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Ce sujet propose les 3 documents suivants :
- un article paru dans *The Economist* du 22 octobre 2011 ;
- un article paru dans *The Telegraph* du 31 octobre 2011 ;
- un dessin humoristique de Jeff Parker paru dans *Florida Today* le 2 novembre 2011.

L'ordre dans lequel se présentent les documents est aléatoire.

The Economist

Oct 22nd 2011

Now we are seven billion

Persuading women to have fewer babies would help in some places. But it is no answer to scarce resources

IN 1980 Julian Simon, an economist, and Paul Ehrlich, a biologist, made a bet. Mr Ehrlich, author of a bestselling book, called "The Population Bomb", picked five metals — copper, chromium, nickel, tin and tungsten — and said their prices would rise in real terms over the following ten years. Mr Simon bet that prices would fall. The wager[1] symbolised the dispute between Malthusians who thought a rising population would create an age of scarcity (and high prices) and those "Cornucopians", such as Mr Simon, who thought markets would ensure plenty.

Mr Simon won easily. Prices of all five metals fell in real terms. As the world economy boomed and population growth began to ebb[2] in the 1990s, Malthusian pessimism retreated.

It is returning. On October 31st the UN will dub[3] a newborn the world's 7 billionth living person. The 6 billionth, Adnan Nevic, born in October 1999, will be only two weeks past his 12th birthday. If Messrs Simon and Ehrlich had ended their bet today, instead of in 1990, Mr Ehrlich would have won. What with high food prices, environmental degradation and faltering green policies, people are again worrying that the world is overcrowded. Some want restrictions to cut population growth and forestall[4] ecological catastrophe. Are they right?

Lower fertility can be good for economic growth and society. When the number of children a woman can expect to bear in her lifetime falls from high levels of three or more to a stable rate of two, a demographic change surges through the country for at least a generation. Children are scarcer, the elderly are not yet numerous, and the country has a bulge[5] of working-age adults: the "demographic dividend". If a country grabs this one-off chance for productivity gains and investment, economic growth can jump by as much as a third.

Less is more

However, the fall in fertility is already advanced in most of the world. Over 80% of humanity lives in countries where the fertility rate is either below three and falling, or already two or less. This is thanks not to government limits but to modernisation and individuals' desire for small families. Whenever the state has pushed fertility down, the result has been a blight[6]. China's one-child policy is a violation of rights and a demographic disaster, upsetting the balance between the sexes and between generations. China has a bulge of working adults now, but will bear a heavy burden of retired people after 2050. It is a lurid example of the dangers of coercion.

Enthusiasts for population control say they do not want coercion. They think milder policies would help to save the environment and feed the world. As the World Bank points out, global food production will have to rise by about 70% between now and 2050 to feed 9 billion. But if the population stays

[1] a wager: a bet
[2] to ebb: to recede, to retreat
[3] to dub: to give an unofficial name
[4] to forestall: to prevent something by taking advance action
[5] a bulge: an increase in number
[6] a blight: something which has a very bad effect, often for a long time

flat, food production would have to rise by only a quarter.

When Mr Simon won his bet he was able to say that rising population was not a problem: increased demand attracts investment, producing more. But this process only applies to things with a price; not if they are free, as are some of the most important global goods — a healthy atmosphere, fresh water, non-acidic oceans, furry wild animals. Perhaps, then, slower population growth would reduce the pressure on fragile environments and conserve unpriced resources?

That idea is especially attractive when other forms of rationing — a carbon tax, water pricing — are struggling. Yet the populations that are rising fastest contribute very little to climate change. The poorest half of the world produces 7% of carbon emissions. The richest 7% produces half the carbon. So the problem lies in countries like China, America and Europe, which all have stable populations. Moderating fertility in Africa might boost the economy or help stressed local environments. But it would not solve global problems.

There remains one last reason for supporting family planning: on some estimates, 200 million women round the world — including a quarter of African women — want contraceptives and cannot get them. A quarter of pregnancies are unplanned. In our view, parents ought to decide how many children to bring into the world and when — not the state, or a church, or pushy grandparents. Note, though, that this is not an argument about the global environment but individual well-being. Moreover, family planning appears to do little directly to control the size of families: some studies have shown no impact at all; others only a modest extra one. Encouraging smaller families in the highest-fertility places would still be worth doing. It might boost the economy and reduce the pressure of population in some fragile places. But the benefits would probably be modest. And they would be no substitute for other sensible environmental policies, such as a carbon tax.

The Telegraph

Now we are seven billion, let's feed the world

Why do we reject the technology that would put food on the plates of the poorest?

By Michael Hanlon 31 Oct 2011

Happy birthday, baby seven billion, Danica May Camacho. Born on Sunday night in Manila, you won't know about your demographic celebrity — which is likely to be short-lived, as was that of Adnan Nevic, the equally arbitrary baby six billion, born just 12 years ago in Bosnia. And some time in the late 2020s, baby number eight billion will arrive.

Since 1880, the world population has doubled and doubled again, and this has changed the face of the planet. We (hopefully) won't see a further doubling, but even the best-case projections see the human tide topping out at around nine to 10 billion in the 2060s.

I am an optimist; I think we will cope, just — but it won't be easy. I know that to stand a chance of keeping an extra two or three billion people fed, watered and sheltered in the decades ahead without completely ruining our planet, we are going to have to abandon our bizarre, decadent aversion to "risky" new technologies and embrace a Brunellian[7] programme of hyper-tech big engineering and innovation. The alternative? An awful lot of dead black and brown people.

Today, we ignore the fact that the reason food is mostly affordable and famines are relatively rare is almost entirely down to the work of scientists few have even heard of — the plant breeders who forged the "green revolution" in the post-war years.

Nobel peace prizes have been awarded to some dodgy people, but if one man deserved it a thousand times over it was American scientist Norman Borlaug, whose work on dwarf and disease-resistant wheat[8] varieties has been credited with saving a billion lives. His research proved wrong the doomsayers such as the US economist Paul Ehrlich, who in the Sixties predicted global famines by the century's end. But we may be getting close to the limits of conventional plant-breeding and we cannot take for granted its ability to feed an extra one to two billion mouths in future. Ehrlich's predictions may yet come true — and food prices have been rising for some time.

There is fury among scientists at the reluctance of the world (outside the US and China) to embrace GM technology. In Britain, scientists have developed varieties of transgenic wheat that are resistant to a new strain[9] of deadly stem-rust disease. Geneticists in the UK, the US, Switzerland and elsewhere

[7] Brunellian: from Brunel (1806–1859) English engineer famous for his railway engines, bridges and iron ships
[8] wheat: a cereal, the grain of which is ground to make flour for bread, pasta, pastry, etc.
[9] a strain: a variety

have developed wheats, "golden" rices and barleys that require fewer expensive pesticides, fewer herbicides and far less water to grow, or which can even grow in brine[10]. Yet this technology is shunned[11] not only in Europe but in Africa, where local green activists take their cue[12] from decadent, well-fed Europeans who would presumably rather see the Third World starve than adopt "unnatural" technology.

If few have heard of Dr Borlaug, Rachel Carson is a heroine to millions. Her 1962 book Silent Spring is credited with launching the modern green movement, and detailed the effects of chemicals such as DDT and pesticides on the food chain. Carson made "chemical" a dirty word.

What her followers ignore (to her credit, she did not) is the fact that if it weren't for chemicals that kill insects, fungus and weeds, two billion people would be starving. Carson's claims about the mosquito-killer DDT have also been blamed for millions of needless malaria deaths. If Norman Borlaug is the unsung Nelson Mandela of science, Carson is seen by some as the (unwitting) Pol Pot of the environmental movement.

We are not just running out of food. The world faces an energy crisis of grotesque proportions. China's population has (more or less) stopped growing, but India's hasn't, and if the subcontinent is to keep the lights on, it must invest in new energy technologies. Again, we face a choice: Earth has plenty of coal and gas, but to power a world of 10 billion people using carbon-emitting, coal-fired steam turbines will invite consequences so dire that even the most diehard[13] climate sceptics will be finally convinced, as the floodwaters come lapping round their ankles.

Again, there is an answer — the wholesale adoption of ultra-modern, clean, green nuclear-fission technology. Nuclear is not perfect. There are well-known dangers and costs associated with the atom. Like democracy, nuclear energy is the worst option there is — apart from all the alternatives.

Greens — not all, but too many — hate machines. Such an attitude has been deemed by too many for too long to be "progressive". We could go back, of course, to a world where food is grown "naturally" and our lives are powered by windmills and everything is sustainable and organic. Such a world would be a paradise if there were a billion humans. But there are not.

If the late-21st century is not to be remembered as the era of the giga-famine, we will have to stop pretending we live in a prelapsarian[14] idyll and accept that only our ingenuity will allow Danica Comacho to live in anything approaching peace and prosperity.

An editorial cartoon by Jeff Parker (*Florida Today*, Wednesday, November 2, 2011)

[10] brine: seawater
[11] to shun: to reject
[12] to take one's cue from someone: to follow someone's advice
[13] diehard: someone who is unwilling to change or give up their ideas
[14] prelapsarian: characteristic of the time before the Fall of Man; innocent and unspoilt