Chapter 2 Archaeology as Global Public Good and Local Identity Good

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Archaeology is an academic discipline; the things, services, experiences, and information intentionally produced or created as by-products of archaeology are, in economic terms, goods, and these goods are traded in the marketplace. Understanding this is essential to successfully dealing market forces that threaten the academic objectives of archaeology, which can only be achieved by examination of archaeological materials in an uncontaminated state and original context.

In economic terms, an archaeological good can range from a body of knowledge of the sort that the Nobel Prize winning economist Joseph E. Stiglitz calls a global public good, to those that he terms local goods, which would include artifacts, services, or experiences (Stiglitz 1999:310). The latter can be produced and consumed in ways that threaten the former. I argue that that the demand for archaeological and more generally "cultural" goods is driven in large part by the ubiquitous human need to establish an identity, that is, to establish a position in the "cognitive chart" that allows humans to navigate through society (see, for example, Spradley 1979).

It would follow that anthropology has much to contribute to economic models. A word of clarification is essential here: I will address below *formalist* models, as opposed to a *substantivist* arguments, both of these terms coined by Karl Polanyi (1957), and the latter bolstered by the work of ethnographers half a century ago (Bohannon 1965). The school of thought established by these scholars has become known as economic anthropology. In what follows, however, I will assume, as mainstream, formalist economists do, that supply and demand are the basic determinants of market structure, and that, therefore, to better understand and direct market structure, it is necessary to identify as precisely as possible the forces that alter supply and demand. One might say that the approach taken here is an anthropological economics as opposed to traditional economic anthropology. Much more could be said about the value of conducting economic analysis informed by anthropology,

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	Excludable	Non-excludable
Rivalrous	Personal Goods: food, clothing, cars, personal electronics	Common Goods (Common-pool resources): fish stocks, timber, coal
Non- Rivalrous	Club Goods: cinemas, private parks, satellite television	Public Goods: free-to-air television, air, national defense

Fig. 2.1 Types of goods

but room does not permit that here. The final chapter of this book will make observations and suggestions, however.

Certain categories of goods were derived from a seminal essay by another Nobel Prize winning economist, Paul Samuelson (1954). These categories of goods (Fig. 2.1) now appear in many of the most widely-used economics textbooks (e.g., McConnell et al. 2009), and have become central to any discussion of how rights of ownership or access to certain kinds of goods affect societal well-being. What is said here about goods applies equally to services, experiences, and information.

Goods are organized in Fig. 2.1 according to two criteria: *rivalry* and *excludability*. The former means that if a good is consumed by one party, it cannot be consumed by another; the latter that a good can be made available only to certain parties, thus limiting access to it by all.

Personal Goods: There is little ambiguity about ownership and rights of access to these goods. Personal goods, such as clothing, are both rivalrous and excludable, because access by one person renders them unavailable for access by another, and the owner of a personal good can exclude the use of it by all others.

Common Goods: These are also known as common pool goods, common stock goods, or common resources. While no one can be excluded from access to common goods, common goods are rivalrous because consumption by one person or party removes the possibility that another person can consume that good. The classic example of a common good is the stock of fish in the ocean. While there is no really effective way to exclude access to fish, depletion of the stock of fish means that fewer fish are available to everyone.

Club Goods: Club goods are those for which access can be denied to all except those within a certain subset of the public. Yet, among the group that has gained access,

consumption by any single person does not diminish access by any other. For example, the provider of satellite television service can limit access only to those who subscribe to the service, but access by one subscriber does not affect access by any other subscriber.

Public Goods: Finally, a public good is available to all, but access by any single person or party does not diminish access by any other. While a public good is to be thought of here in economic terms, as an item, service, or experience that is exchanged in the marketplace, and not as an ethical ideal, Samuelson clearly had the general good of the public in mind when he constructed his argument (Samuelson 1954:389). It is as evident that economists today also have the well-being of society in mind. Public goods are typically introduced to students as an element in discussions about market failure. This was implicit in Samuelson's essay (1954:389): "But there is still this fundamental technical difference going to the heart of the whole problem of social economy: by departing from his indoctrinated rules, any one person can hope to snatch some selfish benefit in a way not possible under the self-policing competitive pricing of private goods...."

Goods that fall purely into this category are rare, and, in fact, there are those who have argued that true public goods do not exist (for example, Randall 1983:134). Examples of public goods frequently offered include national defense and light houses. In the case of national defense, this is true only to the extent that one considers the public only to be citizens of a nation that has developed a defense system and citizens of allied nations. Something similar could be said of lighthouses: a given lighthouse directly benefits only those vessels that sail in the vicinity of it. Other economists would say that these are simply examples of *local public goods* (Tiebout 1956; Stiglitz 1977, 1983).

Joseph E. Stiglitz identified five *global public goods*: international economic stability, international security (political stability), the international environment, international humanitarian assistance, and knowledge (Stiglitz 1999:310). With regard to knowledge, Stiglitz recognizes the need to protect intellectual property. Through patents, trade secret laws, and other means, some forms of knowledge are excludable, and therefore knowledge is often thought of as an impure public good, one that can become private or club, at least temporarily (Stiglitz 1999:309–310). Nonetheless, Stiglitz argues that in the service of equitable development, "...basic research and many other fundamental forms of knowledge are not, and certainly should not be, protected by an intellectual property regime. In these areas efficiency requires public support. And this public support must be at the global level" (Stiglitz 1999:320).

Supply and Demand

The basic supply and demand model is useful in understanding the forces that drive allocation of goods; however, governments, which provide the legal framework for exchange, do not stand apart from these forces. This is highly relevant to the kinds 14 D.C. Comer

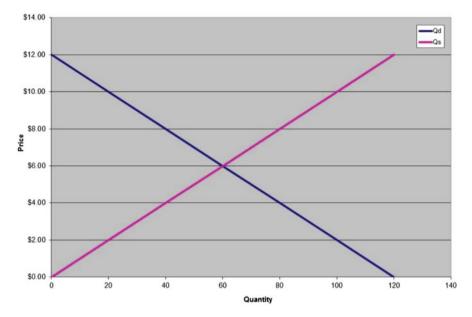


Fig. 2.2 Supply and demand curves for conference coffee mugs. Qd demand quality, Qs supply quantity

of government interventions that are often used as remedies for market failures, and I will return to it. First, however, I will present the model in very simple terms.

Let's say at the next archaeology conference you attend, you pass a table where the professional organization that is sponsoring the conference is displaying coffee mugs bearing the organization's logo. If they are free, people will take many, perhaps not all at once, but they might come back several times for more as they think of archaeologists who could not come to the conference who might want such a mug. However, if the coffee mugs are sold, then the scenario differs. At \$2 or \$4 per mug, they are still a bargain, so many mugs would be sold, 100 at \$2 and 80 at \$4. At \$12 per mug, none are sold. This would align with the basic supply and demand model, in which price is the primary determinant of sales: the lower the price, the more goods of any type sold. The model also assumes that price drives supply as well as demand. So, at the next annual conference, if the sponsoring organization actually wants to make a profit from coffee mug sales, it will have no motivation to sell mugs at \$0, very little if they can be sold only at \$2, little at \$4, moderate motivation to sell mugs at \$6, and increasing motivation as the price goes up in \$2 increments to \$12. Where the supply and demand curves cross, the actual price is set, which in this case is at \$6. This would be the equilibrium price for the market (Fig. 2.2). Equilibrium is as temporary in markets as it is in most systems, however, and so equilibrium changes are influenced by a number of factors.

Among the most influential factors that affect the demand side of market equilibrium are the price of related goods (these can either be complementary goods or replacement goods), income, taste, expectations, and number of buyers. For demand, this can be represented as:

$$Qd = f(Px, Py, I, T, E, B)$$

where Px is the price of the good in question, Py is the price of related goods, *I* is income, *T* is taste, *E* is expectations, and *B* is the number of buyers.

For our conference coffee mugs, demand might be increased by the expectation that prices will go up at the next conference when they are not used as inducements in a membership drive (E), or if the Starbucks in the conference center is selling mugs at \$15 (Py), or if there are 1,000 attendees instead of 100 attendees (B). However, one of the most powerful of the factors that drives demand is taste. For this reason, companies invest great sums of money in advertising and marketing. The term "taste" should not be taken literally; it refers to consumer preference. For example, consider vodka. In a blind taste test reported by the New York Times on January 26, 2005 as, "A Humble Old Label Ices Its Rivals, http://www.nytimes. com/2005/01/26/dining/26wine.html?_r=0&pagewanted=print&position=" Smirnoff vodka, which typically sells for about \$13 per 750 mL bottle, was rated as best. All other vodkas in the top 10 cost more, and some two or almost three times as much per 750 mL bottle. As with demand for conference coffee mugs among archaeologists, the consumption of vodka—akin to the consumption of almost anything—is a performance that proclaims the identity of the consumer to the world at large and to himself or herself. There is more than a half century of anthropological literature that explicitly examines performance and identity. Some of the most widely read includes Gregory Bateson (1955), Schechner (1988) and Turner (1974, 1986), and, more recently, Inomata and Coben (2006). To Clifford Geertz, human culture itself is an "acted document:" humans reenact and recreate culture through public performance (1973). Accordingly, archaeologists reaffirm their identity as archaeologists when they consume conference coffee mugs. By consuming expensive vodka that is publically consumed by celebrities in motion pictures and in glossy magazines, vodka drinkers are doing the same.

Major factors that influence the supply side of the market place are often given as the price of inputs (materials and other resources required to produce goods) and technology, as represented below:

$$Qs = f(Px, R, T)$$

where Px is the price of the good in question, R is inputs (materials and other resources) required for production of the good, and T is the technology used in producing the good.

Generally, demand is the *value* side of the model, which is determined, ultimately, by consumer perception of value. Supply is, more simply, the *cost* side of the model. Both determine price. Therefore, when value or cost change, the entire

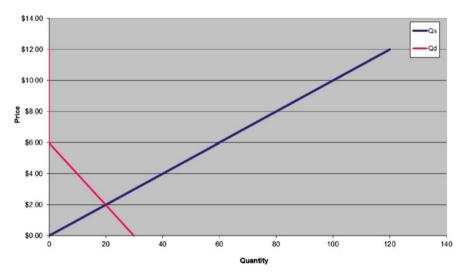


Fig. 2.3 Supply and demand curves for archaeology conference coffee cups sold at a creationist conference. *Qd* demand quality, *Qs* supply quantity

market structure changes. This means that the market equilibrium for any good will change accordingly, but the change requires time.

To illustrate, consider a situation in which archaeology conference coffee mugs are sold at a creationist conference. Our supply and demand curves might look something like those in Fig. 2.3.

Defining Archaeological Goods

Archaeological goods are traded in the marketplace, but as importantly, they play a role in the production of services and experiences. "Experience goods," for example, are those about the quality of which a person cannot be certain until such goods are obtained and consumed. Obvious examples are foods, wines, and hotels, but the term encompasses all kinds of goods and services, from clothing to health care (see, for example, Alfnes 2007). Branding is one pertinent avenue of research here (Brakus et al. 2009; Bloch et al. 2003). The importance of branding is that it functions to remove a level of uncertainty in the mind of the consumer. The consumer associates different qualities with different brands that contribute to a public and internalized identity, as is evident in the consumption of vodkas and coffee mugs.

Archaeology as a Global Public Good

The types of information that can be obtained from the analysis of uncontaminated archaeological materials in original context conform closely to what Stiglitz characterizes as a global public good, as discussed above. For example, archaeological research provides information about the ever-changing relationship between the natural environment and human uses of it. There is ample archaeological evidence to suggest, for example, that humans have degraded regional environments during many eras and in many places in ways that greatly exacerbated natural climatic cycles so that complex social organization became impossible (Cook et al. 2012; Turner 1974). Archaeological evidence suggests that both desertification and increased mortality rates in Wadi Faynen were associated with deforestation and mining during the Roman and Byzantine eras (Barker et al. 2007), which carries with it important implications for similarly arid regions in the Middle East, North Africa, and elsewhere. Cook et al. (2012) have developed climate models using information derived from archaeological investigations that suggest precipitation decreases in the order of 5-15 % in southern Mexico and the Yucatan during the Mayan Late Classic and Post-Classic Periods because of deforestation. This, they argue, produced drastic population decreases after 1500 CE. Given the present-day scale and pace of development around the world, and in numerous locations that only a few decades ago were largely undeveloped, this suggests the real possibility of environmental degradation on a global level. Some have gone so far to say that "sustainable development" is an oxymoron (O'Riordan 1985; Paehkle 1995; Trzyna and Osborn 1995). Other archaeological research assumes a more fine-grained approach to sustainability. It has been argued persuasively that low-density development during the later Angkorian period proved unsustainable, and led to the collapse of a complex form of society, which would recommend against such development today (Evans et al. 2007). In general, archaeology provides information about the many ways that humans have organized themselves, and how human organizations have influenced human well-being. The Hangzhou Declaration, recently adopted by UNESCO, identifies "access to cultural goods and services" as a cultural right for all people in the world (UNESCO 2013). This constitutes an acknowledgement of archaeology and other cultural goods and services as a global public good. We must ask ourselves, however, how likely is it that the capacity to effectively implement this kind of international customary law, or indeed laws and regulations instituted at the national level, exists in most countries in the world? We need only to take note of drastic environmental degradation in rapidly developing countries and on a global scale to find an answer.

Archaeology as a Local Identity Good

Much as information itself can be rendered rivalrous and excludable on a local level, so too, can archaeological goods. As noted previously, archaeological materials themselves can be traded as goods, and they can also prove an experience that can be marketed as an experience.

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Demand Side

Artifacts are among the goods that find their way into the marketplace. Among such artifacts are those collected by the use of metal detectors. What is said about these artifacts in terms of factors that influence supply and demand applies to other types of artifacts, although these factors influence other sorts of artifacts differently. Figure 2.4 presents a market structure for Civil War miniballs. Prices and quantities are hypothetical, as were those for coffee mugs, although some guidance for prices was obtained by perusing eBay advertisements for Civil War artifacts.

Again, demand can be presented as: Qd = f(Px, Py, I, T, E, B), where Px is the price of the good in question, Py is the price of related goods, *I* is income, *T* is taste, and *E* is expectations.

As prices go down for a good, demand increases because more people are able to purchase the goods, yet supply declines because there is less incentive to produce the good. As prices rise, the reverse occurs: demand declines, while supply increases. By far, most artifacts removed from archaeological sites have little or no monetary value because they are not intact. They might not even be recognizable as an artifact—or indeed "branded" with value—to a non-archaeologist. It would be unusual to find potsherds, lithic debitage, or fire-cracked rocks in antique and pawnshops because of this. They can, however, be acquired (although not always legally) at no cost when found by hikers, collectors, or recreational pot hunters. The classic

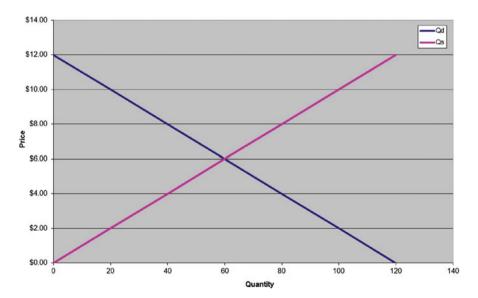


Fig. 2.4 Supply and demand curves for US Civil War miniballs. Qd demand quality, Qs supply quantity

demand curve suggests that a demand for free goods exists even if the economic value is negligible. Over time, this demand will exhaust a finite supply.

Saleable artifacts taken from archaeological sites vary greatly in price. Statuary or intact pots from famed sites or of a type especially valued by collectors command very high prices, but even intact artifacts from historic periods after the advent of mass production are usually inexpensive. There are many reasons for this, which are related to the factors already listed, and are discussed below.

Pv, Price of Related Goods

Complementary Goods

Complementary goods are consumed in tandem with a good in question, so as the cost of complementary good rises, the demand for the other falls. In this case, complementary goods are often complementary experiences. They include attending a convention of Civil War artifact collectors or historic reenactments where artifacts are sold. By means of collective experiences of this sort, which are performances in an anthropological sense, participants enter an imaginary, romantic past. If entry fees go up, this provides a disincentive to attend and consume.

The experience of collecting itself provides a sense of discovery and competence when artifacts are found. Fines levied on collectors who conduct activities at most public lands provide a disincentive to consume the complementary experience and the good itself.

On the other hand, as the price of a complementary good declines, the demand for the complemented good increases. Metal detectors have declined in price steadily over the years, and so the expected looting of metal artifacts from battle-fields and historic sites would increase because demand has increased. Also, television shows that celebrating the excitement of looting with metal detectors can be consumed at no cost. As the media portrays the experience of looting, which assists in "branding" the artifacts obtained and/or the experience of obtaining the artifacts, the demand for looted goods can be expected to increase.

Substitute Goods

A substitute good is one that can be consumed in place of a given good. Substitutes for miniballs might include musket balls and cartridge casings. As these decrease in price, the demand for these items increases, and demand for miniballs can be expected to fall. Related experience also can be thought of as a substitute good. When a person with a metal detector is provided the opportunity to participate in research under the direction of an archaeologist, a substitute for the experience of looting and the ownership of a miniball, demand for the miniball itself is removed and the price of miniballs falls to zero.

I, Income

Income should be thought of as including not only salaries but also savings and net worth. Income affects consumption of products according to product quality. If product quality is *normal*, consumption goes up with income. Therefore, more automobiles and houses are sold when the economy is good and salaries and net worth are rising. Consumption of *inferior* products, however, actually falls when income levels are high. An inferior product is one that people will make do with instead of the product that they value more. For example, public transportation is considered an inferior product because most people aspire to car ownership. When income rises, people will purchase cars rather than taking public transportation, a global phenomenon that has greatly worsened air quality in rapidly developing, as well as developed, countries.

As this applies to artifacts, an inferior product would be one with uncertain provenience or authenticity. There are shops in Bangkok where potential customers are shown photographs of statuary or friezes in situ. If they commit to a purchase, the artifact is obtained. Even this does not ensure provenience or authenticity, of course; the consumer would have to acquire the artifact himself or herself in order to be absolutely sure of these qualities. This market exchange is an incentive to loot, and looting is indeed rampant in isolated locales where frequent patrols are not possible. To offer a looted good in the marketplace, however, is more difficult, unless evidence of provenience is provided. This can be problematic unless documentation is provided that artifacts were taken from private property in a country that assigns rights to artifacts to the owner of the private property. Thus, among the many reasons that miniballs and similar artifacts are worth little in the marketplace is that provenience is typically not well documented. One of the reasons that provenience is not well documented can be that the artifact was taken illegally from public lands where the most important battlefields and historic sites are to be found.

Taste

Taste is more precisely consumer preference, and consumer preference is often related to identity, because consumption is a performance that proclaims identity to the world and to one's self. Tastes can be the result of fashions or fads, and they are heavily dependent upon marketing and the identity constructed by consumption. This is the case with vodka. The collection of miniballs is marketed by companies that produce metal detectors. The characters that appear in the National Geographic reality television show *Diggers* are spokespersons for the Anaconda Metal Detector company. They were featured on the company's website before the appearance of the television show. They are portrayed as salt-of-the earth types, slightly offbeat and resentful of authority, and enjoying themselves immensely through the pursuit of their inexpensive hobby. The experience of looting is conveyed as something like hunting or fishing, with the added attraction that one might strike it rich. National Geographic *Diggers* for a time added a character portrayed as an archaeologist.

She was more sober, and while not an object of ridicule, she was obviously not "one of the boys." In terms of identity, consumers of the inferior products that are metal artifacts looted from battlefields and historic sites would seem to be similar to those who attach their identities to male-oriented, low-cost outdoor pursuits.

Expectations

Demand is influenced by expectations related to income, taste, and price. The relationship between income and demand for goods from houses to televisions is an obvious one. Taste is again closely related to fashion and fad: many newspapers and magazines, for example, publish lists of what is "in" and what is "out" each year, and as opinions circulate among the target demographic and beyond, demand rises and falls accordingly. If prices are expected to rise or fall, more consumers will either choose to purchase a good immediately or to wait. With regard to our test universe of cultural material, artifacts collected by metal detectorists, a good number of advertisements for firearm projectiles and other Civil War materials highlighted the 150th anniversary of the Battle of Gettysburg, and suggested that items taken from that battlefield would be increasingly valuable. The index of consumer confidence, of course, is related to the supply and demand for all goods. The perception that income might fall would have the effect of increasing demand for inferior goods.

Number of Buyers

This is relevant to market demand. As the number of buyers increases demand increases and vice-versa. The number of buyers is again related to marketing; effective marketing in this case is not just of the goods, per se, but of complementary goods, which include experiential goods, and even more specifically, identity goods. Effective marketing is concerned with developing fad and fashion by means of what the marketing industry terms *frequency* and *reach*. Frequency refers to the number of times that a message is delivered to a prospective market, and reach to the breadth of demographic segments that can be convinced to consume the goods in question. Electronic media are much more effective at both than were print media only a few years ago.

Supply Side

Major factors that influence the supply side of the market place are often given as the price of inputs (materials and other resources required to produce goods) and technology. This we can represent as:

$$Qs = f(Px, R, T)$$

where Px is the price of the good in question, R is inputs (materials and other resources) required for production of the good, and T is the technology used in producing the good.

R, Inputs

A crucial point here is that artifacts of archaeological importance cannot be reproduced. They are absolutely nonrenewable. Whereas natural resources can be conserved by wise management to maintain stocks of resources at a level and within conditions that allow resources to recover from exploitation, this is not true for archaeological artifacts.

Services and experiences related to archaeology range from those that remove artifacts from a context in which they can be analyzed in ways that contribute to global public goods to those that can act to preserve artifacts in context. A classic example of the former is the collection of Civil War artifacts by users of metal detectors. Also in this category are television shows and websites that glorify. What holds out some level of hope for the preservation of the archaeological record is that educational documentaries, careful management of tourism at archaeological sites, and a host of other services and experiences can be developed that encourage preservation of the archaeological record.

T, Technology

Technology holds both great danger and promise for the preservation of the archaeological record. For example, as metal detectors have become increasingly available and electronic media have increasingly celebrated looting by use of them, the supply of irreplaceable archaeological material has increased in the marketplace. This, however, has occurred at the cost of reducing the stock of a nonrenewable resource, one that if preserved would be a global public good. On the other hand, technology can be used to gain more information from archaeological materials and to transmit that information to the global public.

Market Failure

As an introductory level economics textbook puts it, a market failure is, "a circumstance in which private markets do not bring about the allocation of resources that best satisfies society's wants" (McConnell et al. 2009:335). There are many types of market failure; among them are externalities, information asymmetries, the development of monopolies and oligopolies, transaction costs, and agency problems. Market failures are most frequently associated with public goods and common goods because free exchange of these goods can alter the structure of supply and demand in ways that ultimately threaten the viability of the market system itself. Room does not permit a discussion here more than externalities, but these are the

sort of market failures that are often associated with depletion of resources, including archaeological resources.

Voluntary exchange in the marketplace can produce externalities, which are benefits that can be enjoyed or costs to be borne by parties not involved in an exchange. Only a voluntary exchange itself is subject to forces of supply and demand, and so externalities are termed a type of market failure. Well-known negative externalities include air pollution and depletion of fish stocks in the ocean. Many people not involved in the production or consumption of energy by the use of fossil fuels will pay taxes for environmental remediation, for example, or will pay for health care that would otherwise not be required. Commercial fisheries impose costs on indigenous groups who depend upon aquatic resources for subsistence, and sports fishermen are deprived of enjoyment, which in turn lessen incomes for those who vend to sport fishermen. There are also positive externalities. Medical treatments that cure individuals of communicable diseases lessen the chances that others will become ill with that disease and require treatment. Externalities ultimately find their way back to the marketplace. Negative externalities typically result in overproduction of the related good or service and over allocation of resources to that production. Positive externalities encourage underproduction and under allocation of resources. Market failures constitute threats to the general well-being, and thus the stability, of a society. Societies deal with them by a variety of means, from taxation and regulation, which often carry with them other economic costs, to innovation in the market system itself. The looting of archaeological materials is a form of negative externality.

Adjusting for Externalities

Government intervention is typically seen as the means by which to adjust for market failures. These can be in the form of bailouts, taxes, subsidies, regulations, wage controls, and price-controls. Bailouts, for example, were used in the recent US recession that followed what has become known as "the real estate bubble." The recession illustrates several points about an essentially free-market system: that market failures are recurrent, that government intervention is controversial, and that intervention can disproportionately benefit one or another economic and demographic sector. It is far from perfect.

Consider, for example, a situation in which a government lays claim to all property, all modes of production, and, essentially, all goods. Were that government interested only in the welfare of its citizenry, one would expect exemplary stewardship of all public and common goods. Clearly, this was never the case among countries governed by communist regimes. Clean air, a classic public good, time and again is not provided to citizenry when the government controls, as opposed to merely regulating, modes of production. As this applies to archaeological goods, Zijun Tang (2013:6) has noted that, in China, the government owns all heritage resources. Further, the government usually sets up state-owned enterprises to be responsible for the matters of protection and utilization of heritage. Since the

property rights of heritage have been monopolized by government, the regulation agency of government and the development enterprises of heritage become the same. When heritage damage and inappropriate utilization occur in practice, the regulation agency cannot make an objective and fair judgment and take effective measures to stop those behaviors because they have common interests with the state-owned enterprises. This regulation system does not aim to maintain the sustainable development of heritage, but rather is foremost concerned with economic profit. Thus, the system is not only a serious impediment to the formation of a real market mechanism for heritage protection and utilization, but also causes great damage to irreplaceable heritage resources.

The economic ties between free-market governments and corporations are similar in many ways to those between monopolistic governments, such as that in China, and the agencies appointed by those governments to oversee production and distribution of goods. This is because the government taxes the private sector for revenue, and so often intervenes in ways that increase taxable private sector profits and taxable wages paid to employees. As the economist Niall Ferguson points out, corporations were seventeenth century creations of the state (2008:128). This was the time during which the great powers of Europe vied over control and exploitation of resources in the New World. Alliances shifted, but war was continuous, and expensive. Success depended upon the ability to raise revenue needed for armies and navies. At a certain point, taxation became highly problematic, and resistance to taxation could topple governments. The failure of the monarchy in France, for example, might well have owed as much or more to the great debts run up by the government as to the ideology of democracy. The English devised an innovative approach to raising revenue at the dawn of the seventeenth century: they formed the English East India Company. With a virtual monopoly on trade, the state and its allied cartel could raise the capital necessary to deal with uncertain returns from any specific trading expedition, and control supply in order to stabilize prices and ensure large profits. Government-corporate alliances have since been common in what are called free-market economies. In 2009, the US Treasury owned 61 % of General Motors stock, prompting some to refer to GM as "Government Motors." This was not uncontroversial, and by June of 2013, the US Treasury owned just 14 % of the company's stock, yet the safety net for corporations in times of market failure clearly remains.

The Resolution: Support for Global Public Good

Stiglitz argues that public support for knowledge as a pure global public good must be at the global level because governmental mechanisms are not available internationally; they are available only to sovereign nation-states. In fact, as discussed just above, sovereign nation-states are not disinterested parties in the marketplace. Indeed, governments have enormous interests in the marketplace because the operation of governments depends upon a share of market revenues and stability.

The only effective means of support for the global public good must reside with public sentiment.

Archaeologists around the world have been greatly remiss in generating the sentiment among the public required for the preservation of uncontaminated archaeological materials in original context. They have bowed both to the public's interest in the discovery of things and the media's "branding" of the discipline, and have not attended as much to the dissemination of information that has been produced by archaeological research. Archaeologists must become much more active on the supply side of archaeology in the marketplace, creating services and experiences that encourage preservation. They must not only promote the excitement of discovery, but also the excitement of how archaeology can contribute to the knowledge base that is both in the global public good and indeed is *a* global public good. Interventions by governments and international organization such as UNESCO can assist in the development of such archaeological products through contracting and grant protocols that reward archaeologists for contributing to this global public good.

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