{Note: this lecture is based on many sources, some of which are quoted directly alongside the slides. Ask for specific sources if you need them: dyec@who.int.} What processes govern whether health in populations gets better or worse on a time scale of a few decades? Have healthy populations reached that state through luck, good leadership, or because people have the freedom to respond to incentives? Culture and evolution are both big words. What I'm asking for specifically is an explanation for why certain behaviours (collectively, "culture") affecting health become common (through "evolution") in populations. We have seen extraordiarily rapid changes in health in recent history - major changes that have taken only a few decades rather than centuries. Some examples of health behaviour are suggested by these pictures. What are the processes that govern the direction, speed and magnitude of the changes?



Vaccination: immunizing children is not simply about developing the next generation of vaccines; the vaccines have to be accepted by the public, and delivered by suppliers. What governs the speed of vaccine uptake, and the final level of coverage?

Slide 3



The question about evolving health behaviour is at it sharpest in the debate about declining fertility. Fertility makes clear the contrast between genetic and cultural mechanisms. Those who win the evolutionary game, in genetic terms, produce more offspring that carry their genes into the next generation. And yet here is a process in which women are choosing to have fewer offspring. Among European countries, Italy has had the lowest fetility rate at various times during the 1980s and 1990s, a phenomemon that happened within sight of the Vatican. How and why?

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Evolutionary timescales			
Туре	Process	Time (years)	
Genetic evolution	Gene, natural selection	>1000s	
Informal institutions	Norms, culture, tradition, religion	100s-1000s	
Formal institutions	Rules, politics, laws, rights	10s-100s	
Governance	Playing game, transactions	1-10s	
Resource allocation	Incentives, market design	Continuous adjustment	

Processes such as the reduction in fertility and uptake of vaccination happen on relatively short time scales compared to genetic evolution. We can put genetic evolution (top) in the context of other processes that happen on shorter time scales (Williamson 2000, Coyle 2007). What interests me especially is the nature of the evolutionary process that leads to selection and change. We want to be able to explain why certain kinds of behaviour do or do not become common. The potential power and elegance of the science is to explain many apparently complex details in terms of a simple underlying process. Darwin's theory of evolution by natural selection had that characteristic. What are the parallels in cultural evolution? The purpose of this lecture is to offer some insight into the dynamic processes that lead to changes in behaviour in populations. To make some progress, I need a framework in which to carry out the discussion...

Slide

5



Slide 6

## Evolution in biology and economics



"same method to explain behaviour in terms of an equilibrium among maximizing individuals... powerful way to cut through forbidding complexity"

Paul Krugman 1994 Nobel prize economics 2008 The fact that there are different kinds of adaptive systems means that we need to make sure we're using the right analogy to explain changes in health behaviour. I'm going to start with markets, if only because they are topical. These images now appear daily all over the media. The market analogy sees health as a commodity that can be bought and sold. Consumers (patients) have the liberty to choose within a framework implemented by government (leaders), allowing for contingencies, or luck. Any failure to satisfy the agreed goals of health care can be seen as a market failure.

Many have noted the similarity between evolution in biology and economics. As Paul Krugman put it in 1994, they use the "same method to explain behaviour in terms of an equilibrium among maximizing individuals". This simple idea of two parties playing a game in which each tries to get the best out of its interactions with the other is a "powerful way to cut through forbidding complexity".





Slide 9



Slide 10
The health market
U
Supply more at
U
Demand more at
High price
U
Calculation
U
Calculatio The notion that ideas in evolutionary biology can be applied to economics had led to the term "evonomics". These are just two examples of complex adaptive systems, which also include ecosystems, language, games, and so on. Having highlighted the similarities, we also need to be aware of the differences e.g. between genetic evolution and markets. Markets have institutional rules and laws (leadership) that provide a structure within which free and fair trade can occur (liberty). Beinhocker's recent book is an excellent exposition.

What is the goal in health? Can free markets deliver that goal? Or can market mechanisms at least help to explain why the goals have not been achieved? The well known aspirational phrase "Health for all by the year 2000" was coined at the United Nations Alma Ata conference in 1978. The model for implementation was "primary health care" (PHC), which involved universal, community-based preventive and curative services, with substantial community involvement.

I've used the terms luck, leadership and liberty to reflect 3 broad processes that underpin change: chance or contingency, leadership or governance, and freedom of choice. Consider the origins of health care in Britain today: the NHS, like many other public institutions is a post-war phenomenon, though it has earlier origins (see dates on book cover); the intentions of government were to provide health for all; but private health care is a manifestation of the need to allow choice for both consumer and provider. Public provision versus private choice is still a tension in developing the NHS.

These are the basics of a health market. If the goal is "health for all", given some more specific definition, the failure to achieve that in a system where health comes from transactions is a market failure. Seen in coldly economic terms, it is immediately clear why a health market will not deliver health for all. The basic theory says that the quantity of health delivered will be determined by the balance of supply and demand. As price falls, demand for preventive or curative measures rises. But as price falls, suppliers are less willing to satisfy the demand. The stable (steady state) quantity of health delivered is at a price where supply = demand, and that quantity (arrowed) is unlikely to mean health for everyone. The cultural part of this is the behaviour of health providers and health consumers. The evolutionary part is the

system dynamics: the system tends to move towards the steady state. The economics of supply and demand is a useful starting point for this discussion, but we are making some simple assumptions that are unlikely to be true. I want to do 2 things: examine what is not true about this example, to see how that affects the way behaviour moves towards or away from health for all; and examine how the system can and cannot be manipulated to achieve the aspirations of organizations like WHO, and the more practically defined goals of the NHS. We might be able to manipulate the interests of various players so as to achieve the desired outcome, but we are not likely to succeed with wishful thinking alone; some balance is needed between incentives (carrots) and regulations (sticks).

# Slide 11 Health market failure Slide Market failure 12 10 reasons why we don't have "health for all" Inefficiency Cheating Ignorance Distrust **Priorities** Spillover Public goods Social contagion Carelessness My health

Health market failure is a failure of a system based on liberty or free choice. I shall limit my discussion to 10 reasons why we don't have health for all. They are in 3 groups: health goods are not exchanged because (1) efficient mechanisms have not yet been invented (red), (2) there is a lack of information between parties (blue), (3) markets offer the wrong incentives to each party (green).

## Slide 13 Kidney donation: "a double coincidence of wants" Jevons 1876 Chief medical officer



Chief medical officer condemns organ donor decision "review concludes public not ready for presumed consent" Observer 16 Nov 2008



Slide 15



(1) Inefficiency. In the USA there are over 70,000 patients on the waiting list for cadaver kidneys, but in 2006 fewer than 11,000 transplants of cadaver kidneys were performed. In recent years around 5000 patients have died annually while on the waiting list, or have been removed from the list as "Too Sick to Transplant". Likewise, in the UK at the end of 2006 there were over 6000 people on the waiting list for cadaver kidneys, and only 1240 such transplants were performed. Part of the problem is to do with incentives: government has taken away potential donors' ownership of their own body parts. Unlike everyone else involved in the transplant business - doctors, nurses, hospitals, drug makers, etc. - all of whom are paid - organ donors (or their heirs) are not allowed to be paid. When potential donors of very valuable organs cannot be compensated, the result is like every other government price ceiling imposed on sellers - a shortage. One solution might be for government to stop hindering the market, i.e. allow donors to benefit from the value of their organs. Another is to use a system of opting out, rather than opting in, now under vigorous debate in the UK. But there is another problem of inefficiency...

(1) Inefficiency. List exchanges try to arrange swaps between pairs of incompatible donorsrecipients, but have failed because of the small size of the pool of incompatible patient-donor pairs. When kidney patients brought potential donors to their doctors to be tested for compatibility, donors who were found to be incompatible with their patients were mostly just sent home. Incompatible patient donor pairs were left in the difficult search for what Jevons described as "a double coincidence of wants" (Jevons 1876, Roth 2007).

(2) Cheating. The incentive for vaccination diminishes as others are immunized. Potential vaccinees may ask why take the risk of side effects, or pay the costs, when they are protected by others? The alternative is to be a freeloader. In addition children are at risk, but parents take the decision to vaccinate. Are their interests exactly the same? This is the principal-agent issue. Parents may be negligent, or simply not have the time needed for a round, say, of 3 inoculations of DTP or polio vaccine in a year.

5



(2) Cheating. HIV+ individuals want health insurance as cheaply as possible, so some will lie about their status. Insurance companies know that there are liars, so they set higher premiums to compensate. At higher premiums those who are HIV -ve may choose not to insure their lives, or they go elsewhere. Then the proportion of customers who are HIV+ liars increases, so the premium has to go up again. This is called adverse selection: one party to a transaction has an incentive not to disclose private information. Insurers try to compensate by finding out the facts. There are various possible consequences: in extreme cases the market collapses and there is no insurance for anyone; in less extreme cases a proportion of people who need insurance will not get it. Even if we put in place a system that should convergence to full health (by some measure), it will only do so provided all players are fully informed.



Slide 18



(3) Ignorance (insurance company) vs discrimination (insured). Obese people have poorer health, but cannot be penalised by health insurance companies because health insurance premiums are not determined by body weight. Due to their higher risk for chronic diseases, obese and overweight people with health insurance impose costs on other people in the same insurance pool. With full insurance coverage, there is no incentive for weight loss when underwriting on weight is not allowed. When it is allowed, consumers benefit because weight loss decreases their own premiums.

(4) Distrust. Transactions are carried out most efficiently on the basis of trust. If you think your doctor is prescribing drugs because he is in the pay of the pharmaceutical companies, then you might be disinclined to take his advice. If so, you would be one more person whose health is not protected.



(4) Distrust. This is one reason why people refuse to have their children vaccinated. Some people believe that vaccines contain poisons linked to allergies, asthma and other conditions, and that "vaccination is promoted by an industry that capitalizes on fear."

(5) Priorities. Maybe the market is working, but not for health. Health is a casualty of a functioning market. In the developing world, there is mass migration to cities for economic reasons. The health of slum dwellers may or may not be worse than their rural counterparts; but it is certainly not as good as for wealthier urban inhabitants. Little provision is made for health in growing shanty towns. Markets don't deliver that; public health services do, but who will pay for them?

(6) Spillover, or "externalities". Contaminating behaviour includes coughing and sneezing, toilet habits, personal washing and bathing, the sources and handling of drinking water and milk, methods of food handling and preparation. In a free market, people will pay to protect themselves, but not to protect others. There is no incentive for consumers to buy a latrine when the stream offers a cheaper an equally effective option. There is no incentive for people to recycle garbage when throwing it in the river involves less cost and effort.

(6) Spillover. Why is antibiotic resistance the same problem as defaecating in rivers? When you use an antibiotic, you go some way towards using it up, if your use generates a resistant bug that is passed on to others. The problem is that your responsibility to society does not go quite as far as your responsibility to yourself. The least you can do is finish your course of antibiotics (see the oddly emerald green bogey men in an Irish advertisement). But there is a double market whammy here: not only do individuals not care immediately about the spread of resistant infections to others, but drug manufacturers might encourage irresponsible behaviour. They can then make new drugs to sell on patent at high prices.



Contagious obesity? up with the the Joneses • 1000 randomly selected individuals in 29 counties • 1% of men and 43% of women say their weight is too individuals in 29 counties • 1% of men and 43% of women say their weight is too individuals in 29 counties • 1% of men and 43% of women say their weight is too individuals in 29 counties • 1% of men and 43% of women say their weight is too individuals in 29 counties • 1% of men and 43% of women say their weight is too individuals • For given BMI, highly educated people more likely to se woreweight themselves as overweight • For obese German men, life say their weight is too • For given BMI, highly educated people more likely to se who live in places where ther people tend to be fatter (6) Spillover, the positive side. There is a personal benefit to vaccination, but also a social benefit for which individuals might be compensated, shifting the balance of pros and cons. Arrow's observation has proved correct under some circumstances, but someone needs to organize and pay for it. A special problem to overcome here is the refusal to vaccinate (form used by the American Academy of Pediatrics). One reason not to vaccinate is that it entails cost and risk from side effects, which might outweigh a low risk of infection.

(7) Public goods are commodities that are not subject to rivalry among consumers, and cannot be delivered exclusively by providers. Going beyond personal protection to prevent conditions like polio, would you pay to eradicate the disease? Eradication is truly health for all. The market can't provide public goods because customers will not pay for something that is free and widely available. Customers also cannot buy eradication as individuals. But the public might be persuaded that paying a contribution is worthwhile personally, and they may, under some circumstances, believe in the public good.

(8) Social contagion. Is the greatest weight of Joneses in Wales? In a 2008 study of nearly 30,000 people - roughly 1,000 randomly selected individuals in each of 29 countries - 31% of men and 43% of women say their own weight is too high. For any given BMI value, women are much more prone to feel overweight than men. For European women, there is evidence that weight dissatisfaction and overweight perceptions depend not just on their own BMI, but also on their BMI relative to other people. The same may be true of dieting decisions. Highly educated people are the most likely to see themselves as overweight once BMI is held constant. This suggests that people have different comparison groups -- the highly educated hold themselves to a thinner standard. For German men, life satisfaction is greater among those who live in places where other people tend to be fatter.



(9) The uncaring market. When was it that British rail companies began to refer to passengers as customers, and we started to buy coffee from "ontrain beverage support staff" (or similar)? Although it is possible to treat people who seek professional help as customers, this undermines ways of thinking and acting crucial to health care. Illustrating the discussion with examples from diabetes clinics and diabetes self care, Mol presents the "logic of care" in a step by step contrast with the "logic of choice". The traditional model is that doctor knows best; the market model emphasize patient choice. In the UK, Mol argues, choice is not about empowering patients; rather it is about trying to make the NHS more efficient. The best solution comes from a doctor-patient discussion of the way that medical expertise can be applied to patients' real needs. (picture wordle.net summary of "The Logic of Care").



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Slide

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(10) My health. Versus the public good. Back to the question of fertility. During the 1990s the Italian population was practically stationary, the excess of deaths over births being compensated for by immigration. In the 30 years between 1960 and 1990 the population had increased by 6 million, and in the preceding thirty years-between 1930 and 1960— by 9 million. Abundant growth was reduced to zero. Why?



(10) My health. Cavalli-Sforza and Feldman argued, from the point of view of social contagion, that the practice of having fewer children spread through Italy because women acquired the trait both from peers and from individuals in their mother's generation. Horizontal transmission is required to explain this transition because, if cultural transmission was always vertical, then the trait of having greater numbers of offspring would be maintained in the population by selection, albeit selection acting via cultural inheritance. Women must acquire the preference for small family size even when it is present in only a small proportion of their cultural circle, if small family size is to replace large family size in the population as a whole. But the development of low fertility during the last 30 years also coincided with an increase of the age of childbearing: in Italy the mean age of women at the birth of their first (and often only) child has increased from below age 25 in the early 1970s to 28 in 1997. Various factors govern the slow departure of the young from the family - the "too much family" problem. Social investment (e.g. meeting places, sport, leisure) for children and the

young is neglected; the gender division of tasks in the family is still heavily asymmetric; the labor market offers few chances to the working mother who needs a flexible or part-time job. The lagging societal adjustment has increased the claims on parents'-and particularly on women's-time and energy. There is a second group of factors, amounting to "postponement syndrome". The completion of the education of both partners is a prerequisite for entering the labor market; a fulltime job and buying a house are prerequisites for leaving the parental home; and leaving the parents' house is a condition for making decisions regarding partnership, marriage, and childbearing. The length of education has increased because of the disorganization of the educational system and the excessive weight of the curricula; the waiting time for finding a job is longer because of the rigidity of the labor market and high unemployment; more time is needed for finding a house because of the cost of buying one; forming the decision to have a baby takes also more time because of the excessive and almost pathological medicalization of pregnancy. These delays mean that more children are born later.

If the market has not delivered health for all, how can that be fixed? This discussion is in part about the trade-off between liberty and leadership.

Slide 29



Slide 30

#### Fixing health markets

Going to

Barbara Ehrenreich

Extremes

"We left the whole business of health care to business, and business screwed it up" Referring mainly to the USA, Ehrenreich describes a cultural disaster powered mainly by greed, where a "bloated overclass" has become more of a problem than the permanent underclass. When markets don't satisfy an agreed goal, we have the option of manipulating them. This is called "interference" or "leadership" depending on perspectives.



Fixing the market requires some sort of regulation: the imposition of a system of rules. Pirates of the Caribbean is a story about rules, whether and when they are needed, and how to interpret them, given prevailing social norms. What's amusing (until you kill the joke by analysing it) is that Jack Sparrow is a pirate, but exerts much influence on the laws of civilized society.

### Slide 32

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The authors of "Nudge" believe in gentle persuasion to improve efficiency. The idea of "Nudge" is that it is possible to influence people to make good choices in areas as diverse as savings, nutrition, and the environment, without restricting their rights to choose. Their mechanism is the horribly-named "libertarian paternalism". Various commentators have questioned the premise of the argument, for example the assumption that what people do when left alone reflects free choice. However, current savings, organ-donation, and health choices are not those of free individuals; they are the choices made in large part because current government policies - taxes, regulations, mandates, and so on - impair incentives. They are government failures presented as market failures. In one view, libertarian paternalism is not designed to liberate individuals from their irrational tendencies but to capitalize on irrational tendencies to move citizens in directions that the paternalistic planner deems best (Mitchell 2008).



Constructing an efficient kidney exchange. Roth showed how, with a database of incompatible patient-donor pairs and relevant medical data, it is possible to arrange more transplants, using a clearinghouse to maximize the number of transplants subject to various constraints. In the Figure, double-headed arrows indicate that the connected pairs are compatible for exchange, i.e. the patient in one pair is compatible with the donor in the other. Pairs A1 and A2 are both from transplant centre A, pairs B and C are from different transplant centres. Transplant centre A, which sees only its own pairs, can conduct an exchange among its pairs A1 and A2 since they are compatible, and, if it does so, this will be the only exchange, resulting in two transplants. However, if in the left Figure transplant centre A makes its pairs available for exchange with other centres, then the exchanges will be A1 with B and A2 with C, resulting in 4 transplants. Swaps now include both 2 and 3-way cyclical exchanges and a variety of chains, either ending with a donation to someone



on the cadaver waiting list or beginning with an altruistic non-directed donor.

Public policy on vaccination: "Had it been left to private markets during the last few decades, it is inconceivable that today some 80 percent of the world's children would be immunized against the six major-vaccine preventable childhood diseases" (Musgrove 1996). One solution is to supply information and to encourage social responsibility. At the other end is compulsory immunization. Each community, with its leaders, has to decide whether it wants provision, regulation or prohibition.

Slide 35



More information could lead to better decisions: you can check out the internet for diagnosis, treatment, insurance advice, and so on, but you still have to trust your doctor to some degree.

Slide 36



More information satisfies makes markets more efficient. One in three people now has a mobile phone: information is power. 41% of all Chinese is nearly half a billion people, about 1/4 of all phone users worldwide. Indian Blood Donors, which operates throughout the country free of charge, links patients who need blood with those willing to donate it locally. So far 45,000 donors have registered. It was the idea of civil servant, Khushroo Poacha, who works for Indian Railways: "In India, because there are shortages, especially for rare blood types, patients are often asked to find their own blood. When someone needs blood, they send a text message in a specific format. Within seconds, they will get a donor's name, blood group and contact details. The process then triggers an SMS to the donor with the contact details of the patient, and the donor and the recipient organise the blood donation between themselves (Guardian 2008).

Slide Cellphones to build 'audio internet'

Slide 38

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Information via the audio internet? Even for some who can afford computers, attempting to access the internet is futile, either because they cannot read or write, or the information on the web is simply not relevant to them. One answer is speech: while a farmer may not be able to write a memo, or an email, or a summary of his work, he can easily talk about it" Nearly 300 million people now use cell phones in India, up from zero a little more than a decade ago. An Indian farmer could set up a Voice Site to sell his daily produce to anyone within a 50km radius. The farmer get the best price, as opposed to the current model in which a single broker has a monopoly.

Trust is the basis of exchange. Among the many kinds of games played in markets, the Assurance Game considers how players, such as doctor and patient, benefit most from joint cooperation. Mutual cooperation is the best possible outcome, but cooperation involves an element of risk. In such situations both players need assurance, or trust, to risk cooperation. Imagine a doctor initiating a patient into a smoking cessation programme. Clearly both the doctor and the patient are better off if the smoking cessation programme is initiated, but without the assurance that the patient will cooperate the doctor risks substantial losses. The worst payoff for the doctor would come from putting time and effort into initiating a programme when the patient has no intention of cooperating. The outcome will be influenced by whether the interaction is once only, or whether it is part of a series of interactions, as with GPs.

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Type 1 civilization (Kardashev) Change we can believe in?			
	0.1	Dominance hierarchies, violent	
	0.2	Hunter gatherers, horizontal political system, egalitarian	
	0.3	Settled agrarian, primitive political hierarchy & division of labour	
	0.4	Chiefdoms, economic inequalities & division of labour, lower classes produce food etc	
	0.5	Political states, mercantile economy	
	0.6	Empires that control other peoples	
	0.7 Current?	Democracies, institutions run by elected officials, early market economy	
	0.8	Liberal democracies, markets embrace free trade	
	0.9	Democratic capitalism, global, free trade	
	1.0	Globalism, all knowledge available to everyone, anywhere, anytime, open economic borders, free markets, health for all?	

What kind of civilization do we want to live in? Soviet astronomer Nikolai Kardashev described 3 types of civilization. Type 1, can harness all of the energy of its home planet. Type 2 can harvest all of the power of its sun and type 3 can master the energy from its entire galaxy. In 1973, the astronomer Carl Sagan estimated that we are a type 0.7 civilization. Current estimates put us at around 0.72. Even in the industrial West, where economic tribalism still dominates the thinking of most people. Hopefully, in the evolutionist's deep time and the historian's long view the trend lines toward achieving type 1 status tick inexorably upward. Is that change we can believe in? (Kardashev 1964, Shermer 2008).



Leadership: success because there is a common will. We are not entirely selfish individuals, as the free market supposes. For some environmental threats, such as contaminated water, private individuals may take defensive measures, but there are better solutions through community action. What is needed are measures that go beyond the individual's resources, such as the construction of sewerage systems. As chief engineer to London's metropolitan board of works in the mid 19th century, Bazalgette had a significant impact both on London's appearance and, through his design of an efficient sewage system, on the health of its inhabitants. He saw to it that the flow of foul water from old sewers and underground rivers was intercepted, and diverted along new, low-level sewers, built behind embankments on the riverfront and taken to new treatment works. By 1870 both the Albert and the Victoria Embankments had been opened. These replaced the tidal mud of the Thames shore with reclaimed ground for riverside roads and gardens behind their curved river walls. One of the effects of the sanitation revolution was a gradual transformation in attitudes toward responsibility for disease. The growth of knowledge regarding modes of transmission of disease made it increasingly clear that individuals might be the victim of forces beyond their control, and that these forces were within the purview of social action. As awareness of this possibility grew, so too did support for state intervention in the interest of public health (www.sleepycity.net).

#### Slide 41



When leadership tries to play the market game. The quoted statement by Jeffrey Sachs may be true in some instances. The risk is that people come to believe that health is only worth the investment if it generates more wealth.

Slide

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Leadership: regulating health markets

several times the costs of scaling up interventions"



324 years

When leadership fails through inefficiency. It's not that India lacks the legal mechanisms (many of which originated during British rule); rather that they cannot be efficiently enforced (Bearak 2000, Peters 2008).





Goals of the NHS?

"creation of a well-governed, financially

system that delivers personal health

services according to need" R Horton, editor Lancet

secure, responsive, and innovative health

THE LANCET

Slide 45 When new leadership might fail through bad luck. In the USA, universal health insurance has been a tough sell, and past events have been an obstacle to universal coverage. Universal health care insurance was originally part of Roosevelt's Social Security Act of 1935, but it was quickly abandoned. The main reason was the strong opposition of the American Medical Association (AMA) to any form of government involvement in health care. By forcing health insurance out of the public sector, the AMA set the stage for the rise of the private insurance market and employer-based coverage. Over time the path became entrenched, not because it was compulsory, but because the groups continually benefited by and therefore reinforced it. This is a story of universal health coverage first being subordinate to old age insurance, repeatedly blocked by organized medicine, and then crowded out by deeply entrenched, vested interests and the astronomical growth of Social Security's and Medicare's costs (Mayes 2008). The history frustrated LBJ's "change through unity", as it might Obama's "change we can believe in".

Part of the problem of lofty aspirations is that while some see health as a human right, others don't. Simply to make declarations of the kind written here is no more than a starting point. Alma Ata did not achieve "health for all" through primary health care for several reasons. One view is that PHC did not achieve its goals because of the refusal of experts and politicians in developed countries to accept the principle that communities should choose, plan and implement their own healthcare services (Hall & Taylor 2008). PHC was a system developed "for the people", but not "by the people".

The goals of the NHS are easily stated, for example "creation of a well-governed, financially secure, responsive, and innovative health system that delivers personal health services according to need" (Horton 2008). Right, but the challenge of leadership is to determine how. What is the mechanism for generating the common interest in achieving these goals?



Slide

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The solution is clearly going to involve a mix of free market and public provision but attempts to use private funds to pay for cherished public services need to be handled with great care. The intention was to provide free care for all at the point of delivery. But a proposal last week by the Department of Health generated immediate controversy. It would allow NHS patients in England who can afford to buy treatments not approved for NHS use to pay for top-up their treatment. This, said the Lancet, heralds a truly two-tier system.

Leadership trying to change social norms; the framework within which the market may operate. The evidence that social status matters is persuasive, but it is less clear is how to flatten steep social and economic gradients. Michael Marmot is urging a social agenda on the world: "It is essential that governments, civil society, WHO, and other global organizations now come together in taking action to improve the lives of the world's citizens. Achieving health equity within a generation is achievable, it is the right thing to do. We rely too much on medical interventions as a way of increasing life expectancy. A more effective way of increasing life expectancy and improving health would be for every government policy and programme to be assessed for its impact on health and health equity; to make health and health equity a marker for government performance." How many will agree in principle and take action in practice?

A global movement, gathering pace"?? Lancet 8 Nov 2008 Reducing health inequities is, for the Commission on Social Determinants of Health, an ethical imperative. Social injustice is killing people on a grand scale. Or just another WHO report? Marmot: "It is essential that governments, civil society, WHO, and other global organizations now come together in taking action to improve the lives of the world's citizens. Achieving health equity within a generation is achievable, it is the right thing to do. We rely too much on medical interventions as a way of increasing life expectancy. A more effective way of increasing life expectancy and improving health would be for every government policy and programme to be assessed for its impact on health and health equity; to make health and health equity a marker for government performance." How many will agree in principle and take action in practice?

16



Culture Evolution	health behaviour adaptive change
Luck	ideas, technology, contingency
Liberty	freedom of choice in a market, with constraints
Leadership	health markets, with regulation

Two last pictures; the first pessimistic, the second more optimistic. This is growing gap between per capita aid from donor countries and the per capita wealth of these countries, 1960–2000. Aid is important for social development, but the volume of aid is low — absolutely, relative to wealth in donor countries, and relative to the level of aid commitment of about 0.7% of GDP in donor countries (Marmot 2008).

The Nordic countries have seen a rapid increase in family policy generosity from the 1960s, mainly due to the earnings-related benefits for parental leave. A direct effect of this policy is that poverty levels in families with children are low in Nordic countries. This effect is probably due to a combination of the amount of benefits paid and the support for two wage-earners, which increases the market income of the household. Family policy generosity also showed a negative association with infant mortality rates, meaning that higher generosity is associated with lower infant mortality rates.

Aspirations like "health for all" may rally some people to the liberal humanitarian cause. However, if the ensuing practical discussion does not acknowledge that different players have different interests, the aspirations are less likely to be achieved. The idea of a market can help to explain why behaviours that affect health are common or rare. And the free market, as a mechanism in cultural evolution, can be a force for good. But for those who have set goals of universal access and full coverage, the market alone is not enough. We also need leadership to implement commonlyagreed goals. And of course, we need some luck.