SEEKING ABUNDANCE: CONSUMPTION AS A MOTIVATING FACTOR IN CITIES PAST AND PRESENT

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ABSTRACT

Purpose – *This paper utilizes the perspective of abundance, rather than scarcity, to understand economies of cities. It also proposes that the earliest urban centers were attractive places of settlement because they represented a greater variety of jobs and objects compared to the rural countryside.*

Design/methodology/approach – *The evolutionary trajectory of our species indicates that humans sought out abundance in their natural environments as early as a million years ago. People also deliberately replicated conditions of abundance through the manufacture and discard of large quantities of repetitive objects, and through the "waste" of usable goods. The development of urban centers 6,000 years ago provided new opportunities for both production and consumption and an abundance of diverse goods and services. These processes are analogous to contemporary economists' views of abundance as a desirable principle and Chris*

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Anderson's view of the Long Tail as the explanatory mechanism for the production and consumption of goods when greater distribution becomes possible.

Social implications – *Today, cities are growing very rapidly despite objectively deleterious conditions such as crowding, pollution, competition, and disease transmission. By recognizing the "pull" factors of consumption and opportunity, researchers can expend their energies to mitigate the negative effects of cities' inevitable growth.*

Originality/value – *Prior archaeological and contemporary analyses of cities have focused on the role of the upper echelons of the political and economic hierarchy; in contrast, this "bottom-up" approach addresses the attractions of cities from the perspective of ordinary inhabitants.*

Keywords: Urbanism; archaeology; abundance; material culture

INTRODUCTION

About 6,000 years ago in different regions of the world, people first came together in configurations that are recognized as "complex societies": states, cities, and empires. Archaeologists often focus on ancient political leaders to explain and analyze the economic impact of this development. The role of elites as the sponsors and beneficiaries of material culture change is particularly investigated for those technologies that utilize scarce materials (gold, silver, obsidian), require specialized processes (iron, high-temperature ceramics), or that have labor-intensive production requirements (weaving). Previous scholarly treatments have tended to focus on material objects as evidence for social divisions, the control of production, and the restriction of access that makes objects an effective form of political display and a demonstration of hierarchy and exclusivity (e.g., Arnold, 1996; DeMarrais, Castillo, & Earle, 1996; Hunt, 1997; Lesure, 1999).

Although the impact of elites on the production and consumption of some goods is well-demonstrated by the elaborate tombs, palaces, and temples associated with political authority, the archaeological record also illustrates that the economic activities of the broader populace is the result of repeated, often large-scale production and consumption events. A wide range of objects did not have elite intervention, such as the daily goods, ornaments, textiles, and domestic and agricultural implements selected and utilized by

ordinary people. Each individual and household in the past used a variety of goods, and archaeologists increasingly are investigating evidence for specialized production, distribution, and consumption processes that were not linked to elite dictates (e.g., Abbott, 2010; Hirth, 2009; Lepofsky & Kahn, 2011; Sheets, 2000; Smith, 2010). The participatory framework of engagement with abundant material goods proposed here takes as its starting point the economic concept of abundance in which there are many types of plentiful material objects.

ABUNDANCE AS AN ECONOMIC PRINCIPLE

Economists have increasingly turned to abundance as a subject to be problematized in the human approach to the natural world and to the use of material goods. This perspective is in contrast to traditional economic theory, which "places scarcity in a pivotal position in most of its theorizing" (Zinam, 1982, p. 61). In recent volumes, Dugger and Peach (2009) and Hoeschele (2010) have argued for an economics of abundance noting that for two reasons, assumptions of scarcity are untenable as a foundation for all economic explanations. The first reason is that some resources, such as information and knowledge, are boundless: "If I learn something, you can learn it too, unless I keep you from doing so" (Dugger & Peach, 2009, p. ix). The second reason is that resources are situationally and temporally variable: "what is and is not a resource changes over time with changes in technology, institutions, wants, and even prices" (Dugger & Peach, 2009, p. 61; see also Zinam, 1982, p. 71). Abundance can therefore be viewed as a foundational category of materiality, from which both scarcity and surplus emanate (Fig. 1).

The concept of abundance as a fundamental underlying principle of cognitive capacity related to the physical world has the potential to greatly expand our understanding of human–material dynamics over the long term. To date, anthropologists have focused on the polarities of scarcity and surplus to identify motivations and constraints of ancient consumption behavior. In an influential paper on the notion of property in prehistory, Timothy Earle describes a necessarily adversarial component in which property is a "behavioral mechanism to limit and direct the use of things" (2000, p. 39). While he views property as "integral to all concepts of social institutions – how people are related to resources and to each other" (p. 40), the assignment of rights is often "contested and ambiguous" (p. 41). Competition is predicated on the notion of scarcity in which goods, raw materials, and labor are limited and the demand is greater than the supply. Examples of created

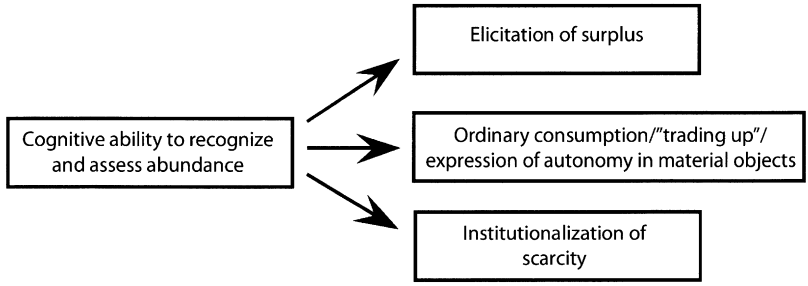

Fig. 1. The Human Cognitive Ability to Recognize and Act upon Abundance Provides the Basis for Both Politically Motivated and Individually Initiated Activities.

scarcity include sumptuary laws, control over production locations, and control over natural resource locales.

Anthropologists' interpretation of the utility of scarce objects for political display has a further theoretical foundation in John Locke's observation that labor is what turns natural resources into property (1980 [1690], p. 28). Objects made of rare materials (whether because of distance or because of natural scarcity) indicate the control of others' labor in the procurement and transport of those materials. An elaborately crafted object implies the existence of a skill set and time investment that is complex enough that the craftsmaker would not have been able to simultaneously grow food, hence requiring the intervention of an elite individual to support the craftsmaker. Indications of elites' control over craft production further comes in the evidence for manufacturers who are physically close to rulers' homes as "attached" specialists (Costin, 1991, p. 11), whose presence is documented in the recovery of unusual raw materials, areas of controlled production in and around elite residences, and elaborate goods found associated with large, distinctive, and therefore "wealthy" tombs.

Anthropologists also have taken a special interest in the role of surplus as a basis for the accumulation and consolidation of political power, particularly after the development of agriculture made it possible to control the production of large amounts of food above and beyond the needs of the cultivating population. In an important early review article, Harris (1959) examined the role that the concept of "surplus" played in the analysis of the development of social complexity. Because the presence of superfluous food sources can be ethnographically identified in the absence of chiefdoms and states, Harris notes that the key question is not whether surplus can be

generated, but the conditions under which "food-producers surrender a portion of their necessary food supply in order to support a class of nonfood-producers" (1959, p. 198). Researchers are still very much focused on elite-controlled "surplus" as a foundational component of the development of social complexity (e.g., Barrier, 2011, Henrich & Boyd, 2008). However, like scarcity, surplus constitutes availability relative to perception and expectations (Dalton, 1960, p. 483, 489) and can be placed into a broader perspective of that which is abundant.

The long history of human–material interactions provides the opportunity to evaluate the human propensity to seek abundance in both natural and human-made objects long before the socially created constraints of scarcity and surplus were articulated by political authorities. Starting 2.5 million years ago, our human ancestors used natural resources for subsistence and created multiple styles and forms in manufactured objects. The results of these activities are manifested in the archaeological record of an increasing quantity and diversity of goods over time.

ABUNDANCE AND DECISION-MAKING

Anthropologists are inclined to view today's rapid production, consumption, and replacement of material goods as an outcome of the Industrial Revolution, with the perception that "replacement rates are apt to be low in pre- and non-industrial societies" (Schiffer, 1987, p. 39). With replacement rates low and with population growth limited, the corresponding assumption is that ancient life not only was nasty, brutish, and short but that it also was low in material possessions. However, the archaeological record provides evidence of the deliberate selection for abundance as part of the long evolutionary trajectory of human–material interactions. Of course, humans were not unique among species in their ability to recognize and relocate to areas of abundant resources as a component of landscape selection that would lead to increased biological viability and reproductive fitness. But humans had many more types of abundance to calculate than other species: not only food resources and mating opportunities, but also sources of raw material for tools.

For mobile human populations, abundance was a signal of suitability for taking up residence in a new locale (see Kelly & Todd, 1988, p. 235; see also Rockman, 2003 on the concept of "landscape learning"). People did not merely seek to locate and thereafter passively absorb conditions of abundance; they also took steps to replicate and create abundance as part of

the modification of their surroundings. Archaeological evidence indicates that abundance was a purposeful condition of object manufacture, judging from the usable objects that were left behind by migrants moving from camp site to camp site. It could be argued that some of the accumulation of objects at sites is the unintended result of reoccupation; even so, the decision to relocate at a favorable spot might have been signaled by the discards left behind by prior inhabitants. At Paleolithic sites including Olorgesailie in Kenya and Kalambo Falls in Zimbabwe, there are deposits of hundreds of handaxes that appear to have no obvious signs of use and which have been interpreted as social displays (Klein, 2009, p. 95; Mithen, 2003, p. 270). Similar conditions are noted at the 500,000 year old site of Boxgrove in England, where hundreds of stone handaxes have been recovered, many of them in unused condition (Langbroek, 2011, pp. 6–7); large quantities of handaxes also are reported from the MK 12 site in Mali (cited in Holl, 1989, p. 319).

Even in the pre-*Homo sapiens* period, therefore, we see the purposeful creation of abundance through labor investment in the manufacture, transport, and accumulation of repetitive quantities of objects. Stone tools were durable items compared to quickly dispersed carcasses and other food waste, and those tools (along with items made of organic materials not otherwise preserved in the archaeological record) would have remained visible even when not being used. The likelihood that individuals could continue to identify their own handiwork among a pile of discarded tools (cf. Longacre, 1991, pp. 102–103) also provides support for the idea of possession that outlasted the original craftsmaker and for which notions of disposition and, possibly, inheritance were actively cognized. The ability to recognize and take advantage of abundance in raw materials also was integrated into the development of social skills such as the demonstration of virtuosity in manufacture (e.g., Mithen, 2003) and apprenticeship in tool-making with its attendant social bonds between skilled elders and younger learners (Milne, 2005; Tomasello, 1999). Abundant sources of raw materials enabled individuals to engage in repeated manufacturing and skill-building to create objects that were more elaborate than strictly required for practical use, whether in the form of bilaterally symmetrical handaxes or, much later, in the form of fluted points in which the act of fluting caused a high rate of failure (Kelly & Todd, 1988, p. 235).

The recognition of abundance and the deliberate manufacture of ''superfluous'' material culture are suggested by the oldest archaeological remains, but the engagement with and creation of abundance increased significantly over time. One way in which this can be documented is in foodways. Ancient

peoples targeted an increasing large range of food choices as part of the "broad spectrum revolution" of increased diet diversity in the Upper Paleolithic starting as early as 45,000 years ago (Flannery, 1969; Stiner, 2001; Stutz, Munro, & Bar-Oz, 2009). Although scholars initially suggested that humans adopted the broad spectrum revolution as a response to scarcity, more recent research has taken as its perspective the view that the diversification of resources included decisions about relative labor investment and time/energy calculations (Stiner, 2001; Zeder 2012). Human accommodation of diversity and abundance also appears to have characterized the subsequent phase of the earliest sedentary societies that were expanding their culinary repertoire. At the 21,000-year-old site of Ohalo II in Israel, the well-preserved corpus of remains includes considerable quantities of small grass seeds compared to the smaller proportion of large cereal grains such as barley and emmer (Weiss, Wetterstrom, Nadel, & Bar-Yosef, 2004). Because small seeds would have been particularly difficult to process, one might make the argument that the attraction of grass seeds for Ohalo II occupants might have included the novelty of accumulating masses of very small items as part of the phenomenology of abundance.

In addition to responding to and making use of abundance in nature, individuals' engagement with material goods in this period continued to include the acquisition, use, and discard of large amounts of objects. Even in small band-level societies, accumulation could take place on a significant scale, as seen from burials with large quantities of goods (such as the double burial with 10,000 ivory beads at the Upper Paleolithic site of Sunghir [Formicola, 2007], and the prehistoric interment of a single male with 30,000 shell beads in California [reported in Gamble 2011]). Examples of accumulations in living contexts include the 15,000–20,000 year old lithic site of Kutikina in Tasmania, where the excavation of an area measuring less than one cubic meter in volume produced 75,000 stone flakes and tools (Kiernan, Jones, & Ranson, 1983, p. 30). The recovery of staggeringly large numbers of repetitive materials at Kutikina fulfills Parry and Kelly's (1987, p. 300) observation that in sedentary societies, tools (including simple flakes that can be used to cut or scrape a variety of substances) "merely have to fulfill a specific short-term task." Once discarded, objects still serve a social purpose as evidence of individual activity and household viability (cf. Smith, 2011) and an economic purpose as potential future source material in times of need (Ingold, 1987, p. 201). Habitation contexts such as Kutikina also illustrate that people in settlements have a larger number of objects per capita as the result of increased object production and consumption.

The capacity to recognize abundance and to increase the amount of material goods may have been a factor in subsequent sedentism and the turn to food production starting 10–12,000 years ago in different parts of the world. Brian Hayden (1990, p. 33–34) specifically credits the abundance, rather than scarcity, of *r*-selected (high reproduction rate) plant and animal species as the key circumstance and motivator for the development of both domestication and social complexity. In his view, early sedentary peoples did not adopt agriculture because of population pressures, environmental constraints, or other circumscriptions on their food resources; instead, the domestication of plants and animals provided an even greater abundance of food resources that could be used by emerging elites to cultivate political loyalty through the provision of feasts. Hayden's formulation enables us to distinguish between the concept of abundance (the recognition and/or creation of a large quantity of items) and the category of a "surplus" that is the result of a political manipulation of a particular resource.

Sedentism made it possible for humans to fulfill their desire for abundance through mechanisms such as storage and the accumulation of goods in a variety of conditions of use and discard. Increasing complexity in human economic and social repertoires after the development of agriculture was accompanied by an increased repertoire of material goods. People in agricultural villages used objects at a high rate of turnover, signaling their participation in the social realm through both active consumption and discard. Exceedingly high rates of production and consumption of durable objects is seen in excavations of the Khartoum Neolithic, for example, where an excavation of 140 square meters of one site yielded 30,000 fragments of grinding stone (Haaland, 2007, p. 172). The recovery of large numbers of duplicative goods indicates that abundance was probably the default expectation for many categories of items, and that humans sought to duplicate natural conditions of abundance whenever possible.

The accumulation of manufactured objects was complemented by a continued monitoring of abundance in the natural environment. Transactions, whether in artifacts or raw materials, were also used to encode social cues and knowledge: "All interactions imply information flow, so that continuous spatial distributions of any class of artifact imply repeated interaction and effective information flow" (Renfrew, 1975, p. 53). People can acquire information and knowledge about goods for "free" even without actually acquiring the goods, a process encoded in even the smallest-scale transactions. The economic impact of repeated, small-scale consumption has been the focus of economic treatments that highlight the purchasing power and social capacity of the "bottom of the pyramid"

(Prahalad, 2005; see also Cross & Street, 2009; Martinez & Carbonell, 2007). The utility of this perspective, which focuses on the capacity for consumption even by below-poverty level individuals, has yet to be fully examined by archaeologists. But as argued in the recent edited volume on markets by Christopher P. Garraty and Barbara L. Stark (2010), the sheer volume of distribution of ordinary goods in the landscape, such as pottery and lithics, argues for the presence of market systems in prehistory and for the existence of a wide variety of transaction mechanisms in the past that did not rely solely on leaders for their existence.

The diversity and abundance of any material category would also have encompassed the necessity of making choices among available objects, so that information gathered in the course of transactions was activated in their subsequent use. Because people can only utilize or even hold a limited number of objects simultaneously, individuals would have had to continually evaluate the utility of selected material goods. With a growing number of items in the economic repertoire, the logistical constraint for use may well have been factors of time rather than income (cf. Taylor, 1992, p. 139). In his book *Consumption Takes Time*, Ian Steedman (2001) has elegantly argued that consumption is a process that has underappreciated temporal consequences, because each activity involving material goods takes up an amount of time, which results in less availability of time for other activities. Time-based management of resources required human cognitive capacities for selection and adjudication among available resources, resulting in a constant need for decision-making among alternatives. The management of both natural abundance and created artifacts was governed by three long-term cognitive trajectories related to material objects: possession and use, inheritance as a mechanism of disposing of goods in a socially meaningful way, and value as a component of the fluid and dynamic assessments undertaken by individuals as part of daily economic life.

Possession

At its most basic, possession is a physical act that begins with proximity and the autonomous body: Are you holding the object or not? Are you standing in that place or not? The here-and-now is clearly implicated in the individual's placement in space and physical proximity to objects. But possession also is conditioned by larger frameworks of time and space, in that there are more objects and more aspects of the landscape to which an individual can have a claim other than what is "used" at any given moment.

As a result, possession has a social component in which an individual's intent regarding particular objects and spaces is created relative to the recognition – and sometimes renegotiation – of those claims. Possession can be activated through direct acquisition by individuals as well as through social mechanisms such as exchange, which constitutes the transfer of objects, resource-rights, and other intangibles.

Inheritance

Possession is about living people and synchronous time. What happens to the objects and architectural spaces associated with people when they are no longer there? The material goods of the deceased may be burned, buried, broken, or discarded; alternatively, they can be curated as untouched heirlooms or kept in use as working implements. But in any case *something* must be done with them, as their original possessor is no longer present to interact with them. The process of inheritance is one in which possessions are devolved to another person; this process also can include intangibles, such as the inheritance of clients, patrons, debts, titles, and social relationships. Inheritance often is associated with the disposition of possessions after death, but a living person also can transfer possessions in perpetuity if they are no longer perceived as useful to the original owner.

Value

Value is situational, conditional, and subject to frequent changes because it draws on the individual ability to dynamically interact with both natural and cultural surroundings (Appadurai, 1986). Value is applied to all objects, both those that physically exist and those that can be imagined; value also encompasses actions calculated to compress long-time scales into single transactions such as a one-time brideprice, dowry, and death or injury compensation (*wergild*) representing the calculated future worth of an individual's energy and reproductive potential. Whether for tangible objects or intangible representations, structures of value are the result of an individual–collective dialectic. Archaeologist V. Gordon Childe (1951, p. 169) discussed the concept of "socially-approved need" as a collective expression of value, a concept that is echoed in Schiffer's (2005) analysis of invention as a series of incremental steps, each of which has an internal logic that resonates with current social conditions. However, the actualization of value is done on an individual basis. Throughout the daily, annual, and life

cycle, people assess the social or physical utility of objects; these idiosyncratic aspects include the individual's autonomous body with its own trajectory of age, injury, illness, and accumulation of skill. Social inputs thus are the result of individual actions codified into norms, in a process very similar to the manner in which language consists of individually generated utterances within a shared rubric of grammar (for language, see Ahearn, 2001).

Our species' surfeit of possessions probably can be traced to our earliest tool-making ancestors, who had to evaluate which items to take with them on migratory rounds and which objects could be left behind. Hence, the three realms of possession, inheritance, and value are *not* a simple evolutionary sequence, although the capacity for very complex value systems probably only was actualized starting 40–45,000 years ago in the Upper Paleolithic period when there was a dramatic increase in the types of objects made and utilized, such as ornaments, multicomponent tools, and clothing, as well as an increase in the ways that artifacts were disposed (including through caching, storage, and burial with the deceased). Individual cognitive capacities expressed through material culture acquisition, use, and discard subsequently were exercised in population centers of increasing size, in which people utilized "multitasking" strategies of managing goods and information as they engaged with increasingly dense social and political networks (Burgess, Veitch, de Lacy Costello, & Shallice, 2000; Salvucci & Taatgen, 2008; Smith, 2010).

CITIES AS THE LOCUS OF ACCELERATED PATTERNS OF POSSESSION, INHERITANCE, AND VALUE

The propensity to seek abundance, beyond serving as a descriptive correlate to migration and settlement by our earliest human ancestors, also has explanatory power for significant questions related to population settlement dynamics in their most complex manifestation: why do cities form, and what is the incentive for thousands of ordinary people to relocate to densely occupied population centers? City dwellers faced a number of challenges that would appear to have made urban residence counterintuitive: crowding and its attendant risks of waterborne and airborne disease transmission; the psychological adjustment to non-kin social networks; and the replacement of direct control over food sources with attenuated networks of provisioning. Conditioned to seeking abundance as a long-standing evolutionary

cognitive adaptation, however, individuals and households saw cities as attractive places of settlement because they could obtain a greater quantity and variety of goods and information.

Cities were established starting around 6,000 years ago, with the first urban agglomerations appearing in the Near East. Subsequent developments of urbanism are seen in Egypt, the Indian subcontinent, Africa, China, and Europe as well as in Mesoamerica and the Andes, often without any contacts between regions. These independent origins of urbanism lay in local conditions of population growth and environmental opportunity that often were coincident with the growth of political systems such as the state (e.g., Feinman & Marcus, 1998; Marcus & Sabloff, 2008; Smith, 2003). Although some coercive urban relocations can be found in the historical literature (see Joffe, 1998), the development and population of cities appears to be an overwhelmingly voluntary phenomenon in the past as it is in the present. Cognitive capacities for social interaction were expressed through a built environment, created by elites and nonelites alike, which included a variety of different types of spaces and access routes. Wherever and whenever they are found, cities tend to be remarkably similar in their layouts and features, with public and private venues, economic activity zones, and organizations of space that reflect the materialization of dense social networks.

Cities alter economic interactions in a number of ways that affect the production, distribution, and consumption of goods and services. Urban spaces per capita tend to be small, so that village-level strategies of storing food in close proximity to residences is replaced by systems of provisioning such as markets, itinerant vendors, and personal supply networks linked to rural providers. Durable goods also increase: there are more people, and therefore more goods, but there are also more goods per person. Contemporary observations indicate the process by which the increasing density of social networks in urban areas becomes manifested in a greater number of material objects as migrants engage in patterns of behavior that expand and modify the habits that they have retained from their original rural settings (e.g., Abu-Lughod, 1969). Urban environments' potential for many expressions of socially useful "weak ties" (Granovetter, 1973) further accelerates the process of consumption as individuals signal their participation in multiple social groups through ornaments, attire, and accoutrements utilized to develop, confirm, and display both private identity and public roles (D. Miller, 1985; Schiffer & Miller, 1999; Smith, 2007). As cities were central places for both objects and information (Renfrew, 1975, p. 12), the accelerated economy of consumption also included a corresponding increase in information about goods, their uses, and their possessors.

We can further distinguish the ways in which consumption in urban centers became specialized not only because of the increased potential diversity of goods, but because of the increased diversity of consumers and the increased connectivity among individuals and households that resulted in a more complex structure of consumption practices. Some of the ways in which consumption becomes more complex in urban environments are discussed below: concentrated loci of consumption, accelerated innovation in production and consumption, "trading up" within categories of consumer goods, gendered consumption, and youth consumption. In addition, cities sponsor diversified patterns of person-to-person transfer and provide a market for stylistic adoptions that affect rural production and consumption patterns.

Concentrated Loci of Consumption

In both ancient and modern urban settings, a common form of distribution is the bazaar in which there are duplicative vendors, often side by side. This form of distribution, display, and acquisition is distinct from the mechanisms of rural consumption, which may be limited to a single in-place vendor or itinerant merchant. In those single-supplier contexts, consumers have access to a reduced selection of items, along with limited information about the quality, provenance, and price of goods. By contrast, urban bazaar economies enable potential consumers to efficiently assess the range of available goods along with their technological qualities, styles, and prices. Producers and distributors alter their strategies of distribution in the bazaar economy by engaging in higher volume and lower margins; for producers and distributors, the bazaar is a convenient locus for sales, while for consumers the bazaar provides competitive prices and a greater selection. The phenomenon of the bazaar can be compared to its modern equivalent: "big-box" retailers whose compressed costs and reduced margins result in lower basic costs of living for consumers, who thereby have the potential for increased discretionary spending (Silverstein & Fiske, 2005, p. 21).

Accelerated Innovation in Production and Consumption

Researchers examining early urbanism have long recognized the value to producers of having a ready market for infrequently produced and infrequently acquired goods. V. Gordon Childe noted that the producers of specialized products risked social alienation by having to wander from place to place filling orders; for them, "one result of the Urban Revolution

will be to rescue such specialists from nomadism and to guarantee them security in a new social organization'' (Childe, 1950, p. 8; see also Carneiro, 1970, p. 736). Providers of new technologies and novel goods also find enough buyers to make even experimental production worthwhile. The process is analogous to what Anderson describes as the ''long tail'' of distribution as the cumulative effect of efficiently marketing items even when there is low demand for any particular object (2004). In the modern context, the delivery mechanism that connects dispersed buyers with uneven demand is the internet, which enables people to find ''obscure products you can't get anywhere but online'' (p. 172). Ancient urban centers provided a physical analog to the ''long tail'' phenomenon, providing advantages to both consumers and producers through the efficiency of delivery, the speed of communication, and the feedback cycle of demand for innovation in the types and styles of manufactured goods. Individual autonomy continued to be expressed (as it always had been) through the possession, inheritance, and valuation of objects and space, although the manifestation of that autonomy was accelerated both in frequency and intensity in the urban context. Cities were places of diversity and risk-taking in both production and consumption, in which dense networks of people provided the mechanism for the actualization of the ''long tail.''

''Trading Up'' Within Categories of Consumer Goods

Silverstein and Fiske (2005) have noted that as the variety of products increases within categories (such as food, clothing, and consumer durables), consumers expend more for value-added goods within some of those categories. Examining consumption as a deliberate strategy of decision-making among similar goods of different value within categories, Silverstein and Fiske note two aspects that affect consumers at all levels. First, the process of ''trading up'' to a more-expensive item within a category usually is accompanied by ''trading down'' in other categories of goods, such that consumers selectively allocate expenditures among categories, and not merely among different representatives of a single category. Secondly, the phenomenon of ''trading up'' is not limited to consumers with substantial means; as they observe, ''Consumers, especially those at the lower end of the income spectrum, often spend a disproportionate amount of their income in one or two categories of great meaning'' (Silverstein & Fiske, 2005, p. 6). Urban centers, with their greater variety of goods and greater number of categories of goods, provide the opportunity for trading up by all levels of the

economic hierarchy as a further acceleration of the production, distribution, and consumption processes in urban environments. As Henrich and Boyd (2008, p. 721) note, "larger, denser social groups should be able to maintain greater levels of technological complexity, knowledge, and skill," a factor of information that also contributes to the decision-making process of acquisition and trading up.

Gendered Consumption

We know from textual sources that some types of work in ancient cities were performed primarily or exclusively by women. Women wove textiles and milled grain in Mesopotamia (Englund, 1991; McCorriston, 1997), wove textiles in Mesoamerica (Brumfiel, 1991), and wove textiles and brewed maize beer in the Andes (Costin, 1998; Hastorf & Johannessen, 1993). In some premodern cases, we also know that the pay scales for women were different than for men, which would have resulted in differential ability to consume goods; at the same time, however, within groups of working women there would have been the potential for hierarchies among females in which some women probably enjoyed high status and controlled the work of others (as suggested by McCorriston, 1997, for Mesopotamia). Ethnographic studies illustrate differential ratios of female/male migration to cities related to work opportunities (e.g., Abu-Lughod, 1969; Penvenne, 1997), which serve as a model for differential female/male migration in ancient cities as well. The resultant gendered patterns of labor and compensation would have provided the opportunity for gendered patterns of consumption, for which there are ethnographic and ethnohistoric analogs (e.g., Frink, 2009; Scheld, 2007; Webber et al., 2010). The presence of a substantial number of working women in ancient cities would have affected the types of consumer goods offered, their distribution, and their prices.

Youth Consumption

A high degree of mobility into urban environments may have meant a differential potential for youth to engage in consumption activities of a greater variety than that available in the rural countryside. Here again, ethnographic and ethnohistoric evidence indicates that youths laboring in the city engage in differential patterns of consumption that produce a distinct "youth cosmopolitanism" expressed through activities such as the

acquisition of inexpensive material culture, pooling resources to purchase clothing and other display items to be shared among a group of youth, and even petty theft (Scheld, 2007).

Diversified Patterns of Person-to-Person Transfer

In rural areas characterized by kin-based economic interactions, the primary means by which possessions change hands is through inheritance and gifting. In urban areas, however, the greater number of people and greater number of groups to which individuals belong mean that interactions include relationships with kin, fictive kin, neighbors, familiars, and outright strangers. This increased variety of relationships provides numerous additional opportunities for the dissociation of possession; in the modern world, mechanisms include swap meets, yard sales, secondhand stores, antique shops, and other venues through which "formal mechanisms supplement but do not supplant face-to-face social interaction in the transfer of used items" (Schiffer, 1987, p. 38). Discard also can be achieved through donations to unknown recipients through the collective mechanism of charity organizations. These mechanisms provide the necessary outlet for an increased urban acceleration of stylistic innovation and discard. The opportunity to acquire items (sometimes unused or lightly worn) also contributes to potential migrants' perception of urban centers as attractive zones of abundance.

Stylistic Adoptions that Affect Rural Production and Consumption Patterns

Urban patterns of production and consumption affect rural economies in a variety of ways, drawing raw materials and labor into the city and providing goods and styles that are available for potential adoption in the surrounding countryside. An example is provided by the ancient urban center of Tiwanaku in Bolivia, where researchers have noted that in the pre-Tiwanaku period, rural pottery styles were diverse and that stylistic borrowing was often incorporated with local innovations. Once the urban site of Tiwanaku was established, however, Tiwanaku pottery styles became widespread and there were no further developments of regionally distinctive styles (Stanish, 2002, p. 189). In other cities and hinterlands as well, residents would have been able to create social capital through the knowledge of consumption practices of new styles that were available first (and sometimes, only) to

urban dwellers. Even individuals of very restricted means could still partake in the acquisition of information about which goods were useful and up-to-date in style, enabling all to participate in the urban economy of abundance.

A further evaluation of urban style enables us to examine another important outcome of urban production and consumption patterns: the development of cognitively necessary restraints on abundance. The diversity of goods, distribution venues, and consumers in urban economies result in an increasingly large quantity of items; however, the repertoire of goods cannot be infinitely expanded by either producers or consumers. Some constraints on variety would have been imposed by logistical considerations, such as producers' physical limitations of space for raw materials, equipment (such as molds and specialized production tools), and finished inventory. Distributors likewise would have faced shortages of space for the storage of large quantities of diverse goods, while consumers would have faced limited quantities of living and storage space in the more constrained living quarters of the city.

Physical limits were not the only means by which variety was suppressed. As Taylor (1992, p. 139) notes with relation to consumption and the human cognitive apparatus, "too much novelty leads to confusion and immobility because one does not know what to expect." The resulting phenomenon of choice-making has been extensively examined by S. S. Iyengar and colleagues (e.g., Iyengar, 2010; Iyengar & Lepper, 2000; Leotti, Iyengar, & Ochsner, 2010). They emphasize that humans (along with other animals) prefer to choose but that this cognitive preference also results in "choice overload" (Iyengar & Lepper, 2000, p. 1004) when the set of alternatives becomes too large. In the modern realm, producers have responded to choice overload by decreasing the variety offered within categories of objects. In premodern times, the development of style would have been a means of providing guidance to consumers about the social validity of innovations. Changes in urban styles resulted in parameters of both production and consumption, with a rapid turnover of styles providing consumers both with new information to consume as well as restricting the stock produced, distributed, and stored by vendors.

DISCUSSION

The recognition of abundance as a component of the human–material dynamic has profound implications for understanding long-term trajectories of human behavior related to material culture. Humans' propensity to

recognize and seek abundance explains the presence of objects at sites of all sizes – discounting formation processes – as a purposeful accumulation of materials, and not merely the residual effect of production or the unintentional result of sequential occupations. Conditioned to abundance, humans would have taken their cues of potentially suitable locales not only through the perception of natural conditions (such as lush vegetation and presence of desired prey) but through the material signatures of prior abundance (including discards and artifact accumulations) that could be "read" as markers of environmental quality and satisfaction.

The human management of abundance also helps to explain the prevalence of storage in human societies. Storage may be a mechanism that is not only the result of the essential logistical solution to utilizing seasonally harvested food products, but also fulfills a human drive for accumulation and abundance. The concept may even be stretched to explain some aspects of plant domestication. Grains, which are a somewhat counterintuitive choice for domestication due to small seed size and difficulties of harvesting prior to the development of a tough rachis that held the seeds tightly to the stalk, may have been attractive because of the perception of abundance that emanates from the flow of grain into jars, storage bins, and other receptacles. Aesthetic and practical factors of overflowing containers and granaries, and the piled-up abundance of grains in both ordinary food preparation events and feasts, may have enhanced the perception that grain was an appropriate food for ordinary people, rulers, and deities alike. A propensity to view abundance as socially meaningful may also explain the function of trash as an advertisement of prosperity and environmental viability, as even people of relatively modest means can demonstrate social viability through the cumulative display of past consumption.

The most complex form of consumer behavior is found in urban centers, where the variety and quantity of goods and information constitute the material manifestation of increasingly complex social networks. The use of an economies-of-abundance framework for assessing whether urban centers attracted early settlers because of a desirable diversity of consumer goods also contains testable archaeological propositions:

- Do urban consumers engage in a higher rate of consumption and discard compared to rural dwellers? This would entail examining the per-capita/per-period trash contents of contemporaneous urban and rural settlements in a region. A high rate of consumption need not result in a high rate of discard; greater amounts of accumulation of durable goods per capita (or per cubic meter of living space) might mark urban residences,

and could be calculated in the ratio of built storage area to living area in urban compared to rural households.

- Do urban areas have a greater array of styles compared to rural areas? This would entail examining the per-capita range of styles for urban and rural areas of the same ancient culture and whether more styles are found in urban areas compared to rural ones, corrected for population size. Styles can be measured not only through the form and decoration of durable consumer goods such as pottery, ornaments, and implements, but also through the examination of foodways as indicated in faunal remains (diversity and variety of meat cuts and species), botanical remains (including flavor enhancers such as spices, herbs, and wild plants), preparation tools (grinding implements, cooking facilities, and utensils), and the presence of venues for the consumption of cooked foods (such as marketplaces and street stalls).
- Are cycles of style change accelerated in urban environments compared to rural environments? For daily-use goods such as pottery, ornaments, tools, and furniture, how many "styles" are there in urban centers compared to rural areas? How many new "waves" of style are never picked up by rural consumers (one can see a series of analogies in 20th century fashion widely adopted in urban spheres that did not become part of the rural sartorial scene, such as zoot suits and punk wear, in addition to music and argot perceived as "urban"). Another test implication for the rapidity of consumption and discard in urban environments is the extent to which tools and other utilitarian objects are discarded in pristine or lightly worn condition in urban middens compared with the use-wear of rural counterparts.

Finally, the use of an abundance perspective also can be applied to structures of power that developed in tandem with sedentism and social complexity. The emergence of elite hierarchies of provisioning and control, in many cases coincident with urbanism, did make use of the concept of scarcity (in the allocation of administrative positions or tokens of privilege). However, elites also engaged with the provision of abundance, particularly in the matter of food. As Hasia Diner (2001) has observed, abundance in foodstuffs does not bring contempt or complacence; on the contrary, the more of a preferred food is supplied, the more it is esteemed. In some cases, elites provided an abundance of preferred foods during feasts; in other cases, a combination of top-down and bottom-up strategies of agricultural investment were coordinated under shared understandings of what was "good to eat" (e.g., Hayden, 1990; Lepofsky & Kahn, 2011; Smith, 2005).

CONCLUSIONS

Economists' recommendations to consider abundance as an economic principle dovetails with anthropologists' exhortations to expand our theoretical repertoire beyond the narrowly derived economic principles of the modern world. As Stuart Plattner (1989, pp. 10–11) noted a number of years ago, "the basic terms of economics are defined abstractly (and) they fit best the capitalist, industrialized economy in which they were developed." Notions of scarcity and surplus, derived as the result of observations of the Industrial Revolution and its aftermath, do not apply universally to all material objects. In the premodern age, the cognitive ability to recognize abundance in the natural environment long predated the development of political agents who had the power to define scarcity and elicit surplus. Even under conditions of political restriction, however, many categories of daily-use goods remained abundantly available.

An increased quantity and variety of goods is documented in the archaeological record of social complexity, particularly after the beginning of the Upper Paleolithic period. This observation has both descriptive and explanatory potential, enabling researchers to understand the development and occupation of increasingly large population centers. In particular, the objectively deleterious conditions of cities in both the past and the present must be counterbalanced by some explanation of why people move into them. Ethnographic accounts suggest that people articulate their desire to migrate to urban centers through phrases of the intangible such as "bright lights, big city" or "buscar la vida" (cf. Wilson, 1992). Those desires and expectations are manifested in material goods and information, of which there is much greater quantity in urban areas than in any other kind of population center. The rapid development of style that accompanied the increased production and distribution of goods provided both a solution to "choice overload" and a source of information about appropriate material culture that could be participated in by all urban dwellers, regardless of how impoverished they might be. More than a simple correlation of urban residence, the ability to acquire more goods and more information about goods serves as a compelling explanation for urban migration and residence.

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