S. case might supply military justifications for such expenditures. Commerical and economic incentives might have mattered, such as Chinese merchants’ interests in expanding trade routes or technological spinoffs from lunar exploration. In either case, symbolic correlates would provide, at best, secondary explanations. Other alternatives include arguments from national identity, rent-seeking, and idiographic factors. We consider these in the appendix, where we also provide additional evidence for our explanation and the rival ones discussed in the paper.

Case Methodology

We deploy process-tracing methodology.⁷⁶ In its Bayesian reformulation, process-tracing focuses on evaluating the likelihood that given evidence would be observed if one theoretical explanation were true compared to others.⁷⁷ This allows us to better adjudicate competing claims than other case-

⁷⁶ Bennett and Checkel 2014.

⁷⁷ Humphreys and Jacobs, 653. Zaks *forthcoming*.

study techniques, especially in light of our uncommon foundations approach. Focusing on the probative value of evidence also allows us to dismiss some alternative explanations more quickly than others: “being equally tough on alternative explanations does not require going into equal depth ... on every one of them.”⁷⁸ For more details, especially concerning data sources, see our online appendix.

Table 2 lays out the observable implications of our argument and how evidence should adjust our confidence in our theory when compared to the two rival accounts evaluated in the body of the paper. In accord with process-tracing methodology, we lay out what we should most likely observe—or not—if our proposed mechanism is operational (but not rivals) or if rivals’ mechanisms are operational (but not ours). Different potential observations—or lack of observations—should adjust our relative confidence in our theory relative to its rivals. Moreover, different observations—or lack of observations—can have *different* effects on our judgment about rival theories. Specifying levels of confidence facilitates transparency and also provides a marker about how observations (for instance, if Ming court records are ever rediscovered) would affect our judgment.

<<TABLE 2 ABOUT HERE>>

Voyages of The Ming Treasure Fleets

In 1405 CE, Zhu Di, the Yongle emperor of China’s Ming dynasty, authorized the first of seven massive naval expeditions from China to the Indian Ocean in 1405.⁷⁹ Other voyages took place in 1407-9, 1409-11, 1413-5, 1417-9, 1421-2, and 1431-3. They covered an increasing distance: the first

⁷⁸ Bennett and Checkel 2014, 23-24.

⁷⁹ Wade 2008, 592.

expedition visited Southeast Asia, Indochina, and modern-day Kolkata and Sri Lanka; the sixth—the last under the Yongle emperor—visited as far as Aden and the East African coast.⁸⁰ Most were commanded by the eunuch admiral Zheng He.

The Yongle emperor died in 1424. On the advice of scholar-elite officials, his son and successor Zhu Gaochi, the Hongxi emperor, canceled further voyages. The Hongxi emperor unexpectedly died in 1425 after less than a year on the throne. His son and successor, Zhu Zhanji—the Xuande emperor—commissioned a seventh expedition, which sailed in 1433, and which may have intended only to repatriate foreign ambassadors and personnel. But the Xuande emperor died in 1435, at roughly the same time as Zheng He. The new emperor, Zhu Qizhen (known both as the Zhengtong emperor, 1435-1449, and as the Tianshun emperor, 1457-1464), discontinued the voyages. Sources concur that no serious attempts to revive the treasure fleets followed the Zhengtong emperor's reign.

Theoretical Applicability

We expect that otherwise superordinate actors will divert substantial resources to maintain their position in a field where their dominance is challenged. The Yongle emperor faced such a crisis because he had succeeded to the throne illegitimately: following a massive civil war from 1399 to 1402, he had usurped the throne from his nephew, whom he (almost certainly) killed—“one of the most extraordinary cases of usurpation in the late imperial period”.⁸¹ He immediately confronted massive challenges. To quell external threats—especially from northern nomads⁸²—he employed a combination of diplomacy and warfare; to ward off an internal military challenge, he created a new

⁸⁰ Needham, 1971, 489-90. See also Dreyer 2007.

⁸¹ Cham 2007, 78.

⁸² Rossabi 1998.

military “nobility” loyal to him; to purge former regime loyalists, he executed hundreds of officials and “tens of thousands of innocent people”; and to further both policies, he removed the capital from Nanjing to the former Mongol capital, a northern city he renamed Beijing.⁸³

His chief “national security” task, however, was legitimizing his rule.⁸⁴ After mass executions failed to settle the issue,⁸⁵ he turned to an alternative strategy. Ming dynastic governance required the emperor to abide by an extensive, demanding set of norms drawn from tradition and invented by elites.⁸⁶ Such norms were overseen by Confucian scholar-officials who staffed the bureaucracy. Western scholars later labeled one important set of practices the “tributary system”: a set of rituals through which external rulers acknowledged the Chinese emperor as their superior in an explicitly hierarchical system of international relations. The Ming court conducted relations with many powerful actors outside its direct ambit—including the polities whose successors would later become known as Korea and Japan—through such practices.⁸⁷ The Hongwu emperor, the dynastic founder, placed special emphasis on the system.⁸⁸ Demonstrations that the emperor commanded respect as the ruler from beyond the borders of the Chinese amounted to symbolic capital in the Ming political field.

The Yongle emperor expanded these practices to an unprecedented degree. The treasure fleets amounted to a bricolage of customs through which the Yongle emperor employed the resources of

⁸³ On the scope of the purge, Cham 2007 94. On the policy context, Cham 1988, 206-208.

⁸⁴ Cham 1988, 184-201.

⁸⁵ Ditmanson 2007, 110-158;Hucker 1998, 201-202.

⁸⁶ See Hucker 1998.

⁸⁷ Kang 2010;Zhang 2015.

⁸⁸ Finlay 2008.

the imperial treasury to “prove” his legitimacy by seeking the validation of external “subjects.” Crucially, these expeditions were *not* voyages of discovery. Chinese merchants and others described the Arab world and Eastern Africa as early as 860 CE, and Ming-era traders already enjoyed extensive commercial contacts with many of the ports that the fleets visited.⁸⁹ The treasure-fleet expeditions “were essentially an urbane but systematic tour of inspection of the known world”.⁹⁰ Their mission was to convince local potentates to enroll in the tributary system. In most instances, the fleets’ trade goods proved sufficient to buy such loyalty. If not, “the Treasure-ships were intended not only to dazzle foreign peoples with their wealth and majesty but to overawe potential opposition with their might and firepower.”⁹¹ The fleet sometimes employed more coercive means. On each of the early voyages, the fleet—and its troops—suppressed pirates and other outlaws, as well as deployed force against local governments who attacked the fleet.⁹²

The fleets succeeded at expanding the emperor-centric world order, enrolling as many as 48 states in the system (many for the first time).⁹³ When the expeditions returned to the Ming court, they brought back not only valuable goods and ambassadors but even foreign rulers—visible tokens of the extension of Ming prestige throughout the known world.⁹⁴ They also carried exotic treasures like

⁸⁹ Needham, 494.

⁹⁰ Needham 1971, 529. See also Needham 1971, 508-535, 477-535.

⁹¹ Finlay 1991, 8. Wang (1998, 320) suggests that the court ran a loss on these exchanges in order to bribe foreign officials to join the tributary system.

⁹² Finlay 1991, 12; Wade 2008, 49-51; Wang 2012, 144-146.

⁹³ Finlay, 1991, 10.

⁹⁴ Wade 2008, 597.

giraffes from Africa—which the court proclaimed to be *qilin*, mythological beings said to appear during the rule of an illustrious ruler.⁹⁵

The observations thus fit the pattern we would expect given our predictions in Table 2. The case meets the criteria required in Implications 1, 2, and 3. Similarly, there seems to be strong evidence that Implication 4, about the termination of the voyage, also fits the pattern we predict. In particular, the fact that the voyages largely stopped with the demise of the Yongle emperor suggests that the legitimacy crisis was tied to his reign (as one would expect given his usurper status; notably, his successors came to the throne legitimately).

Alternative Explanations

Economic Efficiency. If economic arguments based on trade explained the voyages, then (as Implication 5 in Table 2 summarize) the scale of the outlay needed for the vessels would have required expectations of a commensurate return on investment. The scale of the fleets undermines this explanation. The 1405 voyage *alone* included seven ambassadors, ten deputy ambassadors, a few dozen supervisors, 800 sailors, and 26,000 soldiers and their officers.⁹⁶

A fleet constructed for economic returns should have minimized costs; one constructed for symbolic purposes would have overinvested in displays of status. Consider the mammoth investments involved: from felling entire forests to employing “hundreds of households of carpenters, smiths, sailmakers, ropemakers, caulkers, carters and haulers, even timekeepers.”⁹⁷ Such

⁹⁵ Church 2004; Wyatt 2008.

⁹⁶ Finlay 1991, 12.

⁹⁷ Landes 1999, 95-96.

investments would be hard to justify even for luxury goods. Further, it remains unclear if the goods acquired on the voyage even *reached* Chinese marketplaces or if they remained in the court.⁹⁸

A secondary clue comes from the emphasis on political relationships as a goal of the fleets; economic motives cannot explain why the voyages so closely tracked the tributary system. Moreover, it strains credibility that the voyages would have become (or have been seen to become) uneconomical just as the Yongle emperor died (Implication 4).

We find economic explanations unsatisfactory; the most valuable “good” purchased by the fleets was symbolic obeisance (as consonant with Implication 3) and that the fact-pattern predicted does not fit an economic explanation.

Military Security. The Ming faced or initiated security challenges in Vietnam and in Mongolia, both near their core areas. The vast sums the court directed toward the expeditions had no bearing on these military campaigns, nor were they directed against an “over-the-horizon” threat or even yield alliances of much tangible benefit. Given the expenditures necessary to sustain these expeditions, the treasure fleets entailed significant opportunity costs for Ming military security. As Hoffman asks, “why pour money into the fleets when the real danger came from nomads instead?”⁹⁹ Consequently, we find that this explanation would contradict the observed fact-pattern, and, according to Implication 5, we argue for summarily dismissing the security explanation.

⁹⁸ Cham 1988, 236.

⁹⁹ Hoffman 2015, 70.

The Apollo Project

At the dawn of the Cold War, Washington and its allies recognized the existence of a U.S.-led order comprising (at least) the advanced industrialized democracies, most of Latin America, and much of non-communist Asia.¹⁰⁰ This fits with Implication 1: the United States (and its president) were politically superordinate actors. As Implication 2 requires, the Cold War created an ongoing possibility of demonstrable crises of legitimacy. U.S. and other Western leaders saw the Soviet Union as both a material challenger and as an ideological rival with the capability to attract the political support of both the “new nations” (as the then-current phrase described the decolonizing world) and, potentially, their own citizens and states.¹⁰¹ It may seem fantastic today, more than 25 years after the collapse of the USSR, but Soviet communism once appeared not only as a viable alternative to liberal capitalism but also potentially a superior one. Consequently, from the 1950s onward, Washington and Moscow competed to retain existing allies and attract new ones in Latin America and decolonizing regions of Africa and Asia. There was significant uncertainty about which side the ‘third world’ would join.¹⁰² Overall, many leaders—and ordinary people across the globe—believed the United States could lose the Cold War by failing to concretely and continuously make good on the promise of its ideological wagers.¹⁰³

¹⁰⁰ Particularly after the Suez crisis.

¹⁰¹ For instance, Saunders 2013 and Von Eschen 2009.

¹⁰² For a survey, Gaddis 2006, 119-155, and Westad, *The Global Cold War*, for instance at 92.

¹⁰³ As we elaborate below, the symbolic stakes of the Apollo program go beyond those scholars identify with national projects as status symbols in general, and space projects in particular; Steinberg 1987.

Science and technology has long roots as a field of competition, but it emerged as critical one—and specifically in terms of space—almost literally overnight.¹⁰⁴ On October 4, 1957, the Soviet Union launched *Sputnik*, the first artificial satellite. The scale of Western and non-aligned shock at Sputnik surprised the Soviet leadership. The Kremlin quickly moved to capitalize on its success. Success in space became constructed as a contest over whether Soviet communism or democratic capitalism was superior for humankind.¹⁰⁵ Moscow disregarded the Soviet space establishment’s scientific priorities to better promote satellites, and later human space missions, as advertisements for Communism.¹⁰⁶ American officials viewed the challenge as a test of national competence and prestige.¹⁰⁷ In keeping with the construction of the field of competition, accounting progress in the space race quickly became routinized. A January 1960 CIA assessment, for instance, included a table comparing U.S. and USSR accomplishments in fields as specific as “Ionosphere” and “Geodesy” (Figure 1)—a formal statement setting out how scientific capital was exchanged into prestige.¹⁰⁸

<<Figure 1 About here>

The most important impact of this field of rivalry in space was on the competition for the hearts and minds of the non-aligned world. “The flight of Sputnik...impressed many ordinary Latin Americans;

¹⁰⁴ For more details, see our online appendix.

¹⁰⁵ Early 2014, 56; Fursenko and Naftali 2007, 138-167; McDougall 1985; Sheehan 2007, 25-32, 40-42.

¹⁰⁶ Fursenko and Naftali 2007, 149-152; Sheehan 2007, 28-29.

¹⁰⁷ U.S. Information Agency, Office of Research and Analysis, "Impact of U.S. and Soviet Space Programs on World Opinion," 7 July 1959, U.S. President's Committee on Information Activities Abroad (Sprague Committee) Records, 1959-1961, Box 6, A83-10, Dwight D. Eisenhower Library, Abilene, Kansas.

¹⁰⁸ “A Comparison of US and USSR Capabilities in Space,” 1 January 1960, CIA-RDP80B01676R004000110002-6. On the importance of the construction of indexes to the generation of fields, see Gilady 1996. 78.

some recalled it as the first time they ever heard of the Soviet Union.”¹⁰⁹ A July 1959 United States Information Agency (USIA) assessment of the “Impact of US and Soviet Space Programs on World Opinions” found particular shifts about popular views toward the U.S.-Soviet balance in Latin America, where it estimated that “the two nations are about equal”; in Africa, where both sides were also regarded as equal but where that “assessment...represent a very significant revision of views concerning the nature of Soviet society;” and in India, where “Soviet dramatic successes appear to have decisively implanted the opinion that the Soviet Union is now the world scientific leader.” The December 1960s “Sprague Committee” Report on reorganizing U.S. efforts to disseminate information internationally took for granted that science and technology—especially space—would prove to be an enduring part of this Cold War competition for global influence (Figure 2), remarking that “throughout the world the status of the nation’s science is increasingly taken as a measure of its power and dynamism.”¹¹⁰

<<FIGURE 2 ABOUT HERE>>

Gagarin’s Orbit and Kennedy’s Crisis of Legitimacy

By Kennedy’s inauguration, leaders, elite, and mass audiences around the globe—in the Soviet Union and the United States, their allies, and the non-aligned world—viewed space activities as competitive, meaningful, and linked to assessments of not only each camp’s military abilities but also the attractiveness of their systems. The furor over *Sputnik* had largely subsided when Kennedy succeeded Eisenhower in January 1961. Kennedy’s generally bellicose inaugural address even singled

Rupprecht 2015, 42.

¹¹⁰ Conclusions and Recommendations of the President’s Committee on Information Activities Abroad, December 1960, CIA-RDP86B00269R001000010003-7 (Declassified 2008/04/22).

out space and science as an area of potential East-West cooperation.¹¹¹ Yet space reemerged as a competitive arena on April 12, 1961, when Soviet cosmonaut Yuri Gagarin completed an Earth orbit on *Vostok I* to become the first human in space.¹¹² This Soviet triumph was “a worse blow to US prestige than the Sputnik launch ... since by 1961 the American people and US allies abroad were aware that the US had been engaged in a competition to launch an astronaut before the Soviet Union.”¹¹³

On April 21 (two days after the withdrawal of CIA-backed guerrilla forces from Cuba’s Bay of Pigs), a USIA assessment of Gagarin’s orbit on global media opinion concluded that “The Soviet feat is generally held to have increased and consolidated the Soviet lead in space, and to increase Soviet military, political, and propaganda leverage.”¹¹⁴ Survey evidence later confirmed qualitative claims. In October 1961, USIA reported on polls of Western European public confidence in the United States; the document was sent only to the White House and two other agencies “because of the obvious political combustibility of the survey”.¹¹⁵ It found Europeans rated the Soviets as besting the Americans’ “lead in space developments as follows: Britain 78% [Soviet lead] to 7% [American lead]; France 80% to 2%; Italy 62% to 11%; and West Germany 67% to 12%.”

¹¹¹ John F. Kennedy: "Inaugural Address," January 20, 1961. Online by Gerhard Peters and John T. Woolley, *The American Presidency Project*. <http://www.presidency.ucsb.edu/ws/?pid=8032>.

¹¹² McDougall 1985, 317-324.

¹¹³ Sheehan 2007, 48.

¹¹⁴ United States Information Agency Office of Research and Analysis, “Initial World Reaction to Soviet ‘Man in Space’”, 21 April 1961. JFK Presidential Library.

¹¹⁵ Donald M. Wilson to President Kennedy, October 19, 1961, <https://www.jfklibrary.org/Asset-Viewer/Archives/JFKPOF-091-002.aspx>. Besides the White House, USIA sent the report to “the Secretary of State and CIA (who paid half of the bill)”.

The Kennedy administration believed that the United States, as “leader of the Free World,” needed to constantly demonstrate its attractiveness and fitness to the nonaligned countries and its allies. Such thinking fit with a December 1960 CIA National Intelligence Estimate that argued that Soviet leaders regarded the fact that “a Communist rocket which first ventured into space symbolizes for them that they are marching in the vanguard of history.”¹¹⁶ Consequently, as Westad writes, “[f]or Kennedy and his advisers, the key to what America could do to help avoid breakdown in the Third World was held by its technological success.”¹¹⁷ Nor were such concerns limited to the Third World. That USIA paid such careful attention to public opinion polling on space is consistent with the Kennedy administration’s worries that even countries such as West Germany and Italy might become neutral as a result of declining confidence in the West spurring votes for left-wing parties.¹¹⁸

We therefore conclude that policymakers understood Gagarin’s flight as sparing a crisis on the terms of American legitimacy—evidence consistent with Implication 2. The question facing the White House in late April and early May 1961 was thus how to respond. Both Kennedy and his vice

¹¹⁶ CIA, National Intelligence Estimate NIE 11-4-60, “Main Trends in Soviet Capabilities and Policies, 1960-1965,” *FRUS* 1961-1963, Volume V, “Soviet Union”, Document 1.

¹¹⁷ Westad, 2007, 35.

¹¹⁸ See, for instance, Kennedy’s remarks to the Italian government in 1963: “With the large Communist vote in Italy, the question of the future in France after De Gaulle, and the uncertain situation in Spain, Portugal, and Greece, there were many points of instability in the West” *FRUS* 1961-1963, Volume XIII, Western Europe and Canada, Document 318 (“Memorandum of Conversation”, 1 July 1963, involving the Italian government and President Kennedy). In a discussion about Italy’s internal political situation with the Joint Chiefs of Staff, U.S. Ambassador to Italy Frederick Reinhardt not only carefully reviewed the state of play regarding coalition politics but also noted that “the Italians have an increasing awareness of space activities and they are very happy with our success.”

president, Lyndon Johnson, had been starkly critical of Eisenhower's seemingly blasé response to Sputnik and believed that his reluctance to take a stronger line had cost him at home and abroad.¹¹⁹ Thus, per Implication 3, Kennedy and his administration chose to accrue symbolic capital by investing massively in a display of competence. Setting the goal of a lunar landing stemmed not from some supposed romantic yearning for a final frontier, but rather a calculated search for a benchmark where U.S. disadvantages vis-à-vis the Soviet Union—notably, its lack of a reliable heavy-lifting rocket—would be counterbalanced by its superior industrial and organizational potential.¹²⁰ But Kennedy also wanted to pursue the *minimum* goal that would convincingly demonstrate U.S. superiority. He pushed his advisers to investigate alternative national goals—putting a laboratory in space, a manned circumnavigation of the Moon, landing a robotic probe on the lunar surface, or (his last choice) “a rocket to go to the moon and back with a man.”¹²¹ NASA advised that only the most ambitious option, a manned lunar mission, provided the only sure chance of beating the Soviets.¹²²

Kennedy's decision to proceed with Apollo to demonstrate that U.S. capabilities matched U.S. pretensions in global hierarchies provides important evidence consistent with Implications 3 and 5.

¹¹⁹ See for instance “Briefing Paper on Space,” Papers of John F. Kennedy. Pre-Presidential Papers. Presidential Campaign Files, 1960. Issues. Position and Briefing Papers, 1960. Briefing Papers: Social Security, space, tax, unemployment, Veterans' affairs, water pollution. <https://www.jfklibrary.org/Asset-Viewer/Archives/JFKCAMP1960-0993-020.aspx>.

¹²⁰ Jerome Wiesner to Kennedy, 20 February 1961, in *Foreign Relations of the United States [FRUS] 1961-63*, Volume XXV, Document 386.

¹²¹ Logsdon 2010, 80.

¹²² Dryden Notes, 22 April 1961, in *FRUS 1961-1963*, Volume XXV, Doc. 362. These closely track conclusions about Soviet capabilities reached by an Eisenhower-era National Security Council report years before. *FRUS 1958-1960*, Volume II, Doc. 442, Annex A.

At this remove, the scale of Project Apollo's drain on U.S. resources may seem surprising. Apollo ranks with the most expensive public works and defense projects carried out by the U.S. government. The World War II-era Manhattan Project, which developed the first atomic weapons, cost approximately \$22 billion in 2008 dollars; by contrast, Apollo cost \$98 billion.¹²³ At its peak, the Manhattan Project claimed one percent of annual federal spending; Apollo peaked at 2.2 percent of the federal budget.¹²⁴ It was unusual for the fiscally restrained Kennedy to endorse such a costly plan, but he never hid the scale of the commitment: a budget official later recounted that "there was never a major decision like this made with the same degree of eyes-open, knowing-what-you're-getting-in-for" character.¹²⁵ In his May 25, 1961, speech, he told Congress that "No single space project in this period will be more impressive to mankind or more important for the long-range exploration of space, and none will be so difficult or expensive to accomplish."¹²⁶

What was Kennedy paying for? Symbolic capital—defined as demonstrating that the United States, despite its poor showing in the space-race spectacles, was, in fact, dominant in science and technology. Internal Kennedy administration budget memoranda grouped NASA budgets with military and diplomatic expenditures, not with civilian agencies. In December 1961, Kennedy's budget bureau projected that by 1963 NASA would incur obligations of \$3.78 billion, compared to

¹²³ For simplicity's sake, we refer to the entire manned space effort during the 1960s as part of Project Apollo, although technically earlier suborbital and orbital flights under Project Mercury and Project Gemini were separate.

¹²⁴ Stine 2009, 6. These numbers are conservative. Launius (2012, 168) describes NASA as claiming almost 4 percent of all federal expenditures during Apollo's peak years, while Logsdon (2010, 2-3) estimates the total Apollo cost at \$151 billion in 2010 dollars.

¹²⁵ Logsdon 2010, 118.

¹²⁶ John F. Kennedy: "Special Message to the Congress on Urgent National Needs," May 25, 1961. Online by Gerhard Peters and John T. Woolley, *The American Presidency Project*. <http://www.presidency.ucsb.edu/ws/?pid=8151>.

foreign economic aid (\$3.19 billion), foreign military aid (\$1.5 billion), and the entire State Department (\$0.35 billion). NASA was thus the largest line-item in this category except for the military functions of the Department of Defense.¹²⁷ Such evidence reaffirms our interpretation that policymakers envisioned Apollo's international implications as warranting a nearly wartime mobilization of resources; NASA's classification among other military and diplomatic line items reaffirms the power-political nature of Apollo.

Overwhelming evidence corroborates our interpretation.¹²⁸ For instance, in a joint memorandum two weeks before Kennedy's public announcement of Apollo, NASA Administrator James Webb and Defense Secretary Robert McNamara argued for increased spending on manned space exploration *despite* its lack of military payoff: "[m]ajor successes, such as orbiting a man as the Soviets have just done, lend national prestige even though the scientific, commercial or military value of the undertaking may by ordinary standards be marginal or economically unjustified."¹²⁹ The Webb-McNamara memorandum—crafted to support and elaborate a decision to respond that had already been made—assessed that “Projects in space may be undertaken for any one of four principal reasons...gaining scientific knowledge...commercial or chiefly civilian value...potential military value...[or] for reasons of national prestige. The U.S. is not behind in the first three

¹²⁷ “Expenditure Outlook”, December 26, 1961, David E. Bell Files, Box 14, File “Executive Branch Memoranda,” John F. Kennedy Presidential Library.

¹²⁸ Logsdon 2010, 12.

¹²⁹ Webb, James E., and Robert McNamara, “Recommendations for Our National Space Program: Changes, Policies, Goals”, 8 May 1961, online reproduction of files from John F. Kennedy Library, <https://research.archives.gov/id/193859>.

categories....The Soviets lead in space spectacles which bestow great prestige.”¹³⁰ Webb and McNamara concluded

This nation needs to make a positive decision to pursue space projects aimed at enhancing national prestige. Our attainments are a major element in the international competition between the Soviet system and our own. The non-military, non-commercial, non-scientific but ‘civilian’ projects such as lunar and planetary exploration are, in this sense, part of the battle along the fluid front of the cold war. ... It is vital to establish specific missions aimed mainly at national prestige. (*Underscoring in marginalia of original document, possibly by Kennedy himself*)

Despite the romantic language of his public speeches about space, in private Kennedy continually reinforced the message that considerations of international prestige, not the intrinsic value of space exploration or space science, justified Apollo’s expense. Kennedy put this forcefully in a tape-recorded November 1962 meeting with NASA Administrator James Webb and other officials.¹³¹:

KENNEDY: Everything we do ought really to be tied to getting on the Moon ahead of the Russians.

WEBB: Why can’t it be tied to preeminence in space, which are your own ...

KENNEDY: Because, by God, we keep—we’ve been telling everybody we’re preeminent in space for five years and nobody believes it because they have the booster and the satellite. We know all about the number of satellites we put up, two

¹³⁰ Webb-McNamara, 8 May 1961.

¹³¹ For a more detailed analysis of this tape, see Logsdon 2011.

or three times the number of the Soviet Union ... we're ahead scientifically. It's like that instrument you got up at Stanford which is costing us a hundred and twenty-five million dollars and everybody tells me we're the number one in the world. And what is it? I can't think what it is.

MULTIPLE SOURCES: The linear accelerator.

KENNEDY: I'm sorry, that's wonderful, but nobody knows anything about it! ... [T]he policy ought to be that this is *the* top-priority program of the Agency, and one of the two things, except for defense, the top priority of the United States government. I think that that is the position we ought to take. Now, this may not change anything about that schedule, but at least we ought to be clear, otherwise we shouldn't be spending this kind of money because I'm not that interested in space. I think it's good; I think we ought to know about it; we're ready to spend reasonable amounts of money. But we're talking about these *fantastic* expenditures which wreck our budget and all these other domestic programs and the only justification for it, in my opinion, to do it in this time or fashion, is because we hope to beat them and demonstrate that starting behind, as we did by a couple years, by God, we passed them.¹³²

Perhaps the best evidence of Kennedy's motivations comes from an earlier chastising of Webb's enthusiasm for the Moon shot as a scientific endeavor: "But this is important for political reasons, international political reasons. This is, whether we like it or not, in a sense a race." Such remarks

¹³² Transcript of Presidential Meeting in the Cabinet Room of the White House on Supplemental Appropriations for NASA, 21 November 1962, via <http://history.nasa.gov/JFK-Webbconv/pages/transcript.pdf>.

both demonstrates evidence consistent with Implications 1, 2, and 3, and inconsistent with other explanations' predictions about what we should observe.

Further evidence for our interpretation comes from the mode in which Apollo ended. The original purpose of the Apollo project fit uneasily into changing relations between the United States and the USSR by the end of the decade. True, the U.S. government showed off the lunar landings. President Richard Nixon greeted the Apollo 11 astronauts onboard the USS *Hornet* after their splashdown in the Pacific Ocean, the centerpiece of his tour of U.S. allies,¹³³ the Apollo 11 astronauts toured 24 countries on the GIANTSTEP-Apollo 11 Presidential Goodwill Tour,¹³⁴ and the Nixon administration sent lunar samples to 135 countries as tokens of U.S. friendship.¹³⁵ As many as 41 million people attended USIA-organized expositions of moon rocks around the world.¹³⁶ The diplomatic uses of the Apollo missions extended even including only two Communist leaders' voices on a disc left on the Moon's surface: the American-friendly Yugoslavia's Marshal Tito and Romania's Nicolae Ceausescu.¹³⁷

These were not quite the victory laps that one might have expected given the competitive atmosphere in which the Apollo project had begun. By the end of the 1960s, "public diplomats' approach to space programming had shifted notably. Instead, the emphasis of programming

¹³³ Heppenheimer 1999. Available at NASA History Office. <http://history.nasa.gov/SP-4221/ch9.htm>.

¹³⁴ Linn, Priscilla. 2009. "The Journey After 'One Giant Leap For Mankind'." *Dipnote: U.S. Department of State Official Blog*. <https://blogs.state.gov/stories/2009/07/20/journey-after-one-giant-leap-mankind>.

¹³⁵ Kloc 2012.

¹³⁶ Muir-Harmony 2014.

¹³⁷ Vucetic 2011.

portrayed space exploration as a global accomplishment....”¹³⁸ It is not accidental that Neil Armstrong’s words upon setting foot on the lunar surface were to stress that this was not an *American* accomplishment but a giant step “for mankind”.

Apollo’s success, then, was ironic: even though the project met its goal, the world had changed around it, making that triumph worth much less than its authors had intended.¹³⁹ Neither military-security nor economic analyses explain this decision to stop; it only makes sense in the context of a race that had been won—and which had, by the time the Americans won it, already lost its luster. As Implication 7 suggests, this timing is more consonant with our preferred explanation than with rivals.

Assessing Competing Explanations

How do rival explanations track with observed evidence? They do not perform well.

Military Security. There is some supportive evidence for the hypothesis that military concerns triggered spending on Apollo. For instance, the April 1961 USIA survey of world public opinion after Gagarin’s orbit found that there was a “strong feeling that the Soviet feat has military implications and in some way enlarges Soviet military capabilities.” Yet this evidence pales before other data suggesting that considerations of “military implications”—beyond audience perceptions of a link between space prowess and military capabilities—do not appear to have weighed on senior policymakers or President Kennedy.

¹³⁸ Muir-Harmony 2014, 36.

¹³⁹ Although the progress of the project itself served these goals throughout the 1960s. We do not mean to suggest that the symbolic capital acquired—and conspicuously displayed—from Apollo turned out to be worthless for Kennedy’s original purposes.

Kennedy's advisers consistently argued that the Moon project was separate from security needs. The Webb-McNamara memorandum of May 1961 echoed Wiesner's January 1961 transition memorandum on this point: although "it is generally assumed by the American citizen that our vast expenditures of money and technical talent are primarily designed to meet the overriding needs of our military security," missiles were "slowly being delegated to the category of routine management." Wiesner (and, later, Webb and McNamara) argued the most important factor in the national space effort was "the factor of national prestige...During the next few years, the prestige of the United States will in part be determined by the leadership we demonstrate in space activities."¹⁴⁰

Nor was there the promise of substantial spillovers from moonshot technology.¹⁴¹ The 1950s space race involved dual-use technologies, such as developing "missiles able to deliver nuclear weapons and satellites capable of securely performing reconnaissance missions." But U.S. policymakers early realized that Apollo required boosters *far* more powerful than needed for any plausible military purpose.¹⁴² Even Soviet leader Nikita Khrushchev understood in 1962 that

space rockets require more powerful engines, since by this [*sic*] means they carry greater payloads and attain a higher altitude, while military rockets in general do not require such powerful engines—engines already in existence can carry warheads of great destructive force and assure their arrival at any point on the globe.¹⁴³

¹⁴⁰ Wiesner, 1.

¹⁴¹ Sheehan 2007, 8-9.

¹⁴² For instance, Summary Minutes of the Meeting of the National Aeronautics and Space Council, *FRUS* Vol. XXV, Document 367.

¹⁴³ Khrushchev to Kennedy, 20 March 1962, English translation, JFK Presidential Library National Security Files Box 308 Folder "US-USSR Space Cooperation 1961-1963".

Moreover, in the early 1960s, U.S. ICBMs switched to solid propellants, while NASA used liquid propellants, a distinction that limited civilian-military technology transfer.¹⁴⁴ Given this evidence, we conclude that there is little reason to think that a drive for military superiority, per se, played a role in the Apollo project, nor that direct military interests drove the project (see Implications 3 and 5).

Economics. Although NASA press officers valiantly tried to justify Apollo as producing large spillover effects, specific claims about its economic benefits tend to conflate the lunar program with other uses of space, such as earth observation and telecommunications. Otherwise, they rest on nebulous claims of long-term benefits.¹⁴⁵ Such arguments also tend to ignore or downplay the opportunity cost of human space exploration compared to alternative modes of exploration. Although the first manned circumlunar voyage occurred in 1968, robotic missions to the Moon proved feasible as early as the Soviet Luna missions in 1959. Unmanned science could have produced many, if not all, of the same technological spillovers claimed for manned missions. Van Dyke writes that “if there were no reasons for the lunar program other than the prospect that it would produce economic...benefits, it is safe to say that very few would consider it justifiable.”¹⁴⁶ We therefore conclude little evidence supports the contention that economic motives took priority.

¹⁴⁴ Faro, Matthew, 2012, “Ballistic Missile Technology 101—Rocket Fuel,” <http://csis.org/blog/ballistic-missile-technology-101-rocket-fuel>, and “Table of US ICBM Forces,” NRDC, <http://www.nrdc.org/nuclear/nudb/datab3.asp>.

¹⁴⁵ See, for instance, the contributions of NASA officials and others to a symposium on the *Freakonomics* blog: <http://freakonomics.com/2008/01/11/is-space-exploration-worth-the-cost-a-freakonomics-quorum/>.

¹⁴⁶ Van Dyke 1964, 118.

Note that both of these functionalist explanations would be hard-pressed to explain why the Moon missions stopped when they did, except through some process of learning that the security or economic returns were lower than expected; we have encountered no such evidence of dashed expectations.

Conclusions

Today, Project Apollo and the treasure fleets conjure images of national greatness squandered by subsequent generations of lesser, narrow-minded, politicians. Unsurprisingly, American presidents seeking to discover a legacy have recurrently toyed with the idea of sending astronauts to the Moon or even to Mars. Yet despite the seemingly large rewards of doing so, no such project has yet come to fruition. The putative grandeur of Apollo and the Ming fleets sits uneasily with the fact that they were, in military and economic terms, massive wastes of resources that diverted labor and treasure into, on those terms, unproductive ventures. Despite their current rhetorical status, it was not a desire for altruistic “greatness” but a need for self-interested symbolic domination that justified such extravagances. In the absence of such a challenge, the game is not worth the candle.

This article wagers that understanding the processes that could transform legitimacy crises into such performances can, in turn, illuminate other recurrent patterns in world politics. Despite their significant differences—their uncommon foundations—the cases display similar mechanisms and processes associated with the politics of hierarchy and maintaining political dominance, whether in terms of dynastic politics or science-and-technology competition. In finding common mechanisms and processes across the layered hierarchies at stake in Ming China (core, empire, and tributary system) and Cold War America (core, asymmetric alliances, and zones of competition for clients and allies), we show the payoffs to a key wager of hierarchy-centric scholarship: that international-

relations and domestic politics blur together when it comes to the leverage provided by explanatory theory.

This juxtaposition also allows us to engage with Acharya's important call for a "global" approach to the study of international politics by comparing the kinds of systems that long constituted international-relations scholars' bread and butter, like the Cold War, and nonwestern systems that have received less attention, like Ming China. This comparison is particularly salient given widespread interest in interrogating early modern Chinese international relations, including attempts to compare it to post-war American hegemony.¹⁴⁷

We also seek to advance more pluralist ways of studying power politics. Scholars should combine sensibilities from social-constructionist *and* strategic approaches to understand power politics. Such dynamics extend beyond straightforward economic and military competition; they may employ instruments that may sit outside the typical repertoire.¹⁴⁸ Both cases provide examples of high-stakes power politics. But the immediate objects—the capital—at stake took the form of tokens and performances of, on the one hand, obeisance from distant rulers and, on the other, science-and-technical prowess in space. The policy choices of the Yongle and the Kennedy courts involved incontestably strategic and instrumental dimensions, yet played out in socially-constructed fields that cannot be explained in purely 'objective' terms.

¹⁴⁷ Acharya 2014, 652. See also Kang 2010, Khong 2013; Lee 2016; Wang 2012.

¹⁴⁸ Goddard and Nexon 2016. See also Avant and Westerwinter 2016; Barkin 2003; Bially Mattern 2004; Goddard 2008/2009; Guzzini 1993; and Hurd 2005.

Finally, the field-theoretic approach we offer provides a means of cutting into the dynamics of hegemony at the level of individual diplomats, in institutional sites, and between states. While we focused on the last, fields specific to microlevel settings coexist with more macrolevel ones, and they should influence one another.¹⁴⁹ This is the direction that advocates of hierarchy-centric scholarship point to: seeing world politics as composed of complex patterns of super- and subordination that incentivize “compliant and resistant behavior”, generate “positional and role-based behaviors”, and “produce distinctive political spaces”.¹⁵⁰ A hierarchy-centered account of world politics will also have to offer accounts of *what kinds* of competition will be generated under hierarchy, *how* contests for domination and acceptance of subordination will proceed, and *why* the forms of such hierarchies will change over time. By illuminating how legitimacy challenges can produce state actions that mobilize resources on a wartime scale, we seek to show that the stakes of these debates matter for more than abstract concerns: they describe processes at the core of political life.

Supplementary Information

This article’s online appendix is available at [insert *IO* coordinates],

<https://dataverse.harvard.edu/dataverse/dhnexon>, and <http://www.paulmusgrave.info/>

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¹⁴⁹ Go and Krause 2016. See also Adler-Nissen and Pouliot 2014; Krieger, Souma, and Nexon 2016; and Pouliot 2011.

¹⁵⁰ Bially Mattern and Zarakol 2016, 634.

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Case	Superordinate Actor	Contested Fields	Key Symbolic Capital	Audiences/ Priority	Orientation of Projects	Reasons for Termination
Treasure Fleets	Ming Emperor	Dynastic Politics	Evidence of Obeisance from Foreign Rulers	1. Core Selectorate 2. Broader Empire 3. Existing and Potential Tributary Rulers	Core-centric: <i>peripheral hierarchy a source of legitimacy in the core</i>	Effort undermines opponents of the ruler. Dynastic succession renders usurpation crisis less urgent New impetuses for expeditions quashed
Apollo Project	United States	Science and Technology; Space in particular	'Firsts' in Space	1. Third World 2. Core Allies 3. Americans	Pericentric: <i>Legitimizing hierarchy over/in periphery central security concern.</i>	US wins the Moon Race Détente reduces symbolic importance of science-and-technology field for US hegemony

Table 1: Case Summaries

Implications	Conditions under which rival theories would predict observation			Evidentiary Value if Observed	Evidentiary Value if <i>Not</i> Observed
	Our theory	Economic efficiency	Security concerns		
1. <i>Subject is a politically superordinate actor?</i>	Required	Irrelevant	Irrelevant	Very low for our theory; irrelevant for rivals	Dispositive against our theory; irrelevant for rivals
2. <i>Subject faces demonstrable crisis of legitimacy (e.g., fears that subordinates/potential subordinates will reject its right to exercise leadership?)</i>	Required	Irrelevant	Possible but not required	Very low for our theory; irrelevant for economics; weakly favorable for security	Dispositive against our theory; irrelevant for economics; very low for security
3. <i>Subject responds by seeking to accrue symbolic capital by diverting assets from other military or economic uses?</i>	Required	Unlikely	Extremely unlikely	Moderately in favor of our theory; damaging to economic arguments; strongly damaging to security arguments	Dispositive against our theory; weakly supportive to rivals
4. <i>Project ends when legitimacy crisis has ceased?</i>	Likely but not required	Irrelevant	Irrelevant	Moderately in favor of our theory; neither supportive nor damaging to rivals	Damaging, not quite dispositive against, our theory; neither supportive nor damaging to rivals
5. <i>Leaders expect that direct benefits (military or economic) separate from symbolic capital justify expenditures</i>	Extremely unlikely	Required	Required	Highly damaging against our theory, supportive for rivals	Highly damaging <i>against</i> rivals, moderately favorable <i>for</i> our theories

Table 2: Observable Implications and Evidentiary Significance

Comparison of U.S. and USSR in
Various Fields of Space Science

	<u>Field</u>	<u>Status</u>
Unclassified	Geodesy	U.S. ahead
	High Energy Particle Radiations	U.S. ahead
	Solar and Stellar Radiations	U.S. ahead
	Upper Atmosphere	U.S. slightly ahead
	Aurora	U.S. slightly ahead
	Magnetic Fields	Comparable
	Meteors	Comparable
	Meteorology	Comparable
	Ionosphere	USSR slightly ahead
	Lunar Measurements	USSR ahead
	Biosciences	USSR ahead

Figure 1. Table reproduced from CIA report assessing US and USSR accomplishments in space, 1 January 1960.

Scientific and Technological Programs

A startling new development in the period since the Jackson Committee report has been the increasing impact of scientific and technological achievement upon world opinion. Without question the launching of the first Sputnik gave the Soviet Union a psychological triumph which has profoundly affected its image as a technically advanced nation and as a great military power. Its feat in one branch of technology has been systematically exploited—and with considerable success—as evidence of the dynamism of the entire Soviet system.

The United States has had, and continues to have, over-all superiority in science and technology. Nevertheless, since the launching of Sputnik I there has been considerable evidence that the average man in most countries believes that Soviet capability continues to grow relative to that of the United States, and that the Soviet Union leads in certain important aspects of space technology. Short of some now unforeseeable and revolutionary scientific breakthrough, it will be extremely difficult to re-establish the degree of American technological prestige and pre-eminence relative to that of the USSR which existed prior to October 1957.

The Committee feels that, since throughout the world the status of the nation's science is increasingly taken as a measure of its power and dynamism, two things are indispensable psychologically: (1) that the U. S. maintain a continuing stream of scientific and technological achievements; and (2) that these achievements be more effectively communicated to the world than has been the case in the past.

The Committee feels that, despite the improvements which have been made, there is still an inadequate awareness of the psychological importance of our scientific activities in the administration of these programs and that arrangements for publicizing and dramatizing to the world our achievements are inadequate.

Figure 1. Selection from the Sprague Committee Report (p. 36 of original).