



27 September 2010

## Frankness goes to Hollywood

“People who avoid and evade paying their taxes will no longer get away with either.”

- Deputy Prime Minister Nick Clegg at the Liberal Democrat Party Conference in Liverpool.

“Tax avoidance: the legal utilization of the tax regime to one’s own advantage, to reduce the amount of tax that is payable by means within the law.”

- Wikipedia.

“Prat: a person of no account; a dolt, fool, ‘jerk’. Slang.”

- Oxford English Dictionary.

**Something rather interesting** happens during the [end credits](#) of the latest Will Ferrell comedy, ‘The Other Guys’; to the somewhat arch soundtrack ‘Pimps Don’t Cry’, animated sequences [show](#):

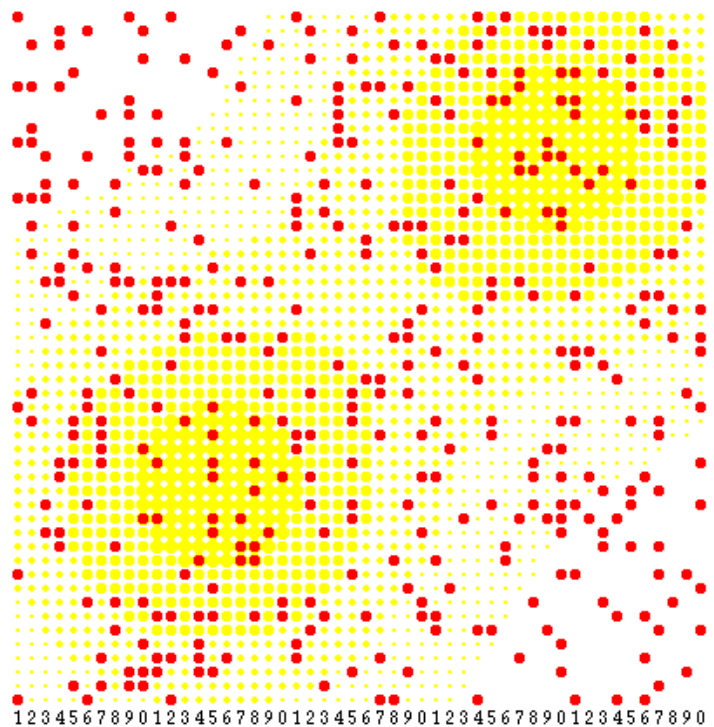
- How a Ponzi scheme works;
- How the \$700 billion T.A.R.P. bailout equated to a \$2,258 payment from every man, woman and child in the United States (the children won’t of course have the money, but they’ll be paying for it as part of the government deficit for the foreseeable future);
- That 73 employees of failed insurer AIG received \$1.2 billion in taxpayer-funded post-bailout bonuses;
- That the ratio of CEO pay to that of the average US employee rose from 7:1 in 1917 to 107:1 in 1990, and to 319:1 in 2010;
- How the recent stock price history of Goldman Sachs compares to that of the average US listed business;
- That the average CEO retirement benefit package amounts to \$83,600,000 while the average American 401K account has recorded a 47% loss over the last five years.

In other words, not exactly Hollywood as usual. We have no problem with an inherent economic imbalance between a genuinely entrepreneurial, risk-taking and value-creating elite and the average employee – it’s called meritocracy, and a degree of imbalance may well be a fundamental factor in any unmanipulated economic system. In 1995, for example, Joshua Epstein and Robert Axtell of the Brookings Institution conducted an experiment to see whether they could create a working economy from scratch. Their aim was to replicate economic life within a computer. Going back to

first principles, they created little economic “agents” and built a rudimentary environment for those agents, a silicon desert island in the form of a fifty-by-fifty square. Epstein and Axtell then gave their island one economic resource: virtual sugar. The experiment, and the name of the island, was Sugarscape.

Each square in the island of Sugarscape had different amounts of sugar piled onto it. Some squares had none, and others up to four units’ worth. The virtual sugar piles were arranged so that the north-east corner of the island contained a mountain of sugar, as did the south-west; in between was a “badlands” area of little or no sugar.

### **A variously sweet economy – the world of Sugarscape**



Source: <http://sugarscape.sourceforge.net/> (where you can rerun the experiment)

Although Sugarscape was an obviously simplified version of a real economy, Epstein and Axtell continued to add broadly realistic facets. Each virtual inhabitant of the economy would take in information about the island, analyse it through its code, and make decisions as a result. In the initial version of the simulation, agents could do three things: look for sugar; move; and eat sugar. Epstein and Axtell also granted these agents a metabolism to digest sugar. The rules for the game’s agents were as follows:

- The agent looks around as far as its vision will allow in each of four directions on Sugarscape (north, south, east and west).
- The agent assesses which unoccupied square within its field of vision contains the most sugar.
- The agent moves to that square and eats the sugar.

- The agent is credited by the amount of sugar it consumes and debited by the amount of sugar burned metabolically. If it eats more than it consumes, it accumulates sugar in a “bank account”. If it eats less, it uses up its savings.
- Each agent is given a “genetic endowment” for its vision and metabolism. Agents with good vision can see up to six squares ahead; those with poor vision, only one. Those agents with slow metabolism need only one unit of sugar per turn to survive; those with fast metabolism need four.
- If the amount of sugar stored by an agent drops to zero, it dies and is removed from the game. Otherwise it lives until it reaches a pre-agreed maximum age.
- As sugar is eaten, it grows back on Sugarscape like a food crop, at the rate of one unit per turn of the game.

Sugarscape began with 250 economic agents dispersed randomly throughout the island. How did the simulation evolve ?

Things began with chaos. Agents ran around looking for sugar, and those unfortunate enough to end up marooned in the badlands ended up dying of starvation. But order was quick to emerge. Agents discovered the sugar-rich mountains, and started to settle around them. It also transpired that agents were very efficient grazers. Sugar never ended up lying around for long. Agents quickly organised themselves into two “tribes” and settled on each mountain.

But perhaps most remarkable was what happened in relation to the agents’ wealth. At the beginning of the game, Sugarscape was a broadly equal society. The distribution of sugar wealth was like the bell curve, with just a few rich agents, a few poor agents, and a large ‘middle class’. But as time passed, the distribution shifted dramatically. Average wealth rose as the agents discovered the mountain supplies. But a new class of super-rich agents emerged, along with a sizeable upper class, a shrinking middle class, and a large and growing underclass of poor agents. How, from a random set of initial conditions, did Sugarscape end up with a highly skewed distribution of sugar wealth ?

The answer, as Eric Beinhocker makes clear in his fascinating book ‘The origin of wealth’ (Random House, 2006), is that the apparently unfair distribution of wealth was an “emergent property” of the Sugarscape economy, “a macro behaviour that emerges out of the collective micro behaviour of the population of agents. The combination of the shape of the physical landscape, the genetic endowments of the agents, where they were born, the rules that they follow, the dynamics of their interactions with each other and their environment, and, above all, luck all conspire to give the emergent result of a skewed wealth distribution.”

In other words, although Sugarscape was a vastly simplified model of a real economy, it was also a true reflection of a real economy as well. **Wealth did not end up being evenly distributed.** Just as Vilfredo Pareto when studying Italian society discovered a lot of people at the bottom end of the ladder, a wide range in the middle class and then a few super-rich, so Sugarscape ended up with a real world Pareto distribution of wealth.

But what the title sequence to ‘The Other Guys’ depicts, along with the environment we now inhabit as workers and investors, is not a reflection of even a crudely simplified economy, but an economy in which those who have made it to the ranks of the ‘elite’, whether in business, banking

or both, now command rewards out of all proportion to any sense of supposed social utility and to any rules-based system. In banking, this putative elite has achieved a spurious and untenable primacy through aggressive lobbying of the political classes, meritocracy be damned, with taxpayers holding the bag and writing the bonus cheques. In saving the banks, governments cut the worst deal in the world: out of some extraordinary deference to the banking lobby we'll keep you alive and bankrupt ourselves (i.e. impose draconian penalties on non-financiers), and we will require not one iota of sensible reform by way of response.

The artificial world of Sugarscape may seem unfair to those who believe in enforced mediocrity and the redistribution of wealth; but what currently passes for our market economy is plainly and simply unfair, not least for taxpayers who face sustainedly higher demands on their income indefinitely into the future in order to pay for a banking sector that remains self-interestedly resistant to the sort of reforms that would otherwise make future sovereign bailouts redundant. Nor are the bankers in isolation responsible; the government and regulators have each played their part in this unholy trinity.

What is most striking today is the lack of resistance to ongoing plans by administrations in the industrialised world to maintain quantitative easing, despite its conspicuous failure, ad infinitum. Where is the public debate? When, if ever, will central banks be held accountable for the savage currency depreciation which QE2 and its kissing cousins will inevitably bring in their wake?

We do not blindly have to play ball. As QE2 marches relentlessly closer, so too does the gold price march relentless higher, an increasingly strident alarm bell that should give the politicians and central bankers pause. But there are other dimensions to this crisis. The conflict is not merely between the financial lobby and the taxpayer. It is also a generational dispute, between near- or current retirees and the younger and increasingly put upon working constituency who will be pyrrhically obliged to finance their pensions. It is a class dispute, as the increasingly fractious debate between the beleaguered UK private sector and unions-in-denial should make clear. And it stretches across geography: tensions will undoubtedly build between an increasingly impoverished, and defensively inclined West, and the emerging economies that perhaps for the first time in history represent a fundamentally sounder base for wealth creation and capital growth. The business of investment has traditionally been focused on underlying assets as a means of capital growth. But the focus has now shifted to capital protection in real terms. It will, in turn, shift toward structures that can put investor capital beyond both the vicissitudes of the markets, and beyond the increasingly desperate grasp of governments that have earned no right to be trusted. Investment risk has previously been somewhat two-dimensional. Now it is a hydra.

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