

A cultural-institutional market failure¹

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29 March, 2011

Abstract. Culture and institutions co-evolve, each influencing the dynamic trajectory of the other. The joint influence of culture and institutions may result in one or more cultural-institutional equilibria in which each provides conditions resulting in the stationarity of the other. Here I explore the idea (motivated by experimental and other evidence) that where market incentives (as opposed to other allocation mechanisms) play a greater role in regulating economic interactions, pro-social values may be less prevalent. I show that even if institutions are adopted in a decentralized Coasean fashion so as to minimize transactions costs, the resulting cultural-institutional equilibrium will be inefficient in the sense that by restricting the extent of the market, a social planner could increase material well-being of the society. This cultural-institutional market failure arises because pro-social values facilitate economic exchange, and in adopting contractual and other institutional choices, economic actors do not take account of the endogenous nature of preferences and hence do not internalize the negative externalities associated with market incentives.

Adam's Fallacy

The fallacy, according to Duncan Foley (2006):xii is “the idea that it is possible to separate an economic sphere of life, in which the pursuit of self interest is guided by objective laws to a socially beneficent outcome, from the rest of social life, in which the pursuit of self-interest is morally problematic.” He thus challenges “the foundation of political economy and economics as an intellectual discipline,” which, he writes, is based on the “separation of an economic sphere... from the much messier, less determinate and morally more problematic issues of politics, social conflict and values.” Here I propose to correct Adam's fallacy by integrating

¹ To celebrate the life and work (so far) of Duncan Foley. Thanks to the Behavioral Sciences Program of the Santa Fe Institute for support of this research. The model presented here draws on Bowles (2011) and will be extended in Bowles (2012)

the “economic sphere” with the world of “politics, social conflict, and values.” I find that even if the ideal conditions thought to ensure the socially beneficent outcomes of a competitive private economy are in place, the economic result is less than what Smith's invisible hand promised. The reason is that in addition to producing goods and services, the economy produces people – favoring some preferences and identities over others – and the amoral self interest that would proliferate in an idealized economy for which the invisible hand would do its wonders (should such an economy ever exist) would not provide the cultural underpinnings of a well working system of exchange.

A cultural-institutional equilibrium

I call the result a cultural-institutional market failure because it results from the effects of markets and other institutions on the cultural transmission of preferences and beliefs and the corresponding effects of the distribution of preferences and beliefs (culture) in a population on the kinds of contracts, forms of economic organization and other economic institutions that economic actors will be motivated to adopt. The main conceptual challenge is thus to model the joint dynamics of individual preferences and beliefs and population-level institutions, one in which both institutions and people are endogenous.

The two foundations of such a model must be a representation of the way that institutions affect the evolution of culture and the way cultures affect the evolution of institutions. With respect to the first, the idea that institutions affect culture is commonly illustrated by the role of families and religious and educational organizations in the socialization process; but it extends to institutions less transparently associated with the evolution of norms, tastes and the like (Bowles (1998)). Supporting evidence comes from studies of parents' child-rearing values: for example, parents value obedience more in their children and independence less if at work they take rather than give orders (Kohn, Naoi, Schoenbach, *et al.* (1990)). My co-authors and I have also documented the influence of cooperative production (hunting large animals, for example, or the cooperative provision of local public goods) on values supporting cooperation in other settings (Gintis, Bowles, Boyd, *et al.* (2005).) There is also extensive evidence that the explicit economic incentives on which markets run either reduce the psychological salience or

inhibit the learning of social preference such as fairmindedness, altruism, reciprocity and intrinsic motivation to contribute to the public good (Bowles and Polanía Reyes (2011), Bowles (2008)).

Guido Tabellini (2008) provides evidence of a quite different sort: generalized (rather than familial) trust appears to thrive in countries with a long history of liberal political institutions

Tabellini also shows that the reverse relationship also holds: the quality of public institutions is associated statistically with more generalized trust. The effect of culture on institutions arises because the kinds of preferences and beliefs that are prevalent in a population will influence the comparative advantage of particular institutions. By institutions I mean formal and informal formal rules governing social interactions, from the organization of families and firms to the structure of government. The extent to which economic activity is governed by markets as opposed to states, firms, communities, families, or other institutions differs across societies and over time, and it is subject to deliberate alteration both by states and by individual economic actors (Coase (1937), Ben-Porath (1980), Ostrom (1990)). These choices will depend on the distribution of individual preferences and beliefs in a population, that is on its culture.

The mutual dependence of culture on institutions and the reverse leads one to expect a limited set of compatible matches between the two. Recently developed models of the coevolution of cultures and institutions (Bowles (2004), Bowles and Gintis (2011)) allow a precise formalization of this thesis. I simplify by representing institutions by a measure of the extent to which markets (as opposed to other institutions) allocate resources (m), while representing preferences by a single-valued measure of civic virtue (v), where the latter represents the prevalence of norms that contribute in essential ways to the functioning of the institutions of a liberal market economy, including such things as truth telling, adherence to socially valuable norms, a strong work ethic, and generosity towards others, even strangers. To make the model concrete, in a population in which there are some people who are amoral and self interested and others who act on the basis of the social preferences just mentioned, then v could be the fraction of the population who are the latter type. In the same population there might be two allocation mechanism – markets and collective allocation – and the extent of the market, m could then be the fraction of an individual's livelihood acquired through the former. The objective of the model is to represent the mutual determination of m and v so as to characterize

the pair or pairs $\{m, v\}$, such that both are stationary, that is subject to change only due to exogenous events. These stationary pairs – the compatible matches between cultures and institutions – are termed cultural-institutional equilibria.

The structure of the model captures two key ideas.

The first is that virtue is crowded out by markets. The experimental evidence for this proposition has already been mentioned. A possible mechanism is that markets frame action settings providing clues that the situation is one in which the pursuit of self interest is morally acceptable (Hwang and Bowles (2011a)). Another is that markets (as well as market-like incentives used by public bodies) reward self-interest and penalize those with other-regarding or ethical values, or that markets reduce the scope for or visibility of generous actions, or in other ways provide environments inimical to the learning of civic values. (Hwang and Bowles (2011b)) In the second set of mechanisms preferences are endogenous (rather than simply state dependent) and that is the case I consider here.

I assume that crowding out of virtue occurs in markets to a greater extent than in plausible alternative non-market allocation mechanisms. Thus there is a stationary level of virtue expressed by the function $v = v(m)$ where $v(m)$ is termed a cultural equilibrium that conditional on the given value of m . Thus when $v = v(m)$ the process of cultural updating is such that the level of virtue in the population does not change (i.e. is stationary, unless m changes). Thus the $v(m)$ function is given by the values of m and v for which $dv/dt = \alpha(m, v) = 0$ where the function $\alpha(m, v)$ is derived from a process of cultural transmission in which an individual's values are periodically updated taking account of the relative payoffs of bearers of different values and the frequency of types in the population given the extent of the market (as modeled in and Bowles (2004) and Hwang and Bowles (2011b)). The crowding out function $v(m)$ is illustrated in panel A of Figure 1; the arrows indicate the direction of adjustment from out of equilibrium states (that is the values of dv/dt for values of $v \neq v(m)$)

The second key proposition– that markets economize on virtue – holds because the extent of the market in allocating resources is determined in a decentralized way by the choices of countless economic agents and it will vary with the cost advantages of markets relative to other institutions that may accomplish the same ends. For example, whether firms produce or

purchase a particular component of the product they produce – the problem analyzed by Ronald Coase (1937)-- depends on the supervision and other costs of the direct command relations that distinguish firms from markets and that are entailed by production of the component, relative to the costs of search, bargaining over prices and other costs of using the market. These costs will depend on the ethical, self-interested and other motives of those involved. Marianna Belloc and I provide a model of this process, showing that where values such as reciprocity and fairness are prevalent, organizations based on partnerships may thrive, while in highly self-interested populations production may be carried out in organizations with close and punitive supervision (Belloc and Bowles (2011)).

As a result, the level of values will influence the extent of the market; and because of the comparative advantage in governing interactions among entirely self-interested individuals enjoyed by markets (relative to bureaucracies, families and other institutions), the relationship is inverse: higher levels of values being associated with a reduced extent of the market. The function $m(v)$ gives the stationary values of m for given values of v based on individuals structuring their interactions with others (choosing among, say, contractual or friendship, or familial ways of interacting in some particular activity) based on the relative payoffs of these various structures. Thus for any given level of virtue (say, $\underline{v}$) there is an equilibrium extent of the market ($\underline{m}$) that is stationary, in the sense that no actor with the capacity to alter the extent of the market may benefit from doing so. I call $m(v)$ an institutional equilibrium for the given level of civic values.

Thus, paralleling the case of the “markets crowd out virtue,” function, the $m(v)$ function gives the values of v and m for which $dm/dt = \beta(m,v) = 0$. The function $\beta(m,v)$ is derived from a process in which individuals periodically alter or reaffirm the contractual or other means by which they govern their economic interactions with others in light of the benefits and costs of the alternatives (market and non-market) given the distribution of types in the population as modeled in Belloc and Bowles (2011). This “markets economize on virtue” function is shown in panel B of Figure 1, where as in panel A the arrows give the out of equilibrium adjustment process, the extent of markets shrinking when they exceed the level indicated by the function and expanding when the reverse is true.

It will be important in what follows to say a bit more about the construction of the markets economize on virtue function. In the figure, the loci labeled y and y^+ are output isoquants, namely loci of pairs of m and v that yield a total income (of the society in question) of y and y^+ respectively with $y < y^+$. The position of the isoquants indicates that virtue contributes to the productivity of the society (its total income). Suppose, for illustration, that (as Coase hypothesized) the extent of the market is determined by an implicit transaction-cost minimizing process that maximizes income net of these costs for a given level of values. Then the $m(v)$ function is the locus of all points for which m is the solution to the problem: maximize $y(v,m)$ for the given level of v which will be found where the isoquant is tangent to the horizontal dotted line indicating the given level of v .

The given value of m is stationary because, conditional on the level of v it maximizes the society's income *ex hypothesi* because of the Coasean process underlying the determination of the extent of markets. (The maximization is implicit in the Coasean assumptions rather than the deliberate choice of any individual, each of whom is seeking minimize the transactions costs of the transactions in which they are engaged.) The idea that entirely decentralized contracting and other interactions would implement an efficient set of institutions in the Coasean sense is of course unrealistic; the key point is that markets will be used more were virtue is less. I adopt the Coasean framework simply because it makes clear that the cultural-institutional market failure thesis does not require any departures from conventional liberal economic models other than the fact that markets have cultural consequences.

Because we want to know the conditions under which both culture and institutions will be stationary, we are interested in a state that is common to both functions, namely the intersection of the two lines representing relationships labeled “markets crowd out virtue” and “markets economize on virtue.” The joint influence of these two relationships shown in Panel C of Figure 1 gives us the equilibrium values of the level of virtue and extent of the market $\{v^*, m^*\}$, termed a cultural-institutional equilibrium. (In Bowles (2011) I present a related model that differs in two ways: I take account of the long term effects of markets on traditional institutions such as lineage based family structures and religious organizations and show that there may be more than one stable cultural-institutional equilibrium.).

The sophisticated legislator corrects a cultural-institutional market failure

Lets now introduce a social planner recently graduated from the New School who having studied *Adam's Fallacy* would have been motivated to read beyond the confines of economics and might have come across this: “Legislators make the citizen good by inculcating habits in them,” Aristotle had written in the *Ethics*. “It is in this that a good constitution differs from a bad one.”(Aristotle (1962):103). Could the sophisticated Legislator – that's what we'll call her – improve on the Coasean “income maximizing” institutional arrangements in the cultural-institutional equilibrium, namely point **a** in panel C of Figure 1?

A tall order, but she knows where to go: Room 1123, 6 East 16th Street at the New School. She draws panel C of the figure on the whiteboard and explains how it works. Her former teacher suggests that she consider educational programs that might enhance the level of citizen virtue, shifting up the $v(m)$ function (in panel C of the figure) and supporting a higher level of income in the new more virtuous and less market oriented cultural-institutional equilibrium. But the Legislator demurs, reminding Foley that public policies designed to change preferences would be regarded as paternalistic and in violation of the basic liberal precept that the state ought not to favor any particular conception of the good (or the good life; Goodin and Reeve (1989), Barry (1996)). “What about the other function,” she asks? Already at the whiteboard, Foley writes

$$\max_m = y(m, v) \text{ subject to } v = v(m)$$

but he then recalls that the Legislator was never much of a whiz in math, and it had been a few years since she had seen something like this. “Because of your liberal biases,” Foley patiently explains, “we have to take the $v(m)$ function as inviolate, so we're going to find the level of m along the $v(m)$ function that maximizes income.” “And..?” She wonders where this is going. “And then find some policies that will shift the $m(v)$ function so that the income maximizing m is part of a cultural-institutional equilibrium.” Its all coming back to her now: “OK, we find the point on the $v(m)$ function that is tangent to one of the isoquant things, right?” Foley writes

$$v'(m) = - y_m / y_v$$

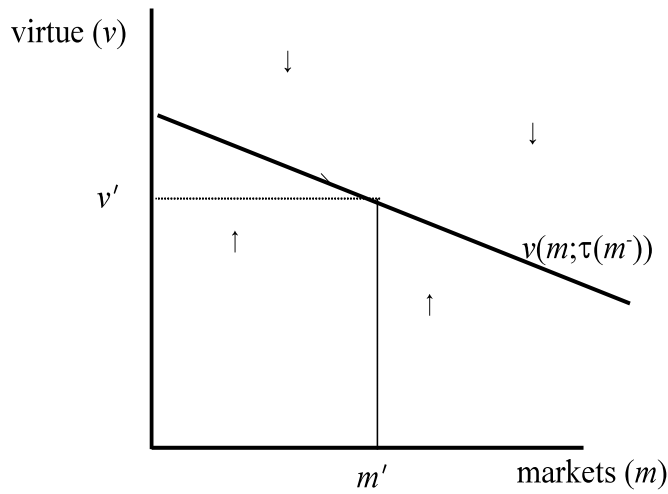
“Or, the..” he begins. She takes over, jumping to the whiteboard, tapping her finger on point **b** “...marginal rate of transformation of markets into (degraded) values must be equal to the

marginal rate of substitution of markets and values as influences on income.” “Brava!” and he returns to his desk:

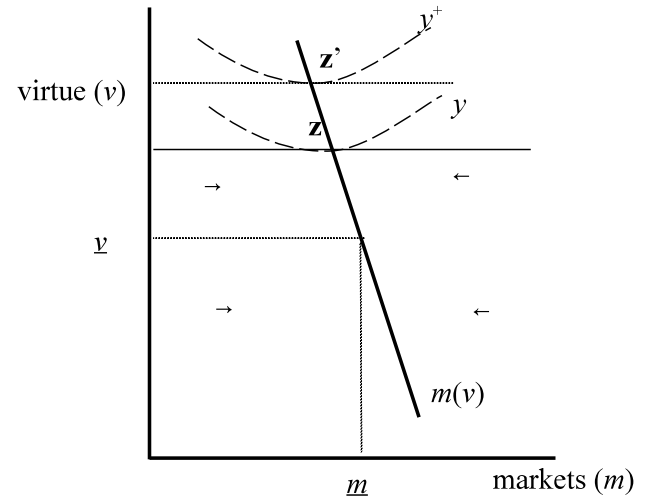
“How you implement this is your department; you're the Legislator.” “No problem,” she's happy to be back on more familiar ground, “there is no shortage of ways to make market transactions more expensive. The Tobin tax, named after one of your former teachers, is just an example.”

She opens her computer without looking at Foley: “Sorry, but let me get this down” and types: “Starting at the Coasean *allegedly* income maximizing cultural-institutional equilibrium **a**” {she smiles when she adds the italics}, “there must exist an exogenous restriction of market extent that would displace the market extent function to the left (given by the dashed line) and shift the cultural institutional equilibrium to point **b**, resulting in a larger aggregate income. The social planner varies m to maximize y subject to the constraint that culture adjusts to the extent of the market according to $v = v(m)$. This income-maximizing level of restricted market use balances the income losses entailed by the use of non-market institutions (in cases for which, conditional on a given v , markets would do better) against the cultural benefits made possible by attenuating the deleterious market effects on culture. This cultural-institutional market failure arises because pro-social values facilitate exchange by reducing transaction costs, and in adopting contractual and other institutional choices, economic actors do not take account of the endogenous nature of preferences and hence do not internalize the negative externalities associated with market incentives.” And she looks up.

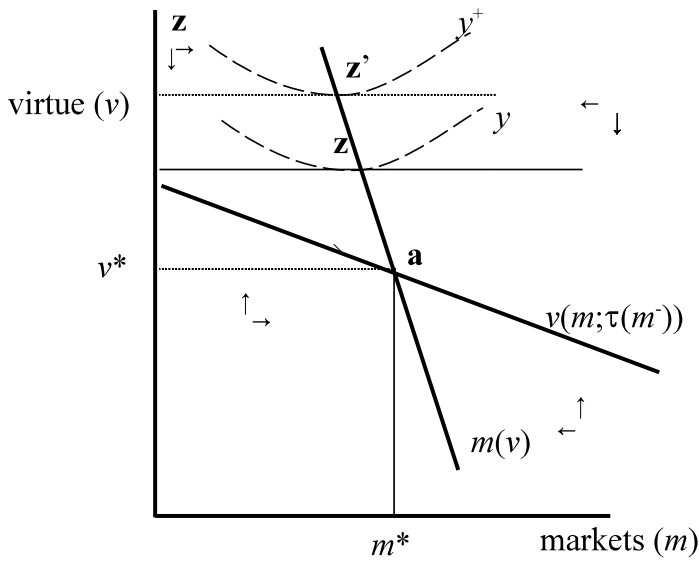
“Let me have a look,” he says, and then after a minute or two, “Bravissima!”



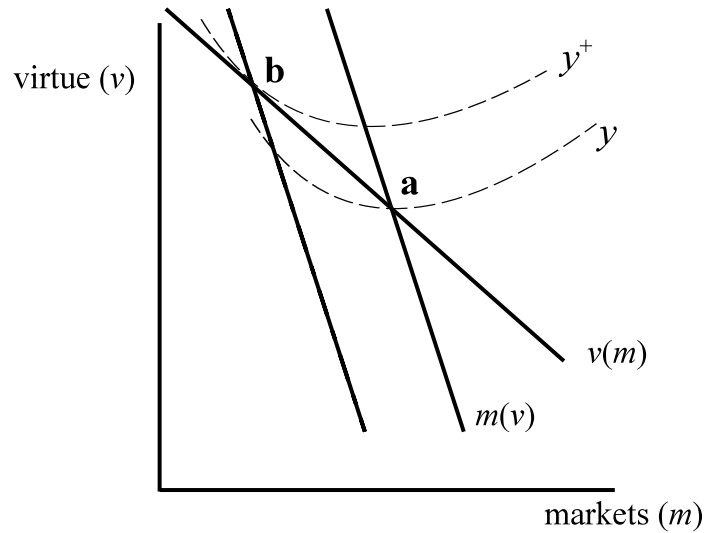
A Crowding out



B Markets economize on virtue



C. A cultural institutional equilibrium



D. A cultural-institutional market failure

Figure 1: A cultural institutional equilibrium. Arrows indicate the direction of adjustment. Panel A: the effect of the extent of markets on virtue. Panel B: The effect of virtue on the extent of markets. Panel C: A temporary cultural-institutional equilibrium Panel D. Point **a** is the cultural institutional equilibrium, while point **b** is a Pareto-superior cultural-institutional configuration induced by an exogenous limitation of the market (the leftward shift of the $m(v)$ function.)

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