

**Behavior Discussion Group/Network study group/Informal behavior discussion
Events February 2007**

2 February 3.30-5.00 Medium Conference

Modernization, Climate Variability and Vulnerability to Famines

Simone D'Alessandro

From 1876 to 1879 and from 1896 to 1902 due to absence of monsoons related to El Nino events, India experienced the two worst famines of all times. Karl Polanyi explained the millions of fatalities as a consequence of the introduction of market prices by British colonial institutions, in areas where traditional agricultural societies had kept significant stocks in rainy seasons in order to compensate for bad harvest of others. In recent literature (e.g. Amartya Sen's *Poverty and Famines*) the institutional determinants of famines are found in political factors (e.g. degree of authoritarianism of the government), but little emphasis is put on the mechanisms through which markets can induce precariousness in the life of rural people. Besides historical investigation, there is scope for a theoretical inquiry into the dynamics which tie environmental variability to economic institutions. In this paper we model the functioning of a simple economic system where strong climate variability determines the need to overcome variance in agricultural productivity by maintaining food stocks. The introduction of new modes of production under colonialism, thanks to the modernization of infrastructures, implies a greater stability of wage. Nevertheless, capitalist production can easily increase the risk of famines. Indeed, negative environmental shocks produce a drop in wages that is larger in magnitude than the increase in wage due to an equivalent positive environmental shock. Consequently the level of the stocks increases more slowly in good seasons than it decreases in the bad ones. Such a process reduces the ability to keep adequate food stocks, thereby increasing the vulnerability of peasants to famines.

Wed 7 February 8.30-10 am. Medium Conference Room

Social networks (reading Matt Jackson's Economics of Social Networks, discussion led by Willemien Ketts)

Monday 12 February: 12.15 President's discussion room

Coups, Corporations, and Common Knowledge

Suresh Naidu, Ethan Kaplan and Arin Dube

We consider the relationship between political coups and asset markets. In particular, we use declassified CIA documents to construct private information events and look for the effect of private versus public events on asset prices of companies that stood to benefit from covert US backing of political transitions. We find that private events which raise

the likelihood of a coup raise the returns on affected asset prices with a lag of about a week. This paper sheds light on debates in finance about asset pricing under public and private information, as well as the political economy literature on institutional transitions.

Tuesday 13 February 3.30-5. Noyce Conference Room

Centrality and Inequality in Network Models and Experiments: A discussion of two papers. (NB. don't be confused by its location in the Noyce. This is an informal discussion among the social networks discussion group (everyone is welcome, but do read the papers.)

Sam Bowles and Sander van Doorn presenting Goyal, Sanjeev and F. Vega-Redondo. 2007. "Structural holes in social networks."

<http://merlin.fae.ua.es/fvega/Art%EDculos-Propios/structuralholes-dec21.pdf>

Charles Efferson and Michael Gastner presenting. Goeree et al, In search of stars: network formation among heterogeneous agents.

<ftp://repec.iza.org/RePEc/Discussionpaper/dp1754.pdf>

Wednesday 14 February 3.30 – 4.30 Pod A seminar room

Predictive coupling between dynamics and topology of social networks (We are expecting some special Valentine's day insights from Carlos!)

Cor A. Hidalgo R., C. Rodriguez-Sickert and A.-L. Barabasi

Using cellular phone communications of more than a million users we show that the persistence of social ties, which measures the likelihood of observing a tie when looking at the network, is coupled to the social network's structure. We study how the persistence of ties depend on individual node characteristics and control for redundancy using a linear model showing that reciprocity explains most of the variance in persistence. We finish by showing that the observed coupling can be used to accurately predict the presence of ties up to one year in advance.

Wednesday 21 February 12.15 - 1.15 Pod A seminar room

Exporting Cities: Examining the "Reproductive Success" of Greek City-States in Establishing Mediterranean Colonies.

Dan Hruschka

Between 900 and 400 B.C. Greek city-states established hundreds of colonies along Mediterranean and Black Sea coasts. A key part of this far-flung expansion was the budding of a single mother-city ("metropolis") to establish new colonies ("polis"), which after several generations frequently spawned new colonies. Some cities were much more successful in establishing daughter colonies than others, and colonies experienced varying degrees of growth and survival. This natural variability may provide a useful case study of differential cultural selection. Particularly, what were the factors, institutional and environmental, that contributed to the differential "reproductive success" of Greek cities? To answer this question, I have compiled a database of Greek cities and colonies (~230), with information (of varying completeness) about the founding city, the date of founding, and the reason for colony formation. I am now trying to identify possible between-polis differences in institutions (i.e. political institutions, relationship with metropolis, heroic cult of first founders) and environment (i.e. available trade goods, links to land trade routes, relationship with indigenous population) that might shed light on the differential reproduction of Greek cities. More broadly, this may provide a particularly well-documented case study of pre-modern cultural expansion.

Friday 23 February, Medium Conference Room 1.00-2.30

The Nature of Wealth and the Evolution of Inequality

Sam Bowles

I model the determination of the stationary distribution of wealth in a long term framework in which the transmission of wealth across generations plays a critical role (along with stochastic shocks to wealth). Transmission consists of three processes: inheritance, assortment (marital or other), and accumulation (the latter meaning investment and saving). Distinct aspects of wealth are defined somatic, material and knowledge and their implications for intergenerational transmission and thereby for the ergodic distribution of wealth are considered. Using this model I propose an interpretation of the long term evolution of wealth spanning the foraging, agrarian-industrial, and information epochs (the latter yet to transpire).

Monday 26 February 12.15 - 1.15 Pod A Seminar Room

Status, Rank, and the Dynamics of Labor Allocation

Susanne Neckermann and Charles Efferson

We propose the following model of labor allocation. In each period agents exert effort, which is assumed to be fixed, in one of two dimensions. Agents compete for status within their current dimension of choice in a rank-based competition based on ability. Status competition can be more or less winner-take-all. Moreover, the "aggregate" status in the two dimensions, so to speak, can be different in the sense that society attributes

status to certain kinds of activities more than others in a way that is potentially independent of rank. For example, the third best movie star in the world probably has higher status than the third best janitor. Each agent has a realized ability in each of the two dimensions that controls the value of effort exerted. Each agent has private information about her realized ability in each dimension, and she knows the bivariate distribution from which realized abilities are drawn. When an agent enters a given dimension, real output is produced in a way that depends on who is currently in the dimension and the focal agent's realized ability. Real output is used both for the provision of a public good and for compensating agents privately. Each period, a relatively small proportion of agents are chosen randomly to update their choice of dimension. They do so using a kind of low-rationality updating in which they best respond to the current state of the system under the assumption that no one else is updating. In addition, agents die according to a small probability, and dead agents are replaced with statistically independent agents. General questions center around the dynamics of effort allocation and productivity when status matters, and how these dynamics compare to the efficient solution.

27 February 3.30-5.00 Medium Conference Room

The biological evolution of the rate of time preference under aggregate uncertainty.

Arthur J. Robson (based on a paper with Larry Samuelson)

We consider how our biological heritage would have shaped our discounting of future rewards. A number of authors have noted a close connection between the biological imperative to maximize the growth rate and the simple economic criterion of the sum of discounted expected utility, when all the risk involved is idiosyncratic. The growth rate of the population, plus the mortality rate, yield the rate of time preference. (We showed elsewhere, however, that this is only true for small intertemporal tradeoffs.) In this paper we reexamine this issue when some of the risk involved is aggregate. All of the simplicity of the idiosyncratic case is now lost. In a particular class of cases, there may be no discounting of future rewards, or, with negative correlation, future rewards may even be valued more highly than current rewards. There is no close connection then to the growth rate plus the mortality rate, which may both remain positive. Individuals might then also prefer the aggregate gamble over its idiosyncratic counterpart. With positive correlation, on the other hand, individuals may discount at a greater rate than that suggested by the sum of the growth rate and the discount rate. In a more general setting, although there may be a present bias, with the rate of discount falling with age, there is a more central argument that the discount rate would rise with age. In any case, reversals in the sense of behavioral economics are impossible. There is a new reason to discount here, so individuals discount at a different rate than that suggested by the sum of the growth rate and the discount rate.