

THE PROPHET FUNCTION: An Economic Theory of Sacred Space and Spiritual Capitals

Colleen E.H. Berndt¹
San Jose State University

Laurence R. Iannaccone²
George Mason University

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Abstract

Places which acquire spiritual significance, becoming sacred capitals, have tremendous influence on the secular institutions by whose side they operate. We examine the factors by which otherwise perfectly ordinary places are elevated to the sacred, and how such places help to shape secular choices. In particular, this paper explores the circumstances surrounding the rise and fall of the Delphic Oracle through analysis of recorded oracular responses. The Delphic Oracle gained stature as the preeminent source of divine information following the Dark Ages in Greece, playing a part in the Trojan War, the Theban War, in the fortunes of the Theban Royal House, in the voyage of the Argonaut, and in deeds of Herakles and Theseus. Evidence suggests Delphi's importance varied with the degree of state control, which affected both oracular demand and supply.

¹ Economics Department, San Jose State University, Dudley Moorhead Hall, One Washington Square, San Jose, CA 95192, colleen.berndt@sjsu.edu.

² Economics Department, George Mason University, Center for the Study of Public Choice, Carow Hall, 4400 University Drive, Fairfax, VA 22030, larry@econzone.com.

Introduction:

Sacred locations play a vital role in the real or mythic history of all religions, and in many cases they remain central to a religion's ongoing activities and organization. But sacred spaces also shape "secular" outcomes. Holy sites remain a potent force in politics and war – most obviously in the Middle East, but also throughout the world.¹ Even in the supposedly secular West, environmental movements almost always succeed when they manage to invest a place with "spiritual" value (be it a redwood forest, Utah desert, native burial site, or Arctic National Wildlife Refuge).

Anthropologists, archeologists, and historians have undertaken countless studies of sacred places, and this paper owes much to their painstaking labor. Unfortunately, the studies provide little in the way of theory. One might expect more theory from sociology or political science, but neither field has devoted much attention to religion or spirituality, except at the level of individual attitudes and population attributes.² In short, the relevant literature yields few insights about the generic social dynamics of sacred places, especially those rare but highly influential places that become *spiritual capitals*.

Economics offers new perspectives on religious beliefs, behavior, and institutions.³ For example, many historians, sociologists, and political scientists now explain the vitality of American religion in terms of its long history of religious competition, whereas the secularity of Northern Europe is traced to its even longer history of religious monopoly and regulation. The surprising strength of strict religions (including many so-called sects, cults, and fundamentalists) is now commonly explained in terms of club-theory and free-rider problems. The most ambitious studies in this genre are those of Rodney Stark, which go so far as to analyze martyrs, miracles, and the rise of major religions in terms of rational choice.

Though the study of ancient shrines seems far removed from the field of modern economics, we find answers to many questions about sacred places in theories of public choice and political economy. The answers are neither as rigorous nor as complete as we would like, but they do yield broader insights and more testable claims than any alternative "product" now on the market. Concrete examples help to clarify and illustrate our arguments, so we shall devote much of the discussion to the Delphic oracle. Delphi is interesting in its own right, but it has the added benefit of lying well beyond the modern Western context that comprises most religious research. There is much to be said for social theories that remain relevant across the millennia, and we hope to show that our arguments attain this level of generality.

In the following pages, we begin by outlining the basic theory of how spiritual capitals arise, and under what circumstances a sacred place may evolve into a focal point. In the second section, we use the example of Delphi to illuminate the theory. The final section provides a glimpse at possible extensions of this theory into a multitude of other 'sacred spaces', including the quasi-religious environment of political beliefs.

1. The Basic Theory

Fundamental Facts:

Studies of the sacred must grapple with two apparently contradictory facts. On the one hand, the sacred is *special*, set apart from everyday life. On the other hand, people find the sacred *everywhere*.

The first fact manifests itself in a rich vocabulary of contrasts, such as sacred versus mundane, spiritual versus material, divine versus human, holy versus profane, and supernatural versus natural. The principle also justifies, and perhaps derives from, people's belief that the sacred transcends normal limits. People will employ sacred objects, places, beings, and actions as they might a special (but risky) technology of production. At the obvious risk of oversimplification, let us model this behavior as a form of (Beckerian) household production, wherein one or more production function has the special form, $z = f(x, t, \theta)$ where x and t denote standard inputs of goods and time, but θ is *spiritual capital*. By assumption θ alters z , either directly or through its impact on otherwise normal x and t . In the case of an oracle such as Delphi, θ yields increased information about future events. Our model sidesteps questions concerning the real versus imagined character of θ . For example, we do not ignore the possibility that many prophecies become self-fulfilling when widely accepted.

The first fact also explains the tendency to associate sacred places with strange places, events, or behavior. Delphi fits the pattern quite nicely – a hilltop, over a cave, riddled with crevices which, as we shall see, may even have released hallucinogenic gasses. But we cannot push this line of argument very far before confronting the second fact. Although some places enjoy natural advantages in the competition for supernatural status, people display an amazing capacity to invest *any* location with sacred significance. For every holy hilltop (that is highly visible yet easily defended, and near the heavens but not far off the road) there is a blessed boulder in a grassy field.

The world is positively littered with sacred places, to say nothing of sacred rituals, objects, and events – from cliff to cave, field to forest, and sea to shining sea. There seems to be no limit to when or where people encounter supernatural beings and forces. Some cognitive psychologists and evolutionary biologists go so far as to ascribe this tendency to the structure of our brains. In *Religion Explained* (2001) Boyer thus finds innate reasons for the persistence of supernaturalism, the structure of religious institutions, the presumed attributes of divine beings, and even the character of fundamentalism in his recent book. We concede the possibility of evolutionary predispositions, but find them relatively uninformative in the present context.

If people have the capacity to invest *any* location with sacred significance then what, if anything, limits the geography of the sacred? And what forces influence the emergence of sacred capitals? Cognitive/evolutionary arguments cannot explain the observed outcomes in terms of innate human tendencies. Nor does it help to emphasize the strange and special character of particular locations. One is tempted to invoke chance alone – a

spiritual random walk, with each step determined by some new and semi-random revelation. We can do much better, however, by adding a third insight to our list of fundamental facts.

Social Factors:

Faith is most readily sustained in *groups*. The evidence on this score is overwhelming, and runs the gamut from history to psychology, and case studies to population surveys. People are vastly more likely to accept a sacred/supernatural claim if they are in contact with others who also accept the claim. The sacred is a *social* construct, and the only exceptions are small, short-lived, and idiosyncratic.

The social side of faith helps explain why sacred spaces manage to be *both* peculiar *and* pervasive. For example, elaborate the previously described production function to account for the inputs of other people, and let their inputs reinforce one's own to the degree that both relate to the *same* sacred object.⁴ The simplest game theoretic analog is a coordination problem in which each of N people must choose among an infinite number of alternative spiritual "strategies" and each person's payoff grows in relation to the number of other people who choose the same strategy. The game has infinitely many solutions, all of which are Nash equilibria, and the only difficulty is choosing an (essentially arbitrary) shared strategy, when any will suffice. As in Schelling's classic example of two people meeting in New York City, the natural solution is to rally around a distinctive "focal point" – even if its special features have no intrinsic relevance to the game and its payoffs.⁵ The worshippers are thus more inclined to meet on a literal or figurative mountaintop, but even an ordinary meadow will suffice *if* they can simply agree on which meadow. Such outcomes can be determined by idiosyncratic factors, and may well be matters of indifference *ex ante*. But once a group "locks in" on a shared strategy, this "path dependent" destination will tend to remain a permanent part of their sacred cosmos. We are in the realm of "rational ritual" as described by Chwe. (Chwe, 2003)

Coordination is, however, only part of the story. In practice, sacred "games" involve players who differ tremendously in wealth and power. By influencing sacred outcomes, major players can radically alter their payoffs. (For them, the game looks more like "battle of the sexes" or "prisoners' dilemma".) Schelling-style coordination may capture the situation confronting the multitude of minor players, but only if we recognize that the relevant group is relatively small – consisting primarily of one's immediate social network. (Psychological experiments and sociological case studies demonstrate that most people have little difficulty maintaining distinctive beliefs as long as those beliefs are shared by their family, friends, and co-workers. History likewise testifies to the viability of religious subcultures that comprise only a small fraction of a total population.)

Proximity: The Standard Case

To better describe the situation and outcomes, let us supplement the language of games and strategies with that of exchange and production. Most minor players are potential

believers – people who ascribe value to θ as long as others do the same. Major players are more inclined to be cynics who value θ only as a means of influencing *other* people. A major player can extract monopoly rents from minor players if he persuades them that he controls the source of θ . Moreover, this doctrine can be self-sustaining if shared θ 's confer real or perceived benefits upon groups of minor players. Although the sacred can serve as a direct source of profit, as when spiritual services are exchanged for payments or sacrifices, far greater profits may accrue to secular leaders who persuade the general population that they enjoy the favor of the gods.⁶

Thus, where power is centralized, the outcome is all but inevitable:

Rulers will seek to augment their power through control of the sacred and, in particular, through control of sacred locations. Hence, in the absence of an ongoing struggle for power, centers of sacred power will move to centers of political power or vice versa.

This certainly describes the standard situation, whether in ancient Egypt, pagan Rome, biblical Jerusalem, medieval Rome, or even Salt Lake City. From ancient times through the present, we observe palace and temple in close proximity whenever a strong central government rules an entire region.⁷ Nor is the path to this outcome obscure. History likewise records numerous attempts at cartelization or co-optation, even when (as in the case of Hitler) it means kidnapping the Pope or (as in the case of Henry VIII) replacing the Pope's representatives with a home-grown alternative.⁸ Geographic proximity allows the political leadership to exert influence over the religious leadership, and visa versa. A ruler having a superstitious congregation accrues an enormous advantage in that obtaining the blessing of the religious authority further secures that ruler's divine right to lead. A disenchanted citizenry is far less likely to refute the will of the gods than it is to refute the will of a random self-appointed leader. Of course, the religious institution also accrues benefits (often in the form of monopoly privilege) as divine support does not come without a cost to the ruler.

Even so there are limits to the linkage of sacred and secular. The countervailing forces include: (a) demand for a greater range of products than any one "church" can supply (due to natural variation in people's preferences and socio-economic circumstances); (b) a large (actual or latent) supply of alternative spiritual producers and products (due to the near absence of scale economies and natural barriers to entry in the spiritual sector); (c) disappointed customers (because state-run religions do a relatively poor job satisfying popular demand for spiritual goods and services); and (d) problems of credibility (because even the most poor and ignorant populace tends to discount the self-serving claims of secular rulers and their spiritual collaborators). We will not revisit the extensive evidence supporting these observations, but refer the interested reader to Finke and Stark (1988), and Iannaccone (1991), (Iannaccone et al., 1997). For a classic analysis of the problematic link between church and state, see Adam Smith's (1981 [1776]) analysis of Europe's established churches.

In practice, therefore, even the smallest and most "primitive" cultures maintain a formal separation of sacred and secular power. Priesthood and royalty almost always occupy

separate classes, no matter how closely they collaborate. And even the strongest state-sponsored church constantly battles the threat of schism, foreign faiths, upstart sects, folk religions, and self-employed suppliers of sacred services.⁹

Separation: The “American” Alternative

As European intellectuals have long appreciated, the United States represents a very different solution to the problem of church and state. In order to form a political union comprising thirteen independent and religiously diverse states, the framers of the constitution decreed that “congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof” (and within a few decades this separation applied within each state as well). The sacred thus became a fully independent “industry.” As Stark, Finke, Iannaccone, and others have emphasized, the result has been an extraordinarily diverse and vital religious market, with far higher rates of innovation and activity than in (almost) any other developed nation.¹⁰ In particular,

When secular authorities exercise little or no power over the sacred suppliers, competition yields a wide range of spiritual “firms” and “products”. No single firm will dominate the spiritual market, and no single location will dominate the spiritual landscape. And even within a given firm, competitive pressures will induce local outlets to limit the status of their national headquarters.

Spiritual suppliers need not *welcome* these results any more than the commercial firms welcome “cut throat” competition. Each sacred specialist and each sacred location would gladly accept higher prestige, power, and profits. But as Adam Smith (Smith, 1981 [1776]) emphasized, the multiplicity of “small sects” forces each group to live and let live.

Isolation: The Multi-polar Exception

Since the late-1980s, a sizeable literature has grown up contrasting religious outcomes under (American-style) “religious competition” versus (European-style) “religious monopoly.” And together with other forms of imperfect competition, the (commercial) market metaphor suggests that these models should provide a fairly complete description of the figurative and literal religious landscape. But commerce-based models ignore at least one important alternative. This case, which we shall call the *multi-polar* exception, falls more within the realm of political economy than the economics of commerce. As we shall show, the Delphic Oracle epitomizes this case.

Consider the situation confronting a group of small states that share a common culture and close economic ties, and occasionally depend upon each other for mutual defense. This situation has been encountered in the past by not only the city states of Greece during the archaic period, but also by Etruria, prior to the founding of Rome, and in Mayan civilizations. (Renfrew and Cherry, 1986) These areas share a developmental path during a politically fragmented time. The ruling class of each state seeks to maintain its power and, if possible, extend that power through annexation or domination of

neighboring states. Such situations approximate a multi-person prisoners' dilemma, which readily degenerates into nonstop conflict. Equilibrium is notoriously difficult to maintain, and costly wars often persist until a single state manages to dominate all others – through conquest, intimidation, and alliances.

"In the context of inter-state competition, sites like Olympia, Delphi, Dodona or Delos, located in the marginal areas and outside the direct control of any single major power, would have been inviting places for states to meet and exercise their rivalries without threat of interference." (Morgan, 1990)

In this context, a shared spiritual capital can benefit the entire population – including the competing rulers – *if* it can maintain independence from each and every state. Continued independence is, of course, far from automatic. Independence means that the sacred place has no direct tie to a large military force. Moreover, a shared spiritual capital constitutes an especially attractive target of state control. (If secular rulers routinely seek to co-opt the “churches” within their borders, how much more will they value one that enjoys trans-national authority?) Nevertheless, a mutually advantageous equilibrium can emerge when no single state has sufficient power to stand against the majority of other states. See appendix A for a (excessively) simple game-theoretic illustration.

A sacred place constitutes a natural “focal point” by virtue of its special character – after all “special” is what the sacred is all about. It provides a neutral meeting place, effectively aggregating information as people constantly travel between it and other places (like a transport system hub). Trans-national status provides more spiritual authority/legitimacy than can be produced by any single-state-based “church” making it more likely that a majority of states will come to its defense if one state (or group of states) seeks to take control.

When a large number of competing secular powers share a common culture and close economic ties, an independent, free-standing oracle can flourish as a mechanism of coordination. It thus becomes a spiritual capital for the people of many different states.

Independence will not persist if the capital lies within territory controlled by a single powerful state. Hence,

The spiritual capital will be located along border or within a relatively weak state.

In distancing themselves from pervasive political environments, spiritual capitals – and political capitals, as it turns out - can establish themselves as non-partisan institutions. Physical distance from major political centers allows the perception of neutrality to flourish, and has been used throughout modern times to establish a semblance of neutrality in the location of governmental centers. One reason the founding fathers selected Washington D.C. as the capital of the U.S. is that it was *not* a thriving political center of an existing colony (as was Philadelphia, for example). The choice of neutral turf removed the perception that any one colony would have more influence than any other over matters of concern to all. The same is true of state capitals such as Sacramento,

California and Albany, New York, or country capitals such as Brazilia and Canberra. By locating in a neutral area, a government can enhance its appearance of fairness, making it more credible in the eyes of the citizenry. In the case of spiritual capitals, though, neutral locations are more likely a result of serendipity. It is doubtful, for example, Delphi was purposely established in a remote location. However, this happy accident most certainly contributed to its ability to remain independent for over 200 years.

2. Putting the Theory to Work: Delphi

Background:

The foggy origins of Delphi lie within the realm of mythology, a tale of divine contest between gods and goddesses with Apollo as the ultimate victor. By the 7th century B.C., Delphi had emerged as the most important shrine in all of Greece. People from all levels of society would make the journey from the far reaches of the known world¹¹ (appendix B) up the slopes of Mt. Parnassus to pose their questions about the future to the Pythia (priestess). The Pythia, a sexually inactive female from Delphi, spoke the oracle which she received directly from Apollo himself while in a trance. Interestingly, years later, while unable to document the exact source of the oracles, researchers have documented the possible source of the trance as originating from volcanic vapors (light hydrocarbon gasses, such as those contain in glue or paint thinner) passing through bituminous limestone which entered the temple's inner sanctuary through a crack in the floor. (Hale et al., 2003) The resulting ethylene has anesthetic properties which can induce trance-like states, given the correct mixture.

Originally, the Pythia was a young female virgin, available for consultation once a year on the 7th of the Greek month of Bysios¹². However, by the 6th century, Delphi experienced an enormous surge in demand for oracular services. Two additional pythia were added to the staff, and oracular audiences expanded to one day each month on the 7th of the month, for nine months of the year (Morgan, 1990; Parke, 1967).¹³ (Due to the scarcity of chaste girls, post-menopausal women were also chosen to speak for the god.) Indeed, Plutarch tells of a time when the numbers of petitioners were so great that there was "difficulty in keeping the assembly in order because of the vast numbers."¹⁴ Because of the great demand, and the limited supply of time, some individuals at the end of the line may have found it necessary to wait another month to have their audience with the Pythia. (Bowden, 2005)

The first settlement at Delphi most likely originated around the 14th century B.C. At that time, the entire area was part of the ancient Mycenaean civilization. The oracle was not prominent during the Bronze Age, though a village seems to have existed. Any oracular presence before the 8th century was purely a local institution (Fontenrose, 1959; Morgan, 1990).

During the Greek colonization period, last third of the 8th century B.C., the Delphic Oracle began to play a role in civic affairs. While Greek colonizing did not necessarily carry with it a political link to the mother city, it did carry a religious link. Of the two, the

religious link was far the more important (Parke, 1967). Greek colonizing during this time period required an organized voyage of an entire flotilla over uncharted seas. Before embarking on the voyage, the leader of the flotilla would first seek the approval of the oracle. This individual was the founder of not only the cults and rituals in the new colony, but also the social and political institutions. Because the gods condoned the voyage, the leader was perceived as having a special relationship with those gods.

During this time, travel to distant cities was not an enterprise undertaken lightly. As Bowden explains, "Sending an embassy to Delphi was no minor matter." (Bowden, 2005) At the peak of Delphi's influence, most people still traveled on foot or horseback, while some wealthier fractions might undergo dangerous sea voyages. Recall that the first magnetic compass was not invented until approximately 200 A.D. in China and did not make it to Western Europe as a serious navigational tool until the 16th century A.D. Greeks making sea voyages in the 6th century B.C. navigated by dead reckoning. Some perhaps were guided by scant knowledge of the wind and stars, though astronomical movement was not well understood.¹⁵ Petitioners making the difficult journey to consult Apollo would not simply turn around and go home after a few minutes' consultation. They would remain in the area long enough to rest and resupply for the long journey home. As mentioned above, because of the popularity of the oracle, some petitioners may have been obliged to wait another month to have their consultation. One can easily imagine the talk at the local gathering places to be a fine source of information about future events and their participants both near and far, a theme we will revisit later in the paper. (Morgan, 1990)

Data Sources:

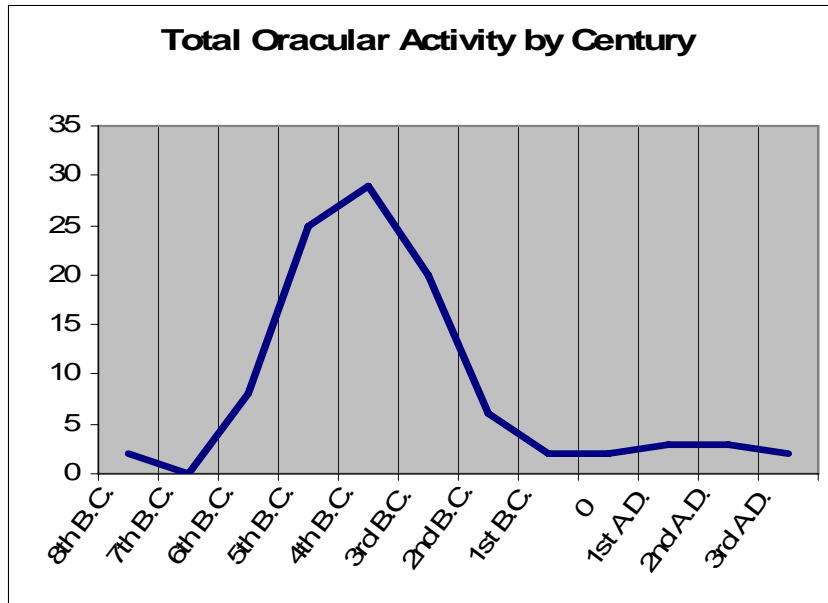
Joseph Fontenrose, a preeminent classical scholar, painstakingly researched and catalogued the questions posed to the Pythia, and the responses given in his book, The Delphic Oracle: Its Responses and Operations with a Catalogue of Responses. He divides the questions and responses into three main topical categories: religious matters, matters of state, and personal matters, further separating the material into four categories: historical, quasi-historical, legendary and fictional. Because of the scarcity of literate individuals, the preponderance of the oracles are completely lost due to lack of any documentation. Of those few that remain, many oracles were passed down orally from generation to generation before being committed to paper or stone.¹⁶ Plutarch entertains much discussion of the exact format of the oracles in *Moralia*. While some oracles were reputedly delivered in obscure or vague language, others were quite precise.¹⁷ They predicted "not only what shall come to pass, but also how and when and after what and attended by what, that is not a guess about what may perhaps come to pass, but a prognostication of things that shall surely be."¹⁸

Though reliability of the sources is questionable in many cases, oracles which Fontenrose categorized as historical were actually spoken and recorded by someone within his own lifetime, and are therefore the most accurate. Quasi-historical oracles are of a more dubious nature, yet enough evidence exists to suspect they are reliable and likely to have occurred. Dates are available for the oracles in both of these two categories. The final two

categories are far less historically credible, and belong to the realm of myth or literary hyperbole. For the purposes of this paper, we consider only the first two categories. We likewise discard any oracles in those categories determined by Fontenrose to be doubtful or not genuine. Accordingly, the number of oracles available for examination is only a very small percentage, subject to some unknown degree of sample bias.

We see in Figure 1 that total oracular activity peaked in the 4th century B.C.

Figure 1.



Using the Fontenrose data, this paper will now examine the particular political environment at Delphi between the 8th century B.C. and the 3rd century A.D.

Political Trends:

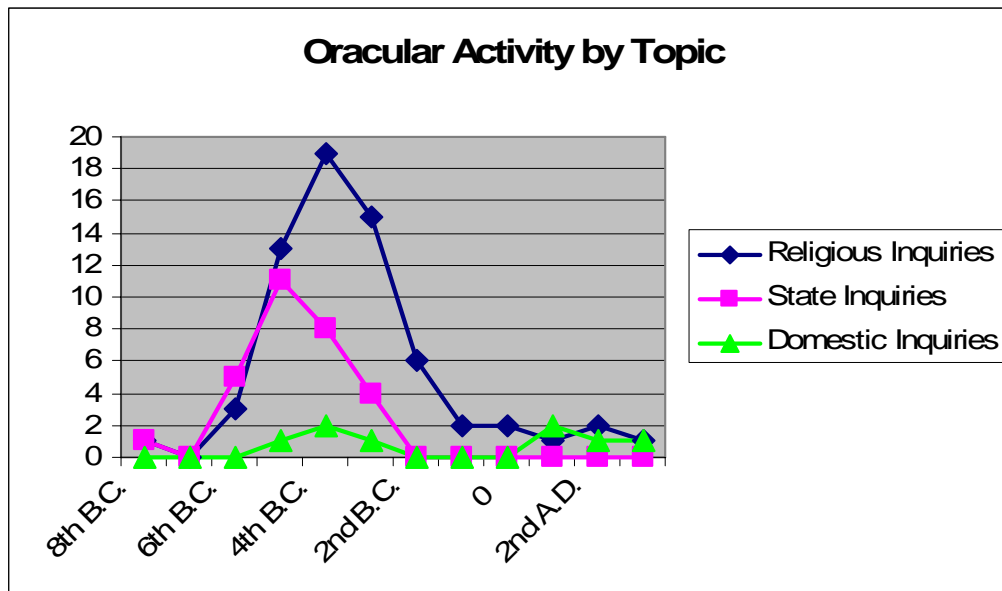
The Phocians exercised some level of political control of Delphi during the 8th and 7th centuries B.C., controlling much of the area including the neighboring town of Crisa. During this time, Delphi operated as a separate political unit. (Parke, 1967) However, it did not escape notice that Delphi was becoming a prominent shrine, and as such was becoming wealthier due to the petitioner's donations. Hoping to cash in on the bounty, the Phocians began to levy heavy taxes on visitors to the Delphic sanctuary. The Delphians (assisted by sympathetic neighboring city states) revolted, starting the First Sacred War in 601 B.C.. As a result, Delphi was formally made a politically independent community, protected by a religious league, the Amphictyony (an association of neighboring states and/or tribes established to defend a common religious center). Thus began a period of over 200 years of Delphian independence.

After the shift in control from the Phocians to the Amphictyony, "Delphians came to occupy a position unique in Greece. They ceased to be reckoned as members of their old tribal unit, the Phocians, and stood apart from any local association. ... They acquired a kind of Panhellenic status through the inter-tribal structure of the Amphictyony. At the same time they retained complete control of the oracle itself." (Parke, 1967) It is in this manner that Delphi rose to its peak, and served the needs of all Greeks regardless of political affiliation. Indeed, as testimony to Delphi's neutrality, Parke relays the following story:

"In Athens the Alcmaeonidae after a period of dominance fell from power. In Sparta King Cleomenes who had quarreled with Athens took a vigorous line of policy which raised difficult questions for Delphi. In 494B.C. he prepared to invade Argos. *Both sides consulted the oracle.*" [Emphasis added.]

In evaluating the types of questions posed to the oracle, Fontenrose divides them into three topical categories: Religious Inquiries, State Inquiries, and Domestic Inquiries. The following graph emerges when the questions are distributed over the time periods in which they were posed.

Figure 2.



Independence from state control would be most germane for obtaining unbiased information on matters of state. In Figure 2, the number of questions pertaining to such matters is indicated by the line labeled State Inquiries. Delphi gained independence at the beginning of the 6th century and lost it again during the First Peloponnesian War in 480 B.C.

Delphi reached its peak of political activity in the 5th century. As the reputation of Delphi spread, so did appreciation of the value of gaining the gods' favor. If a state could control the oracle, it could win support for all state endeavors. As such, control of the oracle constituted a political asset. (Parke, 1967) In the mid 5th century, struggles to obtain this control began to occur. During the next 200 years, Delphi wavered between periods of independence, control by Athens, control by Sparta and control by the Phocians. (appendix C)

If the state could not control Delphi and the oracle, the next best solution was to attempt to manipulate the oracle in other ways. For example, in the final throes of the Peloponnesian War (431 B.C – 404 B.C.), Lysander, a Spartan Admiral, was rumored to have attempted to bribe several oracles, including Delphi, to obtain divine sanction for his military plans. It is during this time that the prestige of oracles was beginning to dwindle rapidly. "It was still useful to obtain their support for special projects, but no one would be greatly surprised or shocked if they were in some instances the product of chicanery." (Parke, 1967) Another example of oracle tampering occurred in the case of the Spartan King, Agesipolis in 387 BC, toward the end of the Corinthian War. He shopped oracles, ending his search at the Olympian oracle due to the known bias of the oracle there toward Spartan interests. This bias resulted from the fact that the area of Elis (the regional home of Olympia) had lately been conquered by Sparta, and was particularly subject to her pressure. The Spartan King had intended to force the Delphic Oracle to give its agreement but Delphi at that time was not committed to the Spartan side.

Attempts to Co-opt Oracular Sanction:

While the need for genuine political guidance dwindled in favor of the need for the appearance of political sanction, personal and religious enquiries began to slowly decline as well. Private individuals became more lax in their attitude. The writings of Xenophon tell of posing questions of the oracle specifically designed to obtain the desired answer.¹⁹ Instead of requesting "if" a certain voyage should be undertaken, he inquired as to which gods it would be best to honor during the voyage. Any response could then be construed as an indication to proceed with the voyage. This anecdote demonstrates that while the need or importance of divine guidance might be questionable, the social custom continued to persist.

The persistence of domestic and religious inquiries during the general decline of Delphi as an unbiased source is consistent with economic theory. As shown by Figure 2, questions posed on personal or religious matters experienced a slightly later peak in activity. Adherence to social norms can be sustained as the cost of following biased information is far less. In order to calculate the cost of maintaining irrational beliefs, one need only examine the things which must be sacrificed in order to maintain those beliefs. Holding irrational beliefs about the quality of information when such information is guiding a king's decision to make war on another kingdom could result in the sacrifice of the king's life, and the confiscation of his wealth and kingdom. The same irrational beliefs guiding a farmer's decision to make an offering to another god may have far less

dire consequences. (Caplan, 2000) Hence, if the price of oracular consultation increases, less consultation will be demanded. Because the cost of religious and domestic inquiries differs from the cost of state inquiries, the increase in cost of one may not affect the others. The full price of political consultation in this scenario does not correlate directly with the price of religious or personal consultation.

By the mid-4th century B.C., Delphi's political influence had fallen to nearly half. Delphi fell into control of the Macedonians in 346 B.C., where it remained for approximately 50 years. While Philip II used it as a valuable center of historical political importance, he did not attach much importance to oracular consultation. By the time of Alexander, in the late 4th century B.C., the center of the Greek world had shifted nearer to Asia Minor and Egypt, relegating Delphi to the status of a regional backwater. This change in status was further reinforced when Delphi fell under the control of the Aetolian League at the beginning of the 3rd century B.C.. The Aetolian League's political expansion likely discouraged outsiders from using the Pythian Apollo. By this time, oracular inquiries revolved around matters of cult. While private enquiries were still submitted, political enquiries had all but vanished. Toward the end of the 3rd century B.C., the area fell under Roman control. The Romans, however, had their own oracles back in Rome. The Roman State did not appear to maintain any regular contact with Delphi. Delphi was used instead as a convenient location for issuing proclamations or publishing legislation. Plutarch conceded that Roman control eliminated the need for the major prognostications of Delphi's past.²⁰

“For my part, I am well content with the settled conditions prevailing at present. And I find them very welcome, and the questions which men now put to the god are concerned with these conditions. There is, in fact, profound peace and tranquility; war has ceased, there are no wanderings of peoples, no civil strifes, no despotisms, nor other maladies and ills in Greece requiring many unusual remedial forces....and the most important consultations on the part of the States concern the yield from crops....”

During Delphi's period of peak traffic in 500 to 400 B.C., petitioners began to come, not only from within Greece, but also from neighboring areas of the world. Clientele included Phrygian and Lydian kings, as well as Spartans, Athenians, and various other Greek regionals. Political inquiries rarely involved internal political issues or non-religious legislation, but instead were focused on matters of moral or legal uncertainty. In such matters, states used divine confirmation to ensure consensus and eliminate disorder. (Morgan, 1990) As result of this enormous demand for divine direction, Delphi added additional Pythia, using three women in shifts to accommodate the crowds. As previously mentioned, the days the Pythia was available changed from one day a year to one day a month for nine months. Additionally, Delphi innovated. As the Pythia could not accommodate everyone in the temple, a system of oracle by lots was devised. A petitioner would ask a question, and a response was drawn from a bowl.²¹

Price/Demand/Supply:

With demand for oracles so high, it is natural to wonder how the price system might reflect this. Delphi engaged in a well-structured type of price discrimination. Payment for oracular services generally took two forms: an entry fee (often a honey cake which was later sold by the priests) followed by a sacrifice, and an after-the-fact expression of gratitude. Entry fee payments for consultation varied greatly based on the status of the petitioner: rich individuals paid more than poor, state delegations paid more than individuals. (Vandenberg, 1982) More burdensome costs came in the form of the sacrifice to be offered at the temple's entrance, usually sheep or goats in accordance with the piety and generosity of the petitioner. Obviously neglecting to adequately demonstrate piety or generosity was to risk divine spite. Although the distribution system is not well documented, the sacrificed animals became one source of Delphian food supply, as most Delphian residents were in the service business and were not dedicated to food cultivation. After the fact remuneration generally came from the prevailing political party in a dispute. These parties established numerous 'treasuries', elaborately carved marble buildings containing enormous wealth, often plundered from the losing party in the battle. The number of treasuries lining the Sacred Way to the temple is testament to the success of the oracle. (appendix C) Amusingly, rival states often built their treasuries directly across from their formerly victorious adversaries, in a Classic display of "in your face"²². Erection of a treasury or monument at Delphi was also one way in which a state could announce "I have arrived," declaring itself a political polity with which to be reckoned. (Renfrew and Cherry, 1986) Interestingly, while the data collected by Fontenrose indicates increased demand for prophesy, there is no mention of any increase in price. This void could indicate a complementary shift in supply.²³

A change in quality could explain the shift in demand for prophesy in Delphi. When Delphi gained its independence from the Phocians, it began to benefit greatly from a perception of fairness. Lack of control by any one state meant that Delphi could operate free from any political pressure. Should the Pythia reveal information a petitioner did not like, the petitioner had no recourse but to visit a different oracle and hope for an answer more to his liking. Unbiased information is also of greater value when it comes to matters of state. Control of the oracle by a state whose interests are contrary to the petitioner's greatly reduces the value of any information received through the Pythia.

Independence from political meddling may have had additional quality implications. As stated above, Delphi was a thriving town, a cross roads for travelers. As such, information exchange would rise with an increase in visitors, and an increase in the time a visitor remained in Delphi. The long journey some made to reach Delphi, combined with the long waits for a consultation, indicate a greater opportunity for information to make its way to the priests and pythias. In addition to the information circulated at the local watering holes, the priestesses were able to aggregate information gleaned from petitioner's enquiries. The pythia or the attending priest would commonly question the petitioner to gain as much information as possible before rendering a pronouncement. (Morgan, 1990) Better information lead to higher quality prophesy. "Delphi was evidently acting as the main central clearinghouse for information of a geographical and political kind which was of potential value to many different cities and their governments., (Renfrew and Cherry, 1986)

One final benefit of independence which would affect demand would be the availability of the oracle to Greeks of all political affiliations. Should Delphi be controlled by any particular state, an individual from another state hostile to the Delphian authority might be compelled to consult the gods in a friendlier region. Concern for one's security would necessarily lead to decreased traffic, and could result in a decline in oracular quality. "A spatial separation between community and sanctuary may have appeared very advantageous to cities forced to maintain cordial relations with powerful, and occasionally threatening, neighbors." (Morgan, 1990)

Changes in the supply of prophesy has been touched on above with regard to the quantity of prophesy supplied. The increase in days worked by the Pythia, the increased hours of consultation afforded by 3 women, and the innovation of oracle by lot all served to keep the price of consultations from changing enough to warrant comment in contemporary works of literature. In addition to the increased availability by process innovation, the material available for distribution may have decreased in cost. Reflecting upon the influx of people and the aggregation of the information which they brought with them, one can see an increase in the inputs of the production of oracles and a subsequent decrease in the cost of those inputs.

Conclusion

Delphi's unique location outside of the politically dominant areas and independence from political influence set the stage for it to become the most influential source of information in the ancient Greek world. The quantities of oracles supplied and demanded are illuminated by an understanding of how political influence, or a lack therefore, contributed to the perception of oracular independence. Under complete independence, Delphi thrived, aggregating information which traveled to its doorstep from distant empires, and providing a reliable source of prophesy based on this information. However, once political control was imposed on Delphi, its ability to respond to petitioners suffers, as a destructive feedback loop evolved: fewer petitioners sought the advice of the Delphic Oracle, leading to less information available to the priestesses, leading to less demand for the oracles, leading to fewer petitioners. Under the various regimes, Delphi's importance foundered. Perceptions of bias and the ability of some to manipulate the oracle led to its ultimate irrelevance. The economic story behind the Delphic Oracle is indeed a difficult one to assess, as precise records are difficult to obtain, where they exist at all. Most of the existing evidence has been obtained through the correlation of the personal and public writings of the few literate individuals and the archeological findings in Delphi excavations. Many of the writings concern legends from the past, many of which include a fair amount of mythological speculation. However, in piecing together the information which does survive, a compelling story arises which is consistent with basic and well-tested economic theory.

3. Extensions/Implications

One obvious extension of this theory would be to examine other multi-polar civilizations to see how the religious authorities interacted with the political authorities. One such

example is found in Biblical accounts of Shiloh. In this particular instance, 12 independent tribes coexist sharing a common cultural background, language and belief systems. A thirteenth tribe, the Levites, constitute a distinct priestly class. As the tribes become consolidated under one ruler, the state attempts to co-opt the priestly class, giving rise to independent prophets. Alternatively, Etruria, as mentioned above, may lead to some interesting insights as a polytheistic civilization characterized by a group of city-states in which no single polity was dominant. In Etruria, as in Greece, divine consultation was an integral part of decision making.

What other possible applications might our theory have? Perhaps we can best extend the multi-polar isolation theory to other forms of sacred status. There are numerous institutions which have evolved into quasi-religious entities. The United States Constitution might be one example of a sacred document, endowed with the beliefs of a nation and spoken of with reverence by small children. Or perhaps one might consider National Parks or wetlands as the temples of the environmental religion. And what of Alan Greenspan and the Federal Reserve? Are they so far removed from Delphi? After all, the oracle speaks and the markets respond. A number of secular institutions could be analyzed in a manner similar to the one we have employed here. In this respect, our analysis of location-specific spiritual capitals is nothing more than a special case of generic spiritual capitals. The analysis may well be applied to the rise and fall of institutions of a secular nature. In our prior discussion we suggested country and state capitals (like Canberra, Brasilia and Washington, D.C.) may well fit the multi-polar isolation model, for example. If we truly believe 'institutions matter,' then let us not neglect the obvious impact of religious institutions and quasi-religious values on political outcomes.

Continued research in this area could yield potentially valuable insight into the ongoing contemporary conflicts where locations have taken on tremendous significance. We need only reflect upon the struggles in Syria, Lebanon, the Gaza strip and the West Bank to realize the opportunity which exists in this area. To those without spiritual ties to these locations, these conflicts may seem irrational. Why fight over a dusty corner of the globe with no natural resources? Of course, such conflicts are not the sole domain of the Middle East. Other examples would include the Alsace-Lorraine region so hotly contested by both France and Germany, or the Pakistani and Indian claims to Kashmir, and the status of Taiwan, to name only a few. A thorough understanding of the spiritual or symbolic significance of these areas may lead us to a peaceful resolution, where other methods have failed.

A further opportunity for exploration exists in the examination of when and why political actors choose a location-based focus. While some political actors will invest space with sacred significance (e.g., Palestine and especially Jerusalem after 1948, Jerusalem during crusades), others minimize the sacred significance of places that have very strong claims to sacred significance. (e.g., the Christian Holy Land and especially Jerusalem, Bethlehem, Nazareth). How and why decisions are made to attach locational significance may yield additional political insight.

5. Summary and Conclusions

As we have described above, the problem of the location of a sacred place or spiritual capital is not one of *inspiration* but of *coordination*. Any place is potentially sacred (and almost every place is actually sacred in the eyes of someone). The location and relative status of spaces depends on the social/economic environment. The nature of the place (location, activities, and purpose) can vary depending on its “social location.” The most common option is to locate the religious center of a society next to or within the political capital of that society, where the two enjoy a symbiotic relationship, each supporting and feeding off the other. The second most popular option is the separation of church and state where political and religious institutions reside in parallel universes. However, we submit that Delphi and possibly others account for a third possibility: multi-polar isolation. Operating in isolation imbues the religious institution with the perception of neutrality, freeing it from the suspicion of ulterior motives and hidden agendas. In this sense, isolation is the preferred option when the religious source also operates as an information source.

APPENDIX A

A. Simplified game-theory description of the “multi-polar” situation:

Assume N independent “major” players, corresponding to independent regions/rulers, R_1, R_2, \dots, R_N .

For $j = 1, \dots, N$, let L_j represent (current or potentially) sacred locations that ruler j can dominate. Presumably domination arises because location j lies *within* region j .

Let i represent (current or potentially) sacred locations *not* dominated by any single ruler. Presumably because location i lies *outside* all regions $j=1, \dots, N$ (or on a border, etc.).

Assume that the regions/rulers receive payoffs that depend on their own choice of location and that of all other regions/rulers.

The 2-player payoff matrix for regions/rulers j and k looks like the following.

| $R_i \setminus R_j$ | ... | L_i | ... | L_j | ... | L_k | |
|---------------------|-----|-------|-----|--------|-----|--------|--|
| ... | | | | | | | |
| L_i | | 2 \ 2 | | | | | |
| ... | | | | | | | |
| L_j | | | | 3 \ -1 | | 1 \ 1 | |
| ... | | | | | | | |
| L_k | | | | 0 \ 0 | | -1 \ 3 | |
| | | | | | | | |

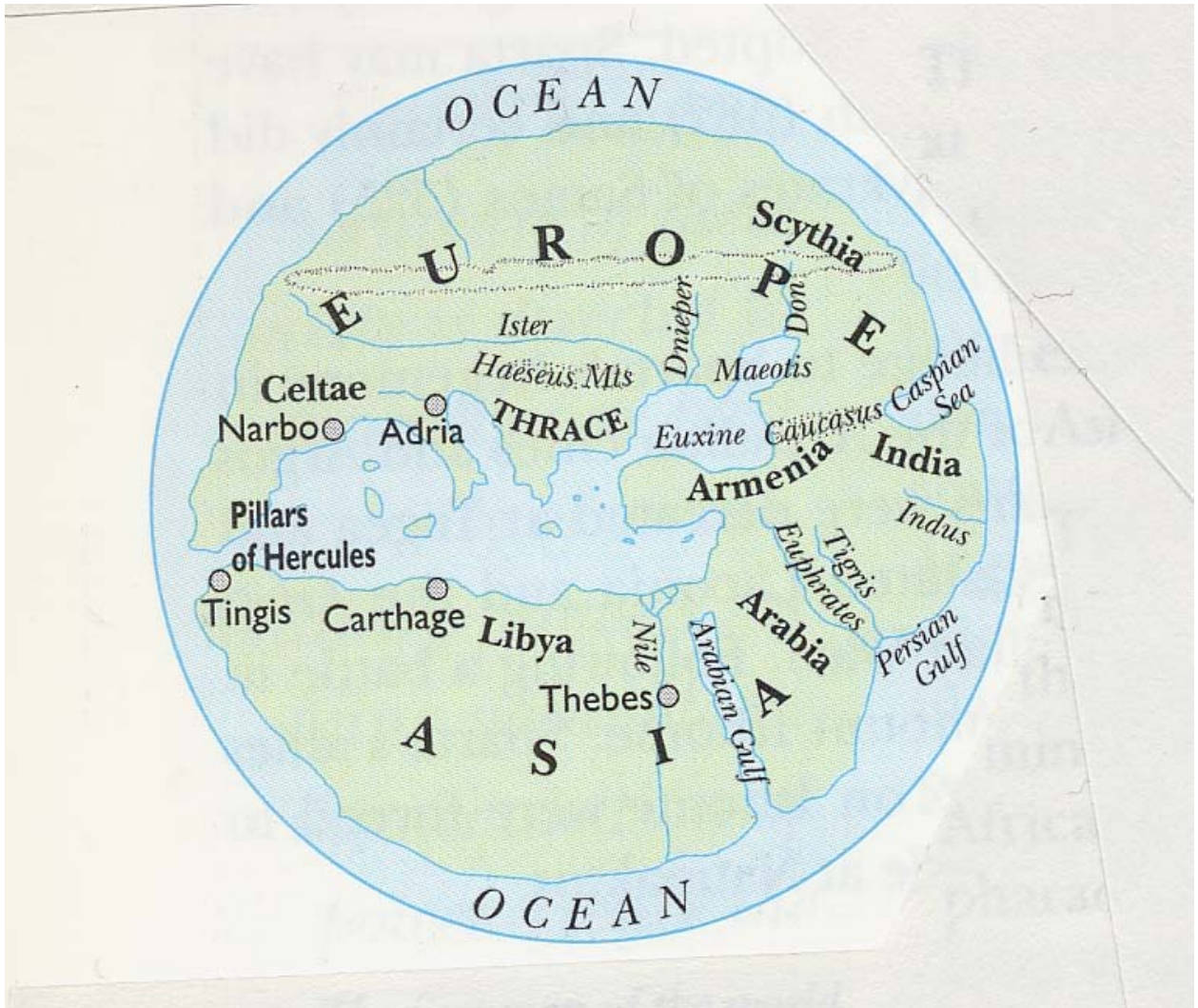
Thus, if location strategies are restricted to the regions that can be controlled by individual rulers then no coordination emerges. Each region/ruler R_j chooses location L_j , for $j = 1, 2, \dots, N$. Hence, there is no coordination and everyone earns payoff = 1. But if regions/rulers can coordinate and agree to share use of independent region L_i , then everyone earns payoff = 2.

Principle problem is that each region is subsequently tempted to assert control over L_i so as to increase its own payoff to 3 and lower competitors’ payoffs to -1.

The N -player version extends the payoff matrix in analogous fashion.

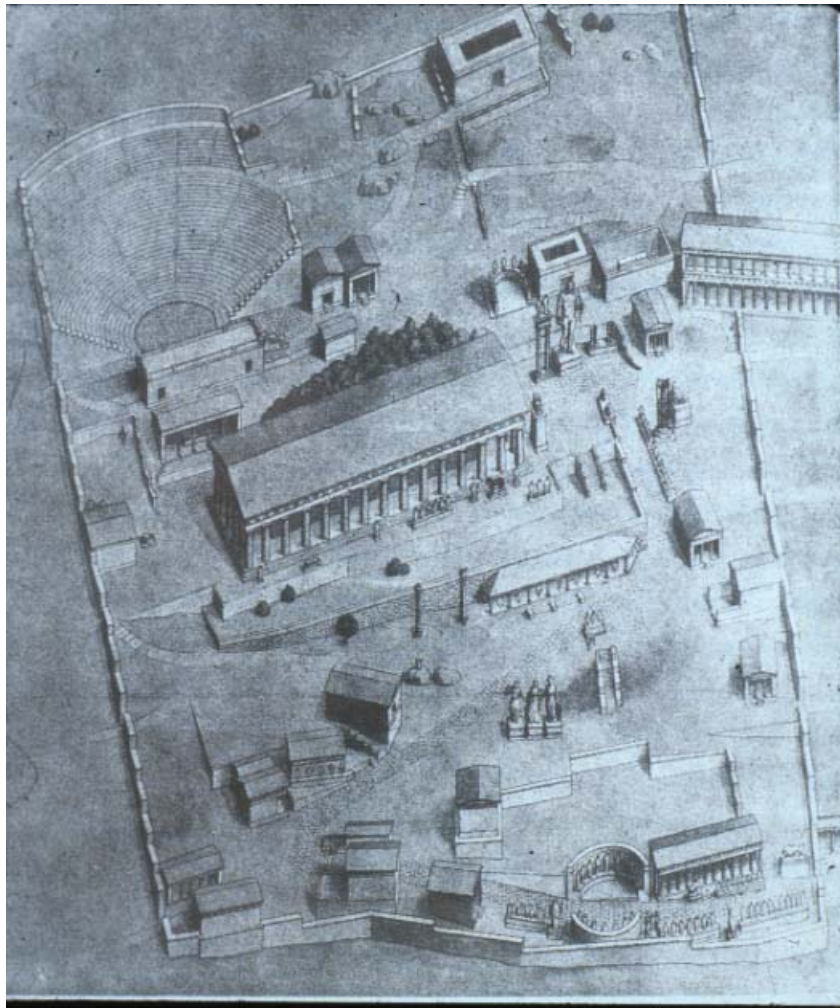
Appendix B

The map below was carved into a bronze tablet and carried during the revolt of the Ionian cities against Persian rule in 499 B.C., and was intended to assist political decision making. (Morkot 1996)



Appendix C

This is an artistic rendition of Delphi as it must have appeared during its later periods of activity. The entry to the city is in the lower right corner. A zig-zagging path, known as the Sacred Way, begins in the lower right corner and leads up the hill past the numerous treasuries (smaller rectangular buildings) of states who had successfully acted on oracular advice. The large rectangular building in the center is the Temple of Apollo, where consultations occurred. Note the large amphitheatre in the upper left corner.



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Notes

¹ One need only to reflect on the world-wide outcry raised by the Taliban in Afghanistan when they announced in March 2001 they would destroy the 1700 year-old Bamiyan Buddhas because they deemed them “offensive to Islam.” Also of relevance, though far less shocking, is the rampant use of classical temple architecture in Washington, D.C. to lend authority to a purposely secular institution, or the quasi-religious character of Lenin’s Tomb in a country ‘free’ of religion.

² Since the 1950’s, sociologists have catalogued numerous facts about the religiosity of individuals living in the U.S. and other Western countries, but they have learned far less about congregations or denominations, let alone major religious movements. The imbalance arises in part because post-1950’s research has emphasized statistical analysis of survey data. Studies of congregations and denominations are by no means absent, but even they lean heavily upon survey responses – alone or in combination with church membership and financial records plus census statistics. These data help document religious trends and the correlates of church growth, but they contribute relatively little to our *general* understanding of religious institutions, especially those that might extend beyond the modern West. Research on sacred places is especially scarce and consists almost entirely of case studies of very small religious groups.

³ For an overview of the economic approach to the study of religion, see Iannaccone (1998). For extended applications of economic/rational-choice perspectives, see Stark’s *The Rise of Christianity*, Finke and Stark’s *The Churching of America*, and Stark and Finke’s *Acts of Faith*.

⁴ For example, let $z = f(x, t, \theta; \bar{x}, \bar{t}, \bar{\theta})$ where the bars denote the inputs of others.

⁵ Schelling postulates a situation wherein two friends are seeking to meet somewhere in New York City despite having failed to discuss their meeting time or place. The most reasonable strategy: show up under the giant wall clock at Grand Central Station at exactly twelve noon. Schelling, Thomas C., 1978, *Micromotives and Macrobehavior*. Norton, New York.

⁶ As Becker notes, it may even be possible for a ruling class and the general population to find mutually advantageous and rational equilibria in which the rulers subsidizes the provision of a biased bundle of spiritual goods that the general population then *knowingly* consumes. Becker, Gary Stanley, 1996, *Accounting for Tastes*. Harvard University Press, Cambridge, Mass.

⁷ The Spanish benefited from a consolidation of power under Catholicism in Mexico in 1531 when the Virgin Mary appeared, not to a European Spaniard, but to an Indian, speaking to him in his native language. Evidence of the conversation was delivered to the Indian in the form of a painted impression left on his tunic, depicting the Virgin Mary with olive colored skin. Spanish missionaries used this story to convert millions of indigenous peoples to Catholicism. A Basilica dedicated to the Virgin was constructed

upon the site of the appearance in Mexico City, which coincidentally was also the seat of Spanish political power.

⁸ The medieval struggle for secular control over sacred authority reached its peak when the French king captured the pope and moved the papacy to Avignon, where it remained from 1302 to 1378. From that date until 1417 there were two popes, one in Rome and one in Avignon, and from 1409-1415 there actually were three. If Hitler had had his way, Pope Pius XII would likewise have been kidnapped in 1944. See “Hitler Ordered Kidnapping of Pope”, Reuters, January 5, 2005.

⁹ The battles between Irish-Catholic and English-Protestant factions in Ireland provide a current example of ongoing conflict between the governments and one or two major opponents. In this context, religion often becomes a major source of countervailing power, especially when the state has a history of trying to fully co-opt the religion, or there exist competing religious factions.

¹⁰ Ireland and Poland are the striking exceptions. In both of these cases, however, the Catholic Church functioned as the prime institution of *opposition* to secular political power – power imposed by Soviet Communists in the case of Poland and English Protestants in the case of (Catholic) Ireland. Interestingly, rates of religious activity dropped off dramatically in both countries after the influence of the respective external powers began to wane.

¹¹ The Greek vision of the world in the 5th century B.C. included the Iberian peninsula and southern Europe, the southern portions of Eastern Europe, the western portions of Turkey and the Middle East, and North Africa from Egypt to the Straights of Gibraltar. In effect, the known world included a moderate portion of any landing touching the Mediterranean sea.

¹² Bysios coincides approximately with the time period of mid-February to mid-March.

¹³ Apollo was said to depart Delphi for three months during the winter.

¹⁴ Plutarch’s Moralia, 5, 414b

¹⁵ During this period, astronomical events, such as eclipses or comets, were regarded as indications or expressions of divine displeasure. (Vandenberg, 1982) Also recall that the peak of Delphi occurred about the same time as Pheidippides’ famous 26 mile run from Marathon to Athens to warn of the Persian invasion. Though his trek is the realm of myth, it does serve to illustrate the limited modes of transportation available to the average citizen, even in situations where speed is exigent.

¹⁶ The earliest oracles were delivered in verse. One virtue of poetry is the ease with which it can be recalled. During the time of Delphi, few people were literate; any important bit of information must be committed to memory.

¹⁷ Ambiguity may have been delivered purposefully in cases where the oracle wished to force the petitioner to arrive at his own decision. Ambiguity would also enhance the idea that divine wisdom is beyond the grasp of the mere mortal. However, there are diminishing returns to this use of ambiguity, in that hard to understand responses are less valuable to those looking for a concrete answer. Stories of ambiguity may serve to reinforce the idea that there is only one correct answer, and misinterpretation is due to the folly and pride of the willful petitioner. Bowden, Hugh, 2005, *Classical Athens and the Delphic Oracle: Divination and Democracy*. Cambridge University Press, Cambridge.

¹⁸ Plutarch's, Moralia, 5, 399b

¹⁹ Xenophon, Anabasis, Harvard University Press 1968, 3, 1, 5

²⁰ Plutarch's Moralia, 5, 408b

²¹ Interestingly, in the original democratic process, top governmental seats were elected, but lower level seats were drawn by lot. It is possible that the oracular trust in the divine was so manifested in the political system. (Aristotle, The Constitution of Athens)

²² After defeating the Athenians in a battle in the Peloponnese War, the Syracusans constructed their treasury directly opposite that of the Athenians.

²³ Further exploration of price matters would provide an interesting extension to the theme, but is beyond the scope of this paper. Specific documentation detailing the donations might illuminate fascinating calculations of the return on investment anticipated by the petitioners. Instead, this paper will concern itself with the circumstances driving the shifts in demand and supply.