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Human development and quality of life in the long run: the case of Greece

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Abstract: The Human development Index of the United Nations and other broadly based indices of wellbeing seek to identify and measure a wide range of determinants of the quality of life. Income, longevity, and education are regarded as key indicators. Auxiliary variables include nutrition, income and gender inequality, political and human rights, crime rates, human rights, and environmental degradation. Although some of the factors cannot be properly assessed with respect to the more distant past, indices such as these nevertheless provide a useful template for the historical cross-cultural and comparative study of human development and quality of life. This paper illustrates the potential of this approach by exploring the changing configuration of significant variables in the long run, using the Greek world from antiquity to the recent past as a test case. This exercise is meant to provide context for the study of the quality of life as envisioned by our panel.

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Defining quality of life*

How can we define quality of life? Economic indicators such as GDP – be it nominal or adjusted for purchasing power (PPP) – are increasingly recognized as excessively narrow indicators of overall wellbeing. The Human Development Index (HDI) of the United Nations, launched in 1990, is meant to address this deficit. It represents a composite measure based on GDP, life expectancy, and education (determined by adult literacy and school enrollment ratios) (<http://hdr.undp.org/en/humandev/>). These criteria tend to be fairly closely associated – in that rich countries also tend to enjoy high levels of life expectancy and education – but do not fully match up. Significant divergences between economic output and human development rankings are particularly interesting because they highlight the limits of purely economic measurements. Such divergences are captured by subtracting HDI rank from GDP rank. In some cases, a country's HDI score greatly exceeds its GDP ranking, for example in Cuba (+44 ranks), Myanmar (+29), and Albania (+23). In others it is the other way around, most notably in oil-rich developing countries such as Equatorial Guinea whose GDP rank vastly exceeds its HDI score (-90 ranks, in a sample of 182 countries) and more generally many Middle Eastern countries (<http://hdr.undp.org/en/reports/global/hdr2009/chapters/>).

In addition, the statistical tables of the annual Human Development Report (HDR) cover a variety of variables that tend to be correlated with overall development, such as poverty levels, access to clean water, unemployment, gender equality in income and political participation, urbanization, fertility, income inequality, economic growth, public spending on health and education, and educational attainment levels. Previous editions also considered other factors such as energy use, deforestation, calorie supply, political participation, crime rates, personal distress, and human rights. Coefficients of income inequality (Ginis) vary widely: the highest (i.e. most unequal) ones are found in southern Africa (Namibia and Botswana) followed by numerous Latin American countries, whereas low rates can be observed both at the very top (Scandinavia) and near the bottom of the global scale (Ethiopia) (<http://hdr.undp.org/en/reports/global/hdr2009/chapters/>).

Alternative metrics focus on Gross National Happiness, a concept indebted to Bhutan's effort to measure "happiness" rather than GDP (<http://gnhusa.org/>). There are several dimensions to national happiness: psychological wellbeing, health, use of time, community vitality, education, culture, environment, governance, and standard of living. The main goal of this ranking system is to go beyond economic development by considering quality of life and preservation of the environment. "National happiness" is not to be confused with more narrowly conceived ratings of subjective wellbeing in different countries based on self-reported happiness and life satisfaction, which are not very closely correlated with economic indicators (<http://www.nsf.gov/news/newsmedia/pr111725/pr111725.pdf>).

The Capabilities Approach, developed by Amartya Sen, Martha Nussbaum and others, adopts an even broader perspective. It includes capabilities or "substantive freedoms" that have been categorized as life (especially its length), bodily health and integrity (including freedom of movement, safety, and reproductive choices); the ability to think, imagine and reason; the ability to form emotional attachments; practical reasoning; freedom of association and from discrimination; interaction with other species; play; and control over one's environment (Nussbaum 2000; cf. Nussbaum and Sen, eds. 1993; Sen 1999).

The desire not to miss important determinants of the quality of life has led to increasingly complex and comprehensive indices. Yet what all these measurements have in common is their presentist focus. Historians are now called upon to apply these concepts to the past, in order to gain a better understanding of quality of life and human development in the long run. Given the

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problems of constructing broadly based indices even for the present, the empirical challenges of extending them into the past are painfully obvious. I hope to show, however, that this is an exercise worth attempting.

Historical depth

Any society with a “deep” historical record would be a suitable object of investigation. I choose Greece for a number of reasons: extended historical coverage, reaching back millennia; intense modern engagement with the evidence; the unusual degree of variability in socio-political institutions (from city-state ecologies to imperial states and from democracy to monarchy); and, of course, the genius loci. A comparative perspective not only extends across different periods of Greek history but also entails comparison between Greeks and others. My main focal points are the Greek world in classical antiquity (especially in the sixth to fourth centuries BCE), the Byzantine period around 1000 CE, and modern Greece in the decades after independence.

In antiquity, Greece was fragmented among a large number of city-states: well over 1,000 are known (Hansen and Nielsen 2004). These polities formed what was by far the largest city-state culture in world history (Hansen, ed. 2000). While many were autonomous or fully independent, some were dominated by other city-states or belonged to federations. Political systems varied from different kinds of monarchy to oligarchies and democracies. Greeks set up city-states across the Mediterranean and the Black Sea region.

I begin my discussion by considering economic indicators. The view that classical Greece was well developed by pre-modern standards has recently been gaining ground (Ober 2010). However, attempts to determine ancient per capita GDP even in the broadest outlines are necessarily fraught with great uncertainties. Modern studies have primarily focused on the Roman Empire (see Scheidel and Friesen 2009 for a discussion of existing scholarship and a new estimate). Mesopotamia in the first millennium BCE has also attracted some attention (Aperghis 2004; Bedford 2007; Foldvari and Van Leeuwen 2010). The economist Takeshi Amemiya estimates a mean of 1,043 liters of wheat equivalent per capita for 220,000 inhabitants of Athens in the fourth century BCE (Amemiya 2007). This compares favorably with a rate of around 900 liters for the (much larger and more diverse) Roman Empire in the second century CE (Scheidel and Friesen 2009), an estimate that in turn effectively rules out a much lower estimate of 550 liters for classical Athens proposed by Daniel Jew (Jew 1999).

Change over time is even more difficult to determine. Scholars hold that economic conditions were the culmination of several centuries of growth, not just in absolute terms (with a larger population and therefore larger output) but also in relative terms. According to one guesstimate, per capita consumption in the Greek world may have risen by between 50 and 100% between 800 and 300 BCE (Morris 2004). Archaeological evidence suggests that Greek house sizes also increased over time: Ian Morris has observed a 350% increase in median house size from 800 to 300 BCE (Morris 2004, 2005).

It is fair to admit that all these estimates are fairly shaky. Better evidence is available regarding real incomes, established by relating nominal wages of workers to the cost of basic goods such as wheat. As I have argued in earlier work, wage laborers in Athens received daily wages equivalent to about 8-9 liters day in the late fifth century BCE and equivalent to 13-16 liters in the late fourth century BCE (Scheidel 2010a). These values are well above the range of about 4-6 liters per day that is commonly observed in ancient and medieval economies. This indicates that the Athenian working population was unusually well-off in real terms. These findings are consistent with the fact that historically elevated real wages (albeit to a lesser degree) are also found on the Aegean island of Delos in the third century BCE.

The distribution of wealth and income are more difficult to assess. Democratic Athens is often regarded as a relatively egalitarian economy. Modern estimates vary: while some have

estimated that 7.5% of Athenians owned 30% of all land or that 9% owned 35% of all land (Osborne 1992; Foxhall 2002) – rates which would be extremely egalitarian by historical standards (Morris 1994) –, others have made a case for more pronounced inequality (Jew 2009). Geoffrey Kron finds that inequality in house sizes was much less pronounced in well-attested Greek cities than in nineteenth-century England (Kron forthcoming).

Mogens Hansen has forcefully argued that urbanization rates were high, with about half of all Greeks residing in ‘urban’ settlements, a startling claim that is nevertheless supported by reported population numbers and archaeological evidence of town size (Hansen 2006). If true, this reconstruction implies that as many as 30% of all Greeks may have lived in settlements of 5,000 inhabitants or more (Ober 2010). This is very roughly twice the rate observed in the Roman Empire, for example.

All these observations converge in pointing to relatively high levels of development, even if some indicators are more difficult to interpret than others. For instance, urbanization rates should not simplistically be equated with the degree of division of labor and economic development per se: many Greek city-dwellers would have been farmers. In this case, it is perhaps more important to consider the cultural and life-style consequences of high nucleation rates: they increased civic interactions, fostered shared experiences, and favored the accumulation of human capital. High nucleation rates were also conducive to investment in urban infrastructure: temples and theaters that drew people together and created shared identities come to mind.

Levels of physical wellbeing are more difficult to assess. Despite claims that average life expectancy rose up to the classical period (Morris 2004), any such notion is based on skeletal data whose interpretation remains highly contested. Body height is another indicator of wellbeing, reflecting as it does both (net) nutrition and disease loads (cf. Steckel 2009). Although it has been claimed that ancient Greeks were relatively tall, this notion is based on small samples (Kron 2005). Given that ongoing work on the ancient Roman world has shown how much our understanding depends on methodology and sample size, it is too soon to form an opinion on conditions in the ancient Greek world: nonetheless, this line of inquiry is certainly worth pursuing. Much the same is true of bone health: the frequency of cranial and dental lesions can be taken as suggestive of nutritional status and health, and work on the ancient Roman world has revealed a great deal of geographical differentiation (Gowland and Garnsey forthcoming). Once again much work remains to be done for Greece, especially in order to supersede Lawrence Angel’s older studies in this area (cf. Keenleyside and Panayotova 2006, and see now esp. Schepartz et al., eds. 2009). Such data are potentially of particular importance because physical wellbeing need not be related to GDP in a straightforward manner: for example, economic development that encourages urbanization may intensify density-dependent diseases and thus reduce physical wellbeing.

Education, the third principal variable in the HDI, is very difficult to measure. In the standard work on this topic, William Harris conjectures a literacy rate of 5 to 10% for classical Athens, a rate which he considers “remarkably high” by ancient standards. At the top end of the educational spectrum, Athens in particular afforded exceptional opportunities for education, both because of the growth of philosophical schools and thanks to the symbiotic relationship between democratic culture and rhetorical skills (Ober 1989). More generally, Josiah Ober has recently posited connections between democracy, learning, and innovation in classical Athens (Ober 2008).

Moving on to auxiliary indicators of human development, we find that some of them are fairly easy to measure, albeit in an impressionistic rather than a quantitative way. In terms of political rights and participation rates, Athens and many other Greek poleis score highly by historical standards. Republicanism was the norm, and democracy may have become more common over time (Hansen and Nielsen 2004 and work in progress by David Teegarden).

Other cultural indicators are less favorable. Although rule egalitarianism was popular among adult male citizens, power asymmetries between the sexes and between free and slaves were considerable. The status of women varied across different city-states: while Athenian women remained under lifelong guardianship (Sealey 1990), Spartan women enjoyed greater freedoms (Pomeroy 2002); the former situation may have been more common. Slaveownership was rife in much of the ancient Greek world (Garlan 1988; Fisher 1993). Athenian society, at least, did not provide for regular enfranchisement of manumitted slaves, unlike ancient Rome. In this respect, Athenian and perhaps Greek rules more generally bore greater resemblance to the antebellum South with its separation of slaves and freed slaves from the citizenry. Consideration of the slave population also affect our understanding of economic inequality: once slaves enter the equation, property and income inequalities necessarily rise, the more so the more slaves were being held. In this context it is worth noting that in the United States in 1850, mean per capita wealth was the same in the northern and southern states, but average per capita wealth of the free population of the South was 50% higher than in the North (Wright 2006). This raises the question how much the appearance or substance of Greek economic development owed to the exploitation of slave labor and the asymmetries and inequalities involved in this process.

Moreover, we must bear in mind the logical corollaries of high rates of political mobilization and participation, especially in the military sphere. Military and political mobilization were inextricably intertwined: they reinforced one another in a feedback loop (Scheidel 2005; Pritchard, ed. forthcoming). Classical Athens was an extreme case, both in terms of the scale of popular political participation and in terms of military manpower losses. According to one reconstruction, during the Peloponnesian War (431-404 BCE) the number of adult male citizens in Athens fell from 47,000 to 13,000, or from 60,000 to 24,000 partly due to a plague that had been exacerbated by siege conditions and partly because of battle fatalities (Hansen 1988). Regardless of the precise numbers, these losses must have had massive social repercussions, greatly raising the numbers of widows and orphans and making it difficult for young women to find spouses: bigamy was temporarily authorized as an emergency measure. And although the Athenian experience in the Peloponnesian War may have been unusual, war was endemic within the Greek city-state culture, and so were high rates of military participation that could lead to serious losses. Anticipation of such losses would have favored preemptive femicide (Scheidel 2010b) and/or large age gaps between spouses at first marriage (Pomeroy 1997), both of which must be understood as markers of gender inequality.

Civic institutions helped resolve conflict within communities in a non-violent fashion, although their efficacy remains debated (Cohen 1995; Herman 2006). At the same time, we observe a high incidence of violent political struggle (“stasis”) within communities (Gehrke 1985). Again, high levels of political mobilization raised the stakes and fatality rates of such conflicts because they tended to draw in a larger proportion of the population than would have become involved in more traditional societies.

In order to make sense of this jumble of contradictory outcomes, it is helpful to compare conditions in ancient Greece to those in other pre-modern cultures. Most of the latter conformed to Ernest Gellner’s famous model of the “agro-literate polity” where a stratified, horizontally segregated ruling class lorded it over laterally insulated communities of agricultural producers (Gellner 1983), a model that is not applicable to the classical Greek polis (Morris 1991). Take, for example, Egypt under Persian (6th to 4th c. BCE) or later Macedonian (4th to 1st c. BCE) and Roman (1st BCE to 7th c. CE) rule, a region for which relevant information is relatively amply available. Some differences to ancient Greece are clear. Recorded real wages for workers were much lower (Scheidel 2010a) and inequality in property-ownership could be massive (Bagnall 1992). Political rights were absent. Mean life expectancy was very low, lower perhaps than in Greece, due to ecological circumstances such as the aggressive disease environment and the high population densities of the Nile valley and oases (Scheidel 2001). In this scribal culture, literacy rates were probably lower than in Greece.

By contrast, gender inequality was less pervasive (Rowlandson (ed.) 1998) and slavery less common. There was less organized violence: military service was performed by professionals, and wars rarely occurred in Egypt proper. Other factors also merit consideration. Environmental degradation would not have been a major concern in Egypt, where the soil was constantly revitalized by the annual inundation; it may well have been a more serious matter in Greece, where deforestation and soil erosion caused problems. Were foreigners or slaves in Greece subject to greater discrimination than marginalized groups in Egypt? Did Greeks or Egyptians expose more unwanted babies? Did Greeks or Egyptians enjoy greater effective freedom of movement? Did the Greeks derive more benefits from their civic infrastructure than Egyptians derived from pooling resources to maintain irrigation systems?

If we focused on the key HDI indicators of GDP, longevity, and education, ancient Greece could be said to have enjoyed greater human development than ancient Egypt. Yet if we pay more attention to gender, slavery, safety, or the environment, we get a different impression. Needless to say, we have no real way of telling whether Greeks were “happier” than Egyptians – we should beware of answers based on hellenophilic bias. We might be inclined to surmise that civic involvement gave Greeks a stronger sense of control over their destiny, but the price, in exposure to violence, could be dramatic. Again, we ought to be wary of addressing such issues intuitively, guided by the biases inherent in a modern western perspective.

If we were to add more societies into the mix, we would encounter different configurations (Scheidel 2006). In the ancient Roman case, for instance, we would observe similarly high military casualties; more political rights than in most premodern polities but fewer than in classical Athens; more inequality than in ancient Greece but less gender discrimination and a better water supply, at least in the city of Rome itself.

Alternatively, we may look at later periods of Greek history. By 1000 CE, Greece and the Aegean were part of the Byzantine Empire. Relative stability had been restored after the near-failure of the eastern half of the Roman Empire, and wars and invasions had abated at least within the Aegean core. Branko Milanovic has attempted to determine average incomes and income inequality in this period (Milanovic 2006). Unskilled wages equaled approximately 200 liters of wheat per month, or 6.5 liters per day. This rate is notably lower than that observed in classical Athens. Milanovic sets Byzantine per capita GDP at between \$680-770 in 1990 Geary-Khamis dollars, similar to the Roman Empire (Scheidel and Friesen 2009).

Urbanization was lower than it had been in ancient Greece, with perhaps closer to 10% residing in cities of 5,000 and more, rather than 30% as in antiquity (Milanovic 2006). Tenancy was frequent and gradually crowded out smallholding; land rents were substantial (Lefort 2002). Feudal relations were developing in this period and aristocratic power was growing (Harvey 1989). Income inequality was considerable, surely higher than in classical Greece: in Milanovic’s (admittedly highly schematic) model, 90% of the population are thought to have lived near subsistence as farmers, tenants and urban marginals.

Life expectancy is empirically unknown (Laiou-Thomadakis 1977 shows how little is known about demography). Educational attainment was probably very limited given extensive ruralization. Popular military commitments were low: with general military service long a thing of the past, even professional armies were increasingly replaced by ethnic mercenaries (Treadgold 1995). Political rights had likewise long disappeared: as so often, military and political mobilization went hand in hand. Some benefits may have accrued from this: age gaps between spouses appear to have been smaller than in antiquity (Laiou-Thomadakis 1977), and for this reason, as well as thanks to far lower casualties, widows and orphans ought to have been much rarer than in classical Greece.

Athens, our main focus for the ancient period, had become a relatively marginal town (Kazanaki-Lappa 2002). Although the eleventh and twelfth centuries witnessed a boom in church building – reminiscent of earlier investments in community infrastructure – identified houses from this period tend to be modest and made of shoddy materials. Grain was grown within the old city

walls. To highlight the contrast to the classical period, it is worth quoting from the writings of Michael Choniates, metropolitan bishop of Athens from 1182 to 1204. He referred to Athens as a place that had lost “the very shape of a city and the form and state that define cities” and was oppressed by “an oligarchy bent on enriching itself.” Even allowing for hyperbole and nostalgia for its famous past, the differences from the classical period are palpable.

More importantly, these snippets are illustrative of general conditions: strong elite power and high inequality; lower real incomes; lower urbanization and attendant opportunities; no effective political involvement paired with low exposure to organized violence. Conditions had become much more similar to those in other traditional societies, such as ancient Egypt as described above. Oppression was more common, but belief in the afterlife may have been stronger as well. Once again we face a complex configuration of circumstances that defies straightforward assumptions about quality of life.

Even this very limited survey helps us discern a few correlations. Elevated levels of development in terms of real income and reduced inequality tended to be associated with the strength of civic institutions, which were in turn associated with exposure to violent death. Other connections are far less clear: health, for example, may well have varied independently of any of these other factors.

Finally, a quick look at more recent conditions. Greek GDP and income inequality in the mid-nineteenth century have not been studied in great detail. Real per capita GDP between 1833 and 1860 fluctuated between 100 and 140 drachmas in 1860 constant prices (Kostelenos 2001), equivalent to 520 to 730 liters of wheat (Pizani and Mitrophanis 1991). This is roughly the same as in the Roman Empire and less than in classical Athens. Moreover, despite some per capita growth in late 19th and early 20th c., annual GDP (in constant prices) did not consistently exceed these levels until after 1925. In the 1850s and 1860s, around 25% of the population lived in settlements of 2,000+, far fewer than in classical Greece. Mean life expectancy at birth stood at around 36 years between 1860 and 1880, with an infant mortality rate of close to 20% (Valaoras 1960). While it is hard to say whether or to what extent this improved on antiquity, it is clear that any differences from the ancient or Byzantine periods would have been modest. As late as in 1910, the majority of the population (60%) was classified as illiterate (Flora 1973), a rate that must have been even higher in older cohorts given that by then 70% of military recruits were literate (Mishkova 1997). Participatory political institutions developed only gradually: constitutions appeared from 1822 onward; the franchise was extended to all adult males in 1864; and a republic was first established from 1924 to 1935.

We find both continuities and discontinuities between the ancient, medieval, and modern periods of Greek history, all of which can be expected to have had consequences for human development, quality of life, and “gross national happiness.” Drastic transformations occurred only afterwards: the 2009 HDR ranks Greece twenty-fifth in the world.

Conclusion

What is the point of this exercise? It shows that the problems we currently face in determining quality of life are not new: we also encounter them in engaging with the distant past. They are not merely empirical problems – of how to find out or how to measure – but methodological ones, of how to weigh different aspects of the human existence. This survey also shows that the application of modern criteria to the historical record has its uses. It suggests that particular institutional arrangements have side effects that can be simultaneously beneficial and detrimental to the quality of life: political and military mobilization and even slavery fall in this category. History reveals that there are many different configurations of the manifold determinants of wellbeing. It is only by appreciating the depth of the historical record that we can arrive at a better understanding of the complexities inherent in the concept of “quality of life.”

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