

The Positional Market and Economic Growth

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Abstract: In addition to the material market, there is also a positional market in human society. The channel of social mobility – the institutional system that regulates the performance of individuals and groups in the positional market – is a critical dimension of the overall institutional foundation of economic growth because it underpins the incentive structure in the positional market. Understanding the interaction between the incentive structures in the material market and those in the positional market sheds new light upon economic history and some of the on-going “natural experiments” in economic development today. Most importantly, understanding the relationship between the positional market and economic growth makes it clear that states should strive to eliminate institutional discrimination because institutional discrimination is not only morally unjust but also economically costly.

Keywords: economic growth, institution, institutional discrimination, positional market, social mobility

JEL Classification Codes: O43, Z13, P00

“If no man could hope to rise or fear to fall in society; if industry did not bring its own reward, and indolence its punishment, we could not hope to see the animated activity in bettering our own condition, which now forms the master-spring of public prosperity.”

— Malthus

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Adam Smith, the founding father of modern economics, recognized that vying for social status or “vanity” drives human behavior (Smith [1759] 1979, 50-54). As economics and sociology parted ways, however, economists have focused almost exclusively on material interest. Meanwhile, although social mobility – defined as individuals or groups’ movement within the stratified society – has been a principal subject of modern sociology, sociologists have been primarily interested in understanding the evolution of social stratification, the social and political consequence of social mobility, and the impact of economic growth upon social mobility. Most sociologists have thought little about the possibility that social mobility may actually influence economic growth.¹

By re-discovering, developing, and synthesizing often implicit insights that have been scattered in classical economics (e.g., Malthus [1798] 1951, 254; Marshall [1920] 1982, 176-177; Smith [1759] 1979, 50-54, 57), sociology (e.g., Breen 1997; Brown 1973; Hirsch 1977; Gellner 1983, 24-25; Goldthorpe 1985; 1997; Tocqueville [1835] 1945, 362-366), (classical) institutional economics (e.g., Hirschman 1973; Lewis 1955, 84-90, 107-113; Veblen [1899] 1967), and the new institutional economics (e.g., Bénabou and Ok 2001; Fershtman, Murphy and Weiss 1996; Fershtman and Weiss 1993), this article seeks to explicitly link humans’ drive for social status and social mobility with economic growth.

Specifically, I argue that there are two distinctive markets in human society. In addition to the more recognized material market, there is also a positional market. I further contend that the channel of social mobility – the institutional system that regulates individuals’ or groups’ performances in the positional market (i.e., social mobility), is a critical dimension of the overall institutional foundation of economic growth (IFEG).² The channel of social mobility influences economic growth by underpinning the incentive structure in the positional market, just as the channel of property rights influences economic growth by underpinning the incentive structure in the material market. More concretely, the channel of social mobility influences economic growth by regulating a critical motive of individual effort: the vying for upward social mobility.

The rest of this article is structured as follows. The first section demarcates the material market and the positional market by tracing the emergences of the two markets in the course of social evolution. The second section introduces the differentiation of positions from position-symbolizing material goods, thus further differentiating the two markets and clarifying several areas of confusion. Section three outlines the core hypotheses linking positional incentives with economic growth and section four employs the presence or lack of incentives in the material market and the positional market to delineate human societies into four “ideal types.” The fifth section examines two historical cases to substantiate the thesis that positional incentives do influence economic growth, *independently* from material incentives. Building upon that, the next section advances a more systematic understanding of the impact of positional incentives upon economic growth. In the final three sections we draw theoretical and empirical implications, and conclude, respectively.

The Origin of Material and Positional Inequality and Markets

A fundamental assumption of this article is that there are two distinctive markets in human society. In addition to the more recognized material market, there is also a positional market. Although the two markets interact with each other to shape human behavior, they are also fundamentally different (for a summary, see Table 1).

Table 1. Material Market Versus Positional Market

	MATERIAL MARKET	POSITIONAL MARKET
Characteristics	A horizontal market in which individuals compete for wealth or profit.	A hierarchical (vertical) market in which individuals compete for positions.
Goods	Material goods, with potentially unlimited supply. Position-symbolizing material goods are a specific type of material goods.	Positions, with inherently limited supply because top positions are always limited.
Supply of goods versus demand of goods	The supply and the demand of goods come from all possible agents (individuals, corporations, states).	Positions are supplied only by hierarchical organizations (e.g., state). Position-symbolizing material goods are supplied by all possible agents. Demand of both types of goods comes from all possible agents, other than the state. The state is exclusively a supplier of positions.
Ultimate source of incentives	Need for survival and material inequality	Positional inequality
Can market exist independently from inequality?	Yes. In principle, the material market can exist without material inequality.	No: without (positional) inequality, there will be no positional market.
The key institutional system that structures incentives in the market	The channel of property rights	The channel of social mobility

Foremost, in the material market, individuals compete for material gains (or profit). In the positional market, individuals compete for positions and real and/or perceived “social status,” power, and prestige that are associated with those positions. Second, whereas the material market is horizontal, the positional market is vertical. Third, whereas the supply of material goods – including position-symbolizing material goods – is potentially unlimited, the supply of higher (thus better) positions at the upper tier of social hierarchies is inherently limited. Fourth, whereas all types of agents, including individuals, can supply material goods, only hierarchical organizations (i.e., states) can supply positions.

Yet, can we really differentiate the positional market from the material market? In other words, how can we be sure that it has been individuals’ drive for social positions rather than their drive for material gains that has been driving a particular behavior?

Since ancient Greece and China, moral philosophers have recognized that both material gains and positional gains drive human behavior and have been speculating the origins of these two drives of human behavior. Although they correctly recognized that the two different drives are fundamentally driven by inequality in human society, they tend to conflate the two inequalities (i.e., positional versus material), and more often, believe that the rise of material inequality via the rise of private property has led to positional inequality (e.g., Dahrendorf 1968, 157-163).³ These earlier treatises could not get the origins of the two inequalities right because they were not aided by modern anthropology. With the aid of modern anthropology, we can now reconstruct the origins of the two inequalities and the two markets. Two principal conclusions can now be drawn firmly. First, positional inequality arose independently from and earlier than material inequality. Second, the positional market arose independently from and earlier than the material market.⁴

The positional market emerges simultaneously with positional inequality, and the positional market and positional inequality are almost synonymous: a positional market exists wherever there is positional inequality.⁵ In other words, the positional market cannot exist independently from positional inequality. In contrast, the material market can operate independently from material inequality, and material inequality arises “independently” from the material market. Moreover, as becomes clear below, material inequality arose “after and from” positional inequality.

At the first stage of human society – the stage of band/tribe as foraging (i.e., hunting-and-gathering) societies, there already exists primitive positional inequality, thus also a primitive positional market because every band/tribe has a headman or a “big man.” These headmen or “big men,” occupy leadership positions almost exclusively based on their personal capabilities and charisma. Occupation of the leadership position is thus “ephemeral and context-specific” (Johnson and Earle 1987, 31). Meanwhile, there is no material inequality in bands/tribes. Bands/tribes are egalitarian societies, and production outputs are redistributed in egalitarian fashion within the entire community. As such, occupying the leadership position in the band/tribe is almost inevitably materially costly: the leader occupies the leadership position, mostly because he can provide more resources (e.g., food) to the community (Service 1971, 131-132; 1975, 49-56, 73-74).

At the stage of band/tribe, a primitive material market based on gift-exchanging exists as primitive division of labor or specialization emerges, but this primitive material market comes after the primitive positional inequality or market. This is so because a more developed division of labor based on specialization of skills emerges long after the primitive positional inequality. Moreover, within egalitarian societies, there is little sense of private property rights: all material goods belong to the community. Most importantly, material inequality cannot exist within egalitarian societies: intentional “leveling” within egalitarian communities prevents the rise of material inequality (Miller and Cook 1998).

At the stage of chiefdom, occupation of the leadership position no longer depends on individual charisma or merit, it becomes hereditary (Earle 1997; Johnson and Earle 1987, chs. 9 and 10; Service 1971, 139-140; 1975, 290-297).⁶ As such, positional inequality becomes institutionalized, and an institutionalized positional market begins to exist. This emergence of institutionalized positional inequality would have a profound impact upon the course of social evolution, and any other inequality evolved after it cannot be understood without taking into consideration the role of power and social conflict (Dahrendorf 1968; Lenski 1966, 104-105; Service 1975, 8).

Foremost, occupation of the leadership position becomes materially rewarding.⁷ At the initial stage of semi-chiefdom, the chief may still observe material egalitarianism by pooling and then distributing production outputs evenly within the community. As times goes by, however, the chief can usurp, embezzle, and then distribute resources to benefit himself, his family, and eventually his kin, under the cover of providing religious service and public goods. This eventually leads to material inequality between the chief, his family, and eventually his kin on the one side and the rest of the community on the other (Johnson and Earle 1987, chs. 9 and 10; Service 1975, 290-297). In the course of human history, the emergence of material inequality within a community had been a direct product of the rise of institutionalized positional inequality within the community.

Moreover, precisely because occupation of the leadership position is now materially rewarding, a primary concern of the chief is to perpetuate his occupation of the position and make sure that the position remains occupied by his children or close kin (Service 1971, 145-7; 1975, 72-80). Happily, the chief has many tools to do so. Most importantly, he can use patronage to buy loyalty and thus strengthen his rule (Johnson and Earle 1987, chs. 9 and 10; see also Miller and Cook 1998, 88-90). Hence, once an institutionalized hierarchy is established, it will be self-enforcing.

An institutionalized material market that is based on good exchange must be based on some sense of “private” property rights. In other words, for an institutionalized material market to exist, at least some production outputs can no longer be pooled and then re-distributed evenly within the community. Within egalitarian societies, there cannot be a sense of “private” property rights. This sense of “private” property comes into existence only with the coming of institutionalized political hierarchy. Private property rights can only be enforced by institutionalized power, and institutionalized power can only be provided by a centralized authority. As such, an institutionalized material market also emerges after an institutionalized positional market during the course of social evolution.

To summarize, in the course of social evolution, the positional market arose independently from and earlier than the material market, and material inequality emerged after the emergence of institutionalized positional inequality. The two markets are distinct although they interact with each other to shape human behavior.

A Key Differentiation

Before I proceed further, a key differentiation must be introduced.

Positions should be clearly differentiated from “positional goods” as defined by Hirsch (1977) and then populated by Frank (1985). Although positions can be understood as a special type of positional goods, most of the positional goods as defined by Hirsch and Frank should be more fittingly called “position-symbolizing material goods.”

The positional market of a particular society is the total sum of all social hierarchies within that society. In the positional market, the real positional goods are positions, not position-symbolizing material goods. Individuals “compete” for positions, and they “consume” position-symbolizing material goods to show off or pretend their association with certain positions or status.⁸ More often than not, individuals over-consume position-symbolizing material goods, resulting in wasteful “conspicuous consumption,” as Veblen ([1899] 1967) sarcastically put it.

As noted above, only hierarchical organizations (or social hierarchies) can supply positions. Quite evidently, among the various social hierarchies, the state has been the largest and thus the most important supplier of positions. In contrast, position-symbolizing material goods, just like regular material goods, can be supplied by all kinds of agents (states, individuals, corporations). Of course, all individuals are (potential and actual) consumers of positions and material goods (see Table 1).

With this differentiation, it becomes clear that there have been two schools looking at two different but interrelated aspects of the positional market. The first school was pioneered by Veblen ([1899] 1967), and further developed by Duesenberry (1949), Frank (1985; 1997; 2005), Hirsch (1977), Knell (1999), Liebenstein (1950), and Ng (1997) in economics, and by (Randall) Collins (1979) in sociology. The French sociologist Pierre Bourdieu’s work on distinction and taste also bears a strong resemblance to Veblen’s work (Bourdieu 1984; see also Trigg 2001).⁹ This school focuses on the usually negative impact of over-consumption (i.e., “conspicuous consumption” or “keeping up with the Jones”) of positional goods upon welfare and growth. This school has generated quite an extensive literature, although most mainstream economists have chosen to ignore it, as noted by Frank (1997; 2005), Mason (2000), and Ng (1997).

A second school focuses on the potential (both positive and negative) impact of positional competition upon economic growth. In economics, this school has been prominently represented by Bénabou and Ok (2001), Fershtman and his colleagues (Fershtman, Murphy and Weiss 1996; Fershtman and Weiss 1993), Hirschman (1973), Lewis (1955, 84-90, 107-113), Malthus ([1798] 1951, 254), Marshall ([1920] 1982, 176-177), and Smith ([1759] 1979, 50-54, 57). In sociology, this school also has

a long and venerable lineage, represented by Breen (1997), Brown (1973), Gellner (1983, 24-25), Goldthorpe (1985), and Tocqueville ([1835] 1945, 362-366). Although many authors in this school do not always explicitly differentiate the positional market from the material market (e.g., Malthus; Gellner), there is a core thesis that unifies this second literature. This core thesis is that although positional competition is zero-sum for any two given individuals within a given social hierarchy, it can improve the welfare of the larger society if the incentive structure in the positional market is properly structured.¹⁰ Compared to the first literature, this second literature has been less extensive.

Apparently, the two schools are not incompatible. Indeed, how to strike a balance between providing individuals with the necessary incentives for positional competition that contributes to welfare on the one hand and limiting their competitive consumption of positional goods on the other hand is an important challenge for welfare economics and institutional economics (Frank 1989, 1997, 2005; Ng 1997).¹¹ Ultimately, one cannot – and perhaps should not – completely eliminate a human's desire to show off because doing so will also greatly weaken the incentives for positional competition.

Hypotheses on Incentives in the Positional Market and Growth

The channel of social mobility is the institutional system that regulates individual and group' performance (i.e., rise-and-fall) in the positional market, and it regulates individual and group social mobility within a continuum between complete social immobility on the one end and "adequate" social mobility on the other end. An individual or group's real social mobility is the outcome from the interaction between that individual or group's endowment and effort on the one hand and the channel of social mobility on the other hand.

The channel of social mobility is an institutional system that consists of many interrelated institutional arrangements. Intuitively, in terms of its impact on economic growth, institutional arrangements fall into two ideal types: growth-promoting and growth-retarding. Due to incomplete knowledge and other (i.e., political) reasons, human societies will inevitably install some institutional arrangements in the channel of social mobility that are growth-promoting and some that are growth-retarding. As such, most societies' channel of social mobility is inevitably a mixture of growth-promoting and growth-retarding arrangements.

To fully understand the impact of institutional arrangements upon economic growth, two key notions need to be emphasized. First, production is the ultimate foundation of economic growth and learning (or the accumulation of knowledge) is the most critical engine of economic growth (Jones 2005). In fact, because production is a process of utilizing, testing, and producing knowledge, production and learning are essentially inseparable (Smith [1776] 1930, ch. 1). Second, knowledge can be true and productive (e.g., Newton mechanics), false and unproductive (e.g., Lysenko genetics), or even evil and destructive (e.g., knowledge for producing poisonous gas), just as entrepreneurship can be productive, unproductive or even destructive (Baumol

1990). In other words, knowledge has a quality dimension, in addition to a quantity dimension.¹²

We can assume that a growth-promoting institutional arrangement rewards those individuals who contribute constructively to social welfare. At the same time, it denies rewards to those individuals who do not contribute to social welfare and punishes those individuals who jeopardize social welfare. In contrast, a growth-retarding arrangement does just the opposite.

A growth-retarding institutional arrangement in the channel of social mobility thus means that some individuals or groups are denied the opportunity to advance their social positions even though they contribute to the welfare of the society. In other words, some barriers against those individuals or groups' upward mobility must exist within the positional market. As such, a growth-retarding institutional arrangement in the channel of social mobility is essentially a form of discrimination, and I shall call it "institutional discrimination."¹³ Institutional discrimination can range from the extreme form (i.e., slavery, racial or ethnic discrimination) to the less deplorable kind (e.g., gender and age discrimination)¹⁴

The presence of institutional discrimination must also mean that there is a privileged individual or group versus a discriminated individual or group. Only a privileged individual or group has the incentives and the capabilities to erect and enforce an institutional arrangement or system that can prevent the discriminated individuals and groups from rising while simultaneously preventing himself and his own group from falling in the positional market.

With the preceding discussion, we can now state the core thesis: Adequate positional incentives for productive individual effort and knowledge promote economic growth, whereas inadequate positional incentives for productive individual effort and knowledge depress economic growth. Before I substantiate the core thesis, however, we need to understand the interaction between the two markets.

Four Types of Society

Because there are both a material market and a positional market in human society, it is natural to assume that the two markets often provide different levels of incentives for individual effort that contributes to economic growth. Because the incentive structures in the two markets do interact with each other to shape the allocation of individual effort in society and individuals can leverage gains in one market upon gains in the other market,¹⁵ individuals can be expected to allocate their talent between the two markets according to the different levels of incentives in the two markets. Building upon the theory of "allocation of talent" (Baumol 1990; Murphy, Shleifer and Vinshy 1991), we can then come up with a general understanding about how different pairings of incentives for individual efforts influence individuals' allocation of their talent and how this allocation of talent affects the overall society's economic growth and political stability.

Different combinations of presence or lack of “adequate” incentives for individual efforts that are ultimately conducive to economic growth in the material market and the positional market can delineate various human societies into four “ideal types,” shown in the simple 2x2 matrix of Figure 1.¹⁶

Figure 1. Incentives in the Two Markets and Human Societies

Incentives in the Positional Market		Incentives in the Material Market
adequate, adequate (IV)	adequate, inadequate (III)	
inadequate, adequate (II)	inadequate, inadequate (I)	

The lower right quadrant of Figure 1 represents a society that offers inadequate incentives in both markets (type I). In such a society, wealth and positions are fixed by birth. Official ideologies in such a society not only sanction the fixed social hierarchy and discourage individuals from pursuing upward mobility, but also idolize economic hardship and discourage individuals from pursuing wealth (usually by promising some kind of happy after-life). In these societies, advances in either market often can only be achieved by usurpation with violent means. Most traditional societies belong to this category (Gellner 1983, 9-11), with slavery in the “antebellum” American South and Apartheid in South Africa being two prominent examples in more recent time. Primitive egalitarian societies represent a special kind of this type I society.

The lower left quadrant of Figure 1 represents a society that offers adequate incentives in the positional market but inadequate incentives in the material market (type II). In such a society, the channel of social mobility is relatively open, mostly because the state bureaucracy is largely meritocratic. At the same time, material benefits in such a society are usually, if not exclusively, allocated according to individuals’ social positions in the state bureaucracy. As a result, most individuals will devote their talent first to advance in the positional market and then use their gained social positions to seek gains in the material market. In such a society, individual effort will be mostly unproductive or even destructive for economic growth, because individuals will be more concerned with dividing-up the economic pie rather than enlarging the pie. Examples of this type of society include the Rome Empire, Imperial China, and most non-market economies in modern times (e.g., North Korea and Cuba today, China and Vietnam before their economic reform, the former Soviet Union and its satellite states).

The upper right quadrant of Figure 1 represents a society that offers adequate incentives in the material market but inadequate incentives in the positional market

(type III). Such a society will accumulate a class with wealth but without power and prestige. Eventually, this class of wealth has to choose between two options: a “voice” option that demands power in the society and an “exit” option that leaves the society (Hirschman 1970). The Glorious Revolution was a case in which the class with wealth chose to exercise the “voice” option; whereas human and physical capital flight from many developing countries to developed countries partly reflects the fact that those with human and physical capital, unable to advance in the positional market and unwilling to risk for the “voice” option, choose the “exit” option.

The upper left quadrant of Figure 1 represents the (ideal) modern industrial society that offers adequate incentives for individuals in both markets (type IV). In modern industrial society, both position and wealth are temporary, and individuals have to endeavor constantly in order to gain and maintain position and wealth. In modern industrial society, position and wealth reinforce each other, and individual effort in the two markets reinforces each other. Such an incentive structure strongly favors economic growth.

If we take the path toward modernization as a one-way street, we can paint a rough picture about how the two markets interact with each other and how their interactions shape the evolution of human society.

Human societies at the stage of band and tribe were materially egalitarian but somewhat positionally hierarchical. In these societies, occupying the leadership position is often materially punishing rather than rewarding. Moreover, producing too much materially often brings moral castigation and even physical punishment (including death) because of others’ “leveling” effort. Band and tribe thus represent a primitive form of type I society — there is little positional incentives and little material incentives beyond subsistence. Such an incentive structure strongly discourages accumulation and innovation (Miller and Cook 1998, 72-82). Not surprisingly, economic growth in such societies tends to be extremely slow, if there is growth at all.

The channel of social mobility becomes necessary only after the coming of the hierarchical society. This is so not only because there is no positional inequality (or stratification) before that, but also because barriers to social mobility can only exist in a hierarchical structure. A hierarchical society, by definition, demands a certain (often, significant) degree of domination, and only a privileged elite group can have both the incentives and the resources to enforce rules in the channel of social mobility. Moreover, after human societies moved out of the tribal stage, occupying a leadership position became materially rewarding (often very). As such, incentives in the positional market began to grow, individuals began to desire (others’) higher social positions, and positional competition became more intense. Because the emergence of positional inequality (and thus the positional market) inoculated more incentives for individuals and transformed a type I traditional society into a type II traditional society, it was a major step toward the making of civilization (Diamond 1997, ch. 14; see also Miller and Cook 1998).¹⁷

For most of our history, however, while most individuals certainly do want to take up the good positions, those positions are not designed for them. These positions are designed by and for those who are powerful enough to ensure that only members

of their own group can occupy those positions. In this sense, incentives for individual efforts in a positional market had long existed, and the problem for most of our history had been that most individual efforts were not rewarded in the positional market. There have always been political barriers that prevent individual effort from being rewarded in the positional market. Those who are powerful (and consequently, rich) normally construct a society's institutions to exclude others for fear of being politically replaced (Acemoglu and Robinson 2006). Indeed, the more powerful and rewarding the positions, the more incentives and the more resources their owners will have to protect their privileged positions. This explains why for much of our history that general upward social mobility can only be achieved through violent means.

Traditional societies can also evolve into a type III society. Today's China may represent a form of type III society.¹⁸ After its "opening up-and-reform," the Chinese state has institutionalized strong incentives in the material market (Nee 2000), yet retained powerful barriers in the positional market. In China, the domination of state apparatus by the Communist Party means that many elite administrative positions are off-limits to non-party members and loyalists (Bian, Shu and Logan 2001; Walder 1995; Walder, Li and Treiman 2000). In these societies, political elite also hold significant, if not enormous, advantage in the material market, and business elites often have to buy into (corrupted) power. As such, both communism and capitalism inevitably become infected by "cronyism" (Dickson 2008b).

Contrary to traditional societies where hereditary power and status determine wealth; power and status are more temporary in (ideal) modern industrial societies. Moreover, in modern societies, wealth usually determines power and status rather than the other way around (Gellner 1983, 24-25; Pagano 2003). Hence, in order to maintain power and status in modern industrial societies, one constantly has to accumulate wealth through investing in physical and human capital. As a result, the incentive structure in modern industrial society strongly favors productive entrepreneurship over unproductive entrepreneurship (Pagano 2003), and thus strongly favors growth. Indeed, it is only in modern industrial societies that adequate incentives are present for individuals in both markets. The modern industrial society, by opening adequate opportunities for advances in both markets, has been able to make an individual's efforts in the two markets reinforce each other. By doing so, the modern industrial society has been able to turn itself into a "perpetual growth society" and remain so ever since (Gellner 1983).

In that sense, a major challenge for pre-modern societies in their path toward modernization is how to reshape the incentive structures in the two markets. To achieve modernization (through economic growth), providing adequate incentives in the material market or the positional market alone is not enough: a state must provide adequate incentives in both markets.¹⁹ In other words, to achieve modernization, a society has to move from a state in which incentives in one or both markets are lacking to a state in which adequate incentives are provided in both markets so that individual efforts that contribute to social welfare will be rewarded not only materially but also positionally.

Two Historical Cases

This section adds a new twist to the interpretations of two important empirical cases in economic history to substantiate the thesis developed above. In both cases, institutions that underpin material incentives were relatively weak, and therefore we can better isolate the impact of institutions that underpin positional incentives. Moreover, the two cases represent two contrasting cases. The first case illustrates that rewarding the “right” group of individuals in the positional market facilitates economic growth. The second case illustrates that punishing the “right” group of individuals and rewarding the “wrong” group of individuals in the positional market depresses economic growth. Together, these two cases present a nuanced picture about the role of positional incentives in economic growth. When it comes to economic growth, while meritocracy and the rate of social mobility is of paramount importance, what kind of individual effort and knowledge that the positional market rewards, denies, and punishes matters even more.

Britain’s Transition to the Industrial Revolution

Before the sixteenth century, England was just like every other traditional society in terms of its channel of social mobility. Both the state and the Church enacted laws discouraging and prohibiting social mobility, while schools and churches taught the norm of accepting one’s “God-given” place in the social hierarchy. Social mobility for lower classes was possible only by entering the Church or by serving on the manor of a sponsoring lord (Herlihy 1973).

The situation began to change under the reign of Elizabeth I (1558-1603). By then, the state began to acquiesce upward social mobility by merchants, first through business and then by becoming aristocracy through land purchasing (Tawney 1941 18; Brown 1973, 61-63). By the middle years of James I (1603-1625), business had become “a plateau from which more prestigious position can be reached” (Brown 1973, 60), and “it was an age of unprecedented opportunities for those already endowed with skills, capital, or entrepreneurship” (Mendels 1976, 209).

The increasing upward mobility of the merchant class (especially the Atlantic traders) gradually led to an increasing representation of merchant class in the British parliament. The process started first in the City of London. From 1509 to 1558, among the 36 members of the House of Commons from the City of London, 26 were merchants. This pattern of increasing presence of merchants in the House of Commons then gradually diffused to other cities and eventually resulted in a substantial presence of merchant interest in the House of Commons. In 1584, merchant interest was still marginal in the House of Commons. Other than the merchants that were sent from the City of London during a span of 50 years, there were few merchants in the House of Commons. By 1640, however, Atlantic traders alone had regularly occupied 50 to 70 seats of the 550 seats of the Long Parliament. This increasing representation of merchants in the House of Commons undoubtedly played an instrumental role in a series of institutional reform that finally laid the

institutional foundation of an industrial capitalist society, including the Glorious Revolution (Acemoglu, Johnson and Robinson 2005; Zhang and Gao 2004).

By allowing upward social mobility for its merchant class, Britain was able to sustain its economic growth even before the Glorious Revolution. “The remarkable fluidity of English social stratification in the first two phases of industrialization undoubtedly contributed to the flourishing of industrial enterprise through individual initiatives” (Mendels 1976, 213). “Without these changes in patterns of mobility, . . . it is unlikely that the rapid expansion of industrial capitalism between 1540 and 1640 would have occurred” (Brown 1973, 63).²⁰

Indeed, robust economic growth was achieved in this period in which institutions governing incentives in the material market were present but relatively weak. From 1558 to 1688, robust property rights was generally lacking in Britain just like in many other traditional societies. The Statute of Monopolies (as a major step toward protecting innovation) and the Glorious Revolution, (as the defining moment of constitutional monarchy), the two events singled out by North and his co-workers as the decisive steps toward robust property rights protection (North and Thomas 1973; North and Weingast 1989), did not come until 1624 and 1688 respectively, long after the merchant class had achieved significant upward social mobility. During the same period, however, incentives in the positional market (for the merchant class) gradually strengthened. The merchants were able to leverage their gains in the material market to gain upward social mobility in the positional market,²¹ thus sustaining their individual effort despite inadequate incentives in the material market.

In terms of the four types of society in Figure 1, Britain between 1558 and 1688 represented a specific kind of type II society. Although institutions that underpin material incentives were relatively weak, there were enough incentives in the positional market for individuals (i.e., merchants) to power economic growth. Merchants were able to leverage their material wealth into upward social mobility in the positional market. Rewarding the right group of individuals that contributed positively to economic growth was indeed able to power economic growth, somewhat independently from material incentives.

Imperial China against Science

One of the most perplexing puzzles in economic history has been the “Needham puzzle”: Imperial China had failed to develop modern science, despite being a world technological leader until at least the Northern Song dynasty (960-1127 AD).²² While Imperial China’s failure to develop modern science was due to a peculiar combination of institutional and cultural factors (Lin 1995; Mokyr 1990, ch. 9; Needham 1969), an immediate cause behind that outcome was institutional discrimination. Only this time, the institutional discrimination was directed against those who pursued scientific and technological knowledge.

In the Western Han dynasty (202 BC to 8 AD) under the reign of Emperor Wu (141 to 87 BC), Dong Zhong-shu (a special advisor to the Emperor) made a modified Confucianism the official ideology of Imperial China. A critical modification that

Dong introduced to the original Confucian teaching was that *ge-wu* – that is, seeking knowledge for its own sake by studying nature according to *The Great Learning [Da-xue]*, was de-emphasized. From then on, *ge-wu* became merely part of the necessary self-cultivation effort toward a state bureaucrat (i.e., a mandarin). Because governing the state did not seem to require much scientific and technological knowledge, only moral integrity and wisdom, classics (and history) became the only legitimate fountain of knowledge for the Chinese elite. With the simultaneous introduction of the state examination system for mandarins (commonly known as *ke-ju*), studying classics toward a mandarin became the only path for upward social mobility for educated Chinese (Ho 1962, 92).

Furthermore, fearing the “replacement effect” (Acemoglu and Robinson 2006), Chinese mandarins, who became mandarins only because of their mastery of classics thus were a class without scientific and technological knowledge (Balazs 1964, 9), erected an institutional system that prevented scientists and artisans from gaining upward social mobility. Under the system, scientists and artisans were far more likely to be ridiculed or even punished for “playing with exotic techniques (*qi-ji-yin-qiao*)” than being encouraged and rewarded for their ingenuity by the state (Needham 1969, 31).

This institutional discrimination against science and technology was so pervasive and profound that it was alive and well even in the Tang dynasty (618 to 907 AD), widely believed to be the most open and cosmopolitan dynasty in Chinese history. In 645 AD, a local official in northern China successfully built a greenhouse (by burning charcoal inside a room) and grew fresh vegetables and fruits during winter. When the official presented those fresh vegetables and fruits to Emperor Tai-zong – widely believed to be the most open-minded emperor in Chinese history, – however, the official was instantly reprimanded and demoted for the crime of trying to please the emperor with exotic techniques (Si-ma [1085] 1935, vol. 198)²³

Overall, under the incentive structures in Imperial China studying classics became extremely “profitable” and studying science and technology became extremely “unprofitable” (Wang 1985). Consequently, consistent with the theory of “allocation of talent,” the Chinese society steadily allocated less and less talent to the pursuit of scientific and technological knowledge. Almost all of its best and brightest were eventually drawn into the unproductive but profitable enterprise of studying classics, and very few gifted Chinese devoted their time to pursue scientific and technological knowledge in Imperial China (Lin 1995, 284-285). Under such an institutional system, it is no wonder that Imperial China could not develop modern science.

In terms of the four types of society in Figure 1, Imperial China also represented a specific kind of type II society. As in most other pre-modern societies, material incentives were also weak in Imperial China. Positional incentives in Imperial China, however, were relatively strong when compared to most other traditional societies. Unfortunately, contra Britain between 1558 and 1688 where the incentive structure in the positional market rewarded productive kinds of individual effort, the incentive structure in the positional market in Imperial China rewarded the unproductive kind of knowledge (i.e., classics) and discriminated against the productive kind of

knowledge (i.e., science and technology). As a result, under Imperial China, science and technology as a vital engine of economic growth was depressed.

How Does the Channel of Social Mobility Influence Growth?

The preceding discussion suggests that the channel of social mobility affects economic growth primarily by regulating incentives in the positional market. It is easier to discuss the impact of the channel of social mobility upon economic growth by focusing on the negative impact of institutional discrimination upon growth. I focus on how institutional discrimination negatively influences economic growth by systemically discouraging the productive effort of individuals and groups, thus blunting their potential contribution to growth.

First, institutional discrimination reduces the incentives to work of both the discriminated group and the privileged group. Because institutional discrimination means low probability of upward social mobility thus less incentive in the positional market for the discriminated group, individuals of the discriminated group have less motivation to strive. At the same time, because institutional discrimination also means less competition in the positional market (and quite often, in the material market as well) for the privileged group, individuals of the privileged group can afford to labor less. Institutional discrimination thus reduces the whole population's incentives to work, as Tocqueville ([1835] 1945, 362-363) so astutely observed in the antebellum American South.

Second, institutional discrimination also means that children of the discriminated group will have less chance of being born into families of high social positions, thus less physical capital to invest in education. Worse, because institutional discrimination often pushes families and individuals of the discriminated group into engaging in wasteful "compensatory consumption" (Caplovitz 1967), they further drain their already limited capital that can be invested in productive learning and entrepreneurship.²⁴

Third, because social status is important for an individuals' motivation and decisions on things such as going to college, getting out of the ghetto, and even educational attainment (Akerlof 1997; Akerlof and Kranton 2000; Feistein 2004), institutional discrimination also means that children of the discriminated group will also have less incentive to learn. Hence, institutional discrimination does not merely influence one generation's incentives to learn; it influences the incentives to learn and the amount of physical capital to invest in learning, one generation after another, through a self-reinforcing vicious cycle.

Fourth, because economic growth fundamentally depends upon the growth of knowledge, population is a nation's "ultimate resource" of economic growth. A large population means not only a larger market (thus larger return for innovation), but also a larger talent pool for producing knowledge (Jones 2005; Kremer 1993; Phelps 1968; Simon 1981). Institutional discrimination, however, inevitably leads to underutilization of a nation's talent pool. Under institutional discrimination, the talent pool of the discriminated group will go under-discovered or undiscovered, thus going

“wasted in misery and agony” and contributing to economic growth less than it potentially can (Lewis 1955, 108, 410; Marshall [1920] 1982, 176). Moreover, because individuals of the privileged group will also have less incentive to produce and learn under institutional discrimination, the other part of a nation’s talent pool is also under-utilized. Thus, institutional discrimination is essentially like “halving a nation’s population” (Phelps 1968, 511-512), and it cannot but be bad for growth.

Fifth and more profoundly, institutional discrimination leads to institutions and culture that reproduce and strengthen the existing social order. Institutionally, the privileged group will erect barriers to upward social mobility against the discriminated group because the former will deem any encroachment upon its privileges by the latter as vitally threatening: the fear of “replacement effect” through re-distribution of wealth and power looms large in the privileged group’s calculation (Acemoglu and Robinson 2006; Engerman and Sokoloff 1997, 272-274; Sokoloff and Engerman 2000, 221-223). Culture wise, a society with institutional discrimination will be very much like the traditional society depicted by Granato and his colleagues: “Social norms encourage one to accept one’s social position in this life. Aspirations toward social mobility are sternly repressed. Such value systems help to maintain social solidarity but discourage economic accumulation” (Granato, Inglehart and Leblang 1996, 609-610; see also Gellner 1983, 9-11).

Finally, the channel of social mobility also affects economic growth by regulating the level of social tension and division and, in turn, the likelihood of cooperation and coordination inside a society. Institutional discrimination widens the divisions between the privileged group and the discriminated group. Institutional discrimination also inflicts injustice upon the discriminated group. As a result, discontent and animosity against the privileged group inevitably arises within the discriminated group, and social tension inevitably develops between the two groups. Social tension and divisions make social cooperation and coordination more difficult, and social coordination and cooperation is critical for sustaining economic growth (Alesina et al. 2003; Rodrik 1999, 2000). Worse, precisely because injustice causes social tension and instability, a society with institutional discrimination (especially the extreme kind like slavery and Apartheid) often has to spend a significant amount of resources to control the discriminated group, leaving less resources for investing in stimulating economic growth. Under institutional discrimination, part of the population will inevitably get into the unproductive and often destructive business of enforcing the unjust institutional system, thus leaving an even smaller population for productive effort: institutional discrimination is worse than “halving a nation’s population.”

Theoretical Implications

By re-discovering and extending the fundamental insight that positional incentives also drive human behavior, the preceding discussion suggests that the channel of social mobility, which underpins the incentive structure in the positional market, constitutes a critical dimension of IFEG. Our recognition that the channel of social

mobility is a critical dimension of IFEG sheds important new light upon the relationship between (positional) inequality, positional incentives, redistribution, and economic growth.

First, while material and positional inequality drives an individual's effort, it alone cannot sustain an individual's effort in the long run. Specifically, in the positional market, the channel of social mobility works together with positional inequality to regulate individual effort. When inequality is coupled with a relative open channel of social mobility, individual effort can be easily sustained. In contrast, when inequality is coupled with a relative closed channel of social mobility, individual effort will be stymied. As Gellner (1983, 24-25) put it, "whereas men can tolerate terrible inequalities . . . there must have an illusion or reality of social mobility and that illusion cannot persist without at least a measure of reality." Hence, in order to sustain an individual's effort in economic development (especially in its early stage in which inequality tends to increase rapidly), the state must maintain people's tendency to believe in the possibility of upward mobility and thus their tolerance for some inequality in the early phase of economic development (the "tunnel effect") before the "tunnel effect" wears off and a sense of injustice and the demand for unproductive redistribution start to sink in (Hirschman 1973, esp. 550-553).²⁵

Second, recent studies point to an important link between an individual's belief in their "prospect for upward social mobility" (the "POUM" [prospect for upward social mobility] hypothesis or "belief in a just world") and their preferences for redistribution: those who believe in a "just world" are less likely to demand redistribution (e.g., Alesina and La Ferrara 2005; Bénabou and Ok 2001; Bénabou and Tirole 2006). Taking together the discussion here and the notion that redistributive politics is usually bad for economic growth (Alesina and Rodrik 1994), we ask whether good redistributive measures contribute to economic growth partly by facilitating the upward social mobility of the disadvantaged, thus sustaining their "belief in a just world" and their effort to contribute to social welfare while simultaneously reducing their demand for unproductive redistribution. In Hirschman's words, good redistribution measures help sustain the "tunnel effect" that is necessary for sustaining economic development (Hirschman 1973).

Third, the new understanding about how the interaction between the channel of social mobility and redistribution affects economic growth allows us to better understand the role of the expansion of publicly-funded mass education, especially primary education, during the course of economic development.²⁶ In cross-country growth regressions, expansion of publicly-funded primary education has been found to be a strong predictor of economic growth for developing economies and for developed economies at their early stages of economic development (Lindert 2003). Because the difficulty of borrowing to send children to school under imperfect capital market affects the poor more (Aghion, Caroli and Garcia-Penalosa 1999, 1621-1624), public investment in primary education is a means of redistribution that enhances poor children's capability and opportunity. Public investment in primary education provides poor children with the initial investment in human capital that will give them the first push in the channel of social mobility and thereafter moves them into

more productive positions (Marshall [1920] 1982, 179-180). Expansion of publicly funded primary education thus contributes to economic growth not only because it directly diffuses knowledge, but also because it is “a major commitment [or more precisely, a great facilitator] to greater upward social mobility” (Easterlin 1981, 14). In other words, expansion of publicly funded primary education facilitates economic growth by strengthening incentives for individual effort in the positional market.

In contrast, during the early stage of economic development, public under-investment in primary education effectively means an elitist bias in the educational system or a form of institutional discrimination against children from low-income families (Lindert 2003, 325). Consequently, public under-investment in primary education must be bad for growth, as Marshall had astutely pointed out: “There is no extravagance more prejudicial to the growth of national wealth than that wasteful negligence which allows genius that happens to be born of lowly parentage to expend itself in lowly work” (Marshall [1920] 1982, 176).²⁷ Who knows, among those poor kids, one may find many future Newtons and Einsteins!

Fourth, once we recognize the channel of social mobility as a critical dimension of IFEG and the growth of knowledge as the central driving force behind economic growth, we can also better appreciate the role of science and technology in driving growth, especially modern economic growth. Because modern industrial society has made scientists a social class of high status and prestige (although with relatively low pay), it has been able to sustain scientists’ search for knowledge. As such, the scientific community has consistently attracted some of the best and brightest in the society, despite its relative low pay. Most scientists may well make more in the corporate world, but they choose to stay in academia to hunt for fame and a place in history, and to enjoy the high social status (Fershtman, Murphy and Weiss 1996; Fershtman and Weiss 1993)! Marshall was perhaps speaking for himself and for most of us too, “[t]hose who do most to advance the boundaries of knowledge seldom care much about the possession of wealth for its own sake” (Marshall [1920] 1982, 4).

Finally, understanding the channel of social mobility as a critical dimension of the IFEG also allows us to better understand some earlier theoretical contributions on positional market and economic growth. Let me briefly emphasize two issues here.

First, once we recognize the channel of social mobility as a critical dimension of IFEG and the growth of knowledge as the central driving force behind economic growth, it becomes evident that Hirsch’s thesis that over-competition in the positional economy through “over-education” must necessarily be bad for growth needs to be qualified (Hirsch 1977, ch. 3). Because the growth of human civilization ultimately depends on the growth of productive knowledge, there is no such thing as “over-education” when the knowledge being taught is productive. Only when education in unproductive knowledge confers social positions and symbolizes status of “cultivated men” (Weber 1978, 1001-1002), as in the case of Imperial China described above and the learning of classics in American higher education scathingly attacked by Veblen ([1899] 1967), will education – over or not – be inimical to growth.

Second, once we recognize that institutional discrimination systematically undermines individuals’ incentives to produce, it becomes apparent that Gary

Becker's economics of discrimination is utterly incomplete, despite being a powerful insight and providing part of the micro-foundation for the central thesis developed here (Becker [1957] 1971). By focusing only on discrimination's direct material cost (e.g., return for white capital and black labor) while largely neglecting the impact of discrimination on incentives in the positional market and its wider effects upon economic growth, Becker has vastly underestimated the macro-economic cost of discrimination.

Empirical Implications

Recognizing that the channel of social mobility is a critical dimension of IFEG can also shed new light on some more recent and on-going "natural experiments" in growth.

In the 1960s, many pundits predicted that East Asia's prospect for economic development would be less bright than that of resource-rich Latin America. The contrasting pattern of development between East Asia and Latin America after World War II thus poses a fundamental puzzle for economics and economists.

The neoclassical thesis that the East Asian miracle has been largely driven by physical input or accumulation of human capital through learning-by-doing provides us with a clue but not the real answer (e.g., Lucas 1993; Young 1995). If physical input and accumulation of human capital has caused the East Asian miracle, why has it not done so in other parts of the world such as Latin America? Moreover, why hasn't the miracle occurred in all East Asian countries, but has largely restricted itself to some East Asian countries (e.g., the four Asian Tigers)? In light of the thesis developed above, one of the major reasons behind the two regions' contrasting pattern of development may have been the differences in their channel of social mobility.

In East Asia in general and in East Asian states that were more influenced by Confucian teaching, especially, a Confucian teaching-based *ke-ju* system that allows and encourages social mobility through high learning and meritocracy has long existed.²⁸ Hence, in these East Asian states, an institutional system that encourages upward social mobility through meritocracy was already in place before its economic take-off although the system had encouraged the unproductive kind of learning (i.e., learning classics) before the coming of the West. Once these states accepted the new religion of science and technology, it was easy for them to marry their meritocratic channel of social mobility with science and technology (i.e., achievements in science as merit). A direct result of this marriage has been that these Confucian East Asian states have been able to produce not only many scientists and engineers, but also a whole new "class" in the society – the "technocrats." These technocrats have been instrumental in formulating industrial policies for the East Asian "development state" and engineering the East Asian miracle (Wade 1990).

In contrast, in many Latin American countries, power and privilege has long been monopolized by a rather closed elite class: these countries represent a kind of type III society with adequate material incentives but inadequate positional incentives.

For the elite in these countries, preventing the “replacement effect” or minimizing political change by blocking the channel of social mobility holds priority over facilitating economic growth. Hence, institutional arrangements in Latin American countries have generally emphasized class, nobility and earlier entry (Sokoloff and Engerman 2000, 223-228). These institutional arrangements discourage social mobility and they persist even today (Lovell and Wood 1998). Two sets of evidence stand out. Whereas bureaucracy in East Asia is the most meritocratic among developing countries; bureaucracy in Latin America is the second least meritocratic after Sub-Saharan Africa (Evans and Rauch 1999, 757). Whereas East Asian states usually allocate more resources to primary education; Latin America states have consistently allocated more resources to higher education than to primary education, indicating a strong elitist bias (Lindert 2003).

As a result, the “tunnel effect” that is necessary for sustaining economic development had rarely persisted while demand for redistribution had emerged from time to time in many Latin American states (Hirschman 1973), and Latin America seems to have been locked into a trap of persistent low social mobility, high inequality, social upheaval, and low economic growth or growth collapse (Anderson 2000, 2001; Rodrik 1999). One can certainly wonder whether the recent “left” turn of many Latin American states at least partly reflects some sort of demand for redistribution.

Differences in the channel of social mobility may also partly account for another “natural experiment” inside East Asia: the contrasting path between South Korea and the Philippines. In 1960, South Korea and the Philippines stood roughly on the same footing in terms of their level of economic development, with the Philippines being far better endowed than South Korea in terms of natural resources. After thirty years, however, the contrast of the two countries could not be starker. South Korea is now a developed country, while the Philippines now lag behind countries like Thailand in terms of economic development. Once again, part of the cause might have been that whereas the South Korean society encourages upward social mobility through personal merit, the Philippines, like its Iberian parents, emphasizes class, status, and nobility. Again, one piece of evidence is that bureaucracy in the Philippines has been the least meritocratic in East Asia whereas the bureaucracy in South Korea has been the second most meritocratic (Evans and Rauch 1999, 763).

India’s economic backwardness can also be partly explained by a similar logic. Discriminations based on caste, tribe, class, and ethnicity run rampant in India, and these discriminations discourage individual effort. Moreover, there has also been a strong elitist bias in India’s education policy (Lindert 2003, 338).

Finally, acknowledging social mobility’s impact on economic growth also allows us to better understand the recent Chinese experience. Immediately after the founding of the People’s Republic of China, the Chinese Communist Party (CCP) abolished private business, and businessmen were institutionally discriminated against. After the launching of open-and-reform, however, China’s channel of social mobility began to open for its business elite. Culturally, to get rich is no longer despised but “glorious.” Institutionally, CCP recently promulgated the doctrine of the

“three represents [*sange daibiao*]” to encourage the new rich to join the Party and become part of the power elite in the society (Dickson 2008a),²⁹ although mostly on the margin. Essentially, the Party is trying to achieve what Britain had achieved in the sixteenth and seventeenth centuries: to allow its new business elite to gain some limited but legitimate political power through upward social mobility so that they will exercise the option of “voice” without violence, rather than the option of “exit,” or worse, “voice” with violence.³⁰

Concluding Remarks

For too long, most sociologists have not seriously considered the possibility that social mobility may actually influence economic growth. Meanwhile, economists have focused almost exclusively on material incentives, ignoring Smith’s fundamental insight that “vanity” also drives human behavior. By bringing many fragmented discussions scattered in the literature into a more coherent framework, I advance that the channel of social mobility – the institutional system that underpins the incentive structure in the positional market – is a critical dimension of IFEG. The channel of social mobility structures incentives in the positional market, just as property rights structures incentives in the material market. Understanding the interaction between the incentive structures in the two markets of human society helps us better understand economic history.

The discussion here points to an important direction for future research. We should pay more attention to the different institutional arrangements that underpin social mobility (i.e., what it rewards, denies, and punishes) rather than to the rate of social mobility per se. More specifically, if we can measure the quality of those institutional arrangements, we can then more rigorously examine the relationship between the channel of social mobility and economic growth with cross-country growth regressions.

At an even more fundamental level, admitting that human behaviors are driven by not just material gains may eventually nullify the whole neoclassical economics approach. Although some behavioral economists (e.g., Akerlof 2002, 2007; Akerlof and Kranton 2000) have (re-)discovered that human behaviors are really driven by more than material gains, most economists have stayed with the neoclassical economics model. Yet, neoclassical economics is incompatible with a non-materialism approach toward human behavior.³¹ Fundamentally, a large portion of human behavior is socially (and thus also historically) constructed, and this social construction includes not only material interest but also emotional and ideational influence. Thus, economics cannot start with a neoclassical economics baseline: economics is doomed to be a hopeless enterprise if it continues to assume atomistic individuals without a society (for a more detailed discussion, see Tang 2010). Echoing Richard Thaler (2001) but going even further, economics has to move away from *Homo economics* to the real *Homo sapiens* in real human societies (see also Akerlof 2002; Akerlof and Kranton 2000; Ng 1997). We need a more sociological approach

toward economics, or better yet, bringing sociology and economics together, in the spirit of Veblen institutional economics (Hodgson 2007).

Finally, the discussion here also has an important and straightforward policy message for promoting economic growth. Because institutional discrimination is not only morally unjust but also economically costly, states should eliminate all forms of institutional discrimination in their positional market. On this front, “interest is reconciled with morality” (Tocqueville [1835] 1945, 365).

Notes

1. Here, we are primarily interested in the vertical dimension of social mobility. The functionalism school argued that social stratification serves a social purpose of “placing and motivating individuals in the social structure,” thus implying that it may play a role in economic growth. See Davis and Moore (1945, 242).
2. I discuss the overall IFEG in greater detail elsewhere. For a preliminary discussion, see Tang 2006. According to my formulation, IFEG is a system that consists of at least six major dimensions, with the channel of social mobility being one of them. “Institutions are the humanly devised constraints that shape human interaction.” Institutions include both formal and informal types (North 1990, 3-4). An institutional system contains many inter-connected institutional arrangements (Lin and Nugent 1995, 2307). Here, I cannot get into the question whether growth “for its own sake” is inherently good. I reject such a view, although I shall maintain that for much of human history and for many developing countries today, economic growth is generally good.
3. Elman Service (1971, 150) attributed this “tendency in modern thought to see exploitation, wealth expropriation, and greed as causes of the rise of authority, classes, and the state” to Marx’s and Marxism’s profound influence over social sciences.
4. Service (1971, 1975) reviewed and interpreted the available evidences back then. He reached the same two conclusions without stating them as explicitly as I do here.
5. We should differentiate two types of positional inequality (or hierarchy): domestic versus political (Service 1975, 49-50). Domestic hierarchy operates within a family or a clan. In contrast, political hierarchy extends beyond a family or a clan. We are interested in political hierarchy here.
6. Anthropologists explain the transition from a mostly egalitarian band/tribe to a hierarchical chiefdom as an outcome that was driven by a combination of population growth, scarcity of resources, settled agriculture and external threat (e.g., Diamond 1997; Earle 1997; Johnson and Earle 1987; Service 1971, 1975).
7. Of course, this does not mean that occupation of any leadership position in human society thereafter is always materially rewarding, at least not in the short run.
8. I retain the label of “positional goods” because it has gained currency.
9. As perceptively pointed out by Tilman (2006) and Trigg (2001), some critics of Veblen’s theory of conspicuous consumption (and by implication, Bourdieu’s work too) have been using a very restricted reading into the phenomenon of conspicuous consumption, thus missing a great deal of social reality.
10. This notion again testifies the geniuses of Bernard Mandville’s and Adam Smith’s insight that individuals’ selfishness can produce public good, given proper incentive structures.
11. Luxury tax is one such measure to strike such a balance, and income tax to a less extent. In fact, Frank (1989, 1997) advocated for a progressive consumption tax explicitly on the ground to curb conspicuous consumption and increase happiness. Ng (1997) endorsed Frank’s position.
12. Most economists have treated knowledge as if it has only a quantity dimension. The fact that knowledge has a quality dimension has profound implications for understanding economic growth. I develop a growth model that takes the quality dimension of knowledge into account elsewhere.
13. Discrimination means to make a distinction between people on the basis of class or other categories, without regard to their merit. Defined as such, discrimination captures a very broad phenomenon, including an individual’s dislike of another individual (i.e., prejudice, as a form of individual discrimination). “Institutionalized discrimination” usually denotes formally legalized discriminations (i.e., slavery in the “antebellum” American South, apartheid in South Africa). Institutional

discrimination here covers both informal and formal discriminations that are backed by explicit or implicit power or domination, in Weberian terms (Weber 1978, 53-54, 61-62, 340-342, 926-927, 941-946). Thus, institutional discrimination is broader than institutionalized discrimination, but narrower than discrimination. Institutional discrimination is related to other concepts such as social closure/exclusion/barrier, power/domination, stratification, class, status, and inequality, all of which cannot be elaborated here.

14. The most extreme form of social in-mobility is ethnic cleansing. Under ethnic cleansing, one group seeks to completely eliminate another group's chance of social mobility by annihilating the latter physically once and for all. Hence, slavery (especially in ancient time), however deplorable morally it might have been according to modern standard, does represent progress when compared to killing the prisoners-of-war (which is a type of ethnic cleansing) because slavery at least preserves the growth of population. The growth of population had been a critical engine of economic growth for much of human history (Jones 2005; Phelps 1968).
15. For earlier discussions on the interaction between the two markets and its impact upon growth, often without explicitly differentiating the two markets, see Baumol (1990); Fershtman, Murphy and Weiss (1996); Fershtman and Weiss (1993); Hirsch (1977); Knell (1999); and Pagano (2003, 640-642).
16. Apparently, what level of incentives is adequate is both an objective and a subjective question.
17. Hence, positional competition became a universal trait of human beings only after human society evolved into a hierarchical society, as Rousseau (1755 [1993]) recognized long ago. Rousseau thus provided the first (though rough) explanation for the origin of our quest for status, recognition, honor etc. (Shaver 1989). Interestingly enough, Karl Popper ([1945] 1995, 174) labeled tribal society as a "closed society" and post-tribal society as an "open society," and stated explicitly that in open societies "many members strive to rise socially, and to take the places of others."
18. Vietnam, being closely similar to China, is also a type III society. Indeed, most sociologists on transitional economies put Vietnam and China under one category (Walder 2003). India may also belong to this type III society, although in a different way. In India, the caste system still stigmatizes upward social mobility for individuals from lower castes. For much of the twentieth century, most Latin American countries have also been type III societies.
19. For instance, secure property rights for the slavers in the American South surely did not help the overall economy in the pre-Civil War American South, nor did it help many Latin American economies (Engerman and Sokoloff 1997).
20. Brown was sloppy here: most economic historians probably would not identify the economic growth of Britain between 1540 and 1640 as "industrial capitalism." For a critique, see Beier 1975.
21. The possibility that merchants tried to gain upward social mobility in order to protect their material gains does not invalidate our thesis. In fact, it strengthens it.
22. There seemingly is a contradiction here: If Imperial China's channel of social mobility had been so strongly against those who pursued science and technology, why did Imperial China lead technologically for such a long time? The short answer is two-fold. First, Imperial China had a large population, thus a large talent pool from which to draw. Hence, even when its institutional arrangements were strongly against those who pursued science and technology, there were some innovations. Second, for much of the time, Imperial China was a unified state with a unified language, currency, and legal code. This unity greatly reduces transaction cost (Epstein 2000; Olson 1993). I address the "Needham puzzle" in greater detail elsewhere.
23. Indeed, Si-ma Qian, a high mandarin trained in the institutionalized Confucianism tradition in the Northern Song dynasty (which immediately followed the Tang dynasty), recorded this event not as an indictment of Tai-zong's blunder but rather a testimony of Tai-zong's integrity and wisdom!
24. I thank a reviewer for alerting me to this mechanism and the literature on "compensatory consumption."
25. Evidently, a partial theory of revolt and revolution can be developed from Gellner's and Hirschman's thesis on individuals' demand for redistribution. One can certainly take institutional discrimination as a source of injustice (or a form of fundamental injustice), and injustice often induces revolt (Moore 1978).
26. Because it may be possible to achieve mass education without public funding, I use publicly-funded mass education to avoid confusion.

27. Indeed, Marshall ([1920] 1982, 179-180) advocated for the expansion of publicly-funded mass (primary) education explicitly on the grounds of furthering social mobility for children of the disadvantaged group.
28. These countries include China (including Chinese mainland, Hong Kong, Macau, and Taiwan), Japan, North Korea, Singapore, South Korea, and Vietnam.
29. The doctrine of the "three represents" proclaims that the CCP always represent "the demand by advanced production force, the direction of advanced culture, and the interest of most Chinese people."
30. As Andrew Walder (1995) noted, the institutional arrangement that non-party loyalists can only become another type of elite means that the Chinese political system has an inherent vulnerability. The "three represents" can be understood as a measure designed to partially reduce this vulnerability.
31. Although one can argue that neoclassical economics is compatible with idealism by stating, for instance, "I did this because I got high by doing this," doing so renders neoclassical economics tautological and any testing of neoclassical economics explanations impossible (Bunge 1996, 366-370). Raymond Boudon's "cognitive rationalism" was moving toward adopting the non-materialism approach, but even he admitted the problem of being tautological (Boudon 1998, 826).

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