

GLOBAL GOVERNANCE AND HUMAN HEALTH

CARLO JAEGER

1. INTRODUCTION: EPIDEMICS AS SOCIAL CHALLENGES¹

In the years between 1346 and 1350 an epidemic known as the 'Black Death' killed about one third of the population of Europe, i.e., more than 30 million people. Most likely, the epidemic had originated many centuries earlier in Mongolia, from where it had slowly traveled through China and the Middle East to Crimea and Turkey. In all these places it had created widespread suffering and killed huge numbers of people, without leading to far-reaching changes in the lifestyles of the surviving people.

The plague reached Sicily in 1346. One year later it was in France, two years later in England. In many cities, more than half of the inhabitants died within months. In Europe, the epidemic led to all sorts of reactions, ranging from the emergence of rituals of self-punishment to efforts at isolating the ill to block contagion. It also led to a massive shortage of manpower in many economic activities, and it led to increased freedom to migrate for the surviving rural population. What it did not lead to was a general mood of despair or a period of economic stagnation. Quite the opposite, the plague was followed by the outburst of cultural creativity and economic expansion known as the Renaissance.

A remarkable cultural reaction to the experience of the Black Death is given by the Italian writer Giovanni Boccaccio. Immediately after the onset of the epidemic, around 1349, he started working on his masterpiece: the tale of a group of noble men and women fleeing from the

¹ I am grateful for helpful discussions to the research group on 'Globalization and the Financial Transition' at PIK and to O. Edenhofer, C. Engel, P. Epstein, A. Haas, E. Ostrom, O. Renn, M. Rohner, A. Sen, and L. Tubiana. The usual disclaimers apply.

plague in Florence to the countryside and entertaining each other by telling amusing short stories, each of which is worth reading in its own right. It is noteworthy that for the rest of his life Boccaccio was insecure whether his work was really something to be proud of or rather a sign of disorientation in the wake of a great disaster. He would certainly have been relieved to know that in the long run his creative reaction to the Black Death helped crystallize the Italian language along the lines set by Dante, whom Boccaccio deeply admired.

What distinguished Europe from other world regions hit by the plague earlier on was the fact that here this terrifying experience was countered by a wave of innovations that transformed not only Europe, but actually the world as a whole. While it would be naïve to attribute the emergence of modern society to the experience of the Black Death, it is remarkable how in this case the experience of a tremendous epidemic was integrated into a history of creative progress.

There are many other instances of large-scale epidemics, but none of them triggered a comparable response so far. Take the case of the 'Spanish Flu' of 1918-19. It seems that it originated in March 1918 in Kansas, U.S., most likely through a virus transfer involving poultry, pigs, and humans. The huge movements of soldiers involved in World War I led to a fast spread of the epidemic across the Atlantic. In Spain, which was not involved in the war, the epidemic was more widely publicized in the media, hence the somewhat misleading name 'Spanish Flu'. A remarkable feature of the flu was that it by no means spared young, healthy people, as flu usually does. In summer 1918, somewhere in France, the virus underwent a mutation that made it even more deadly. It reached Africa, Russia – brought there by troops fighting the communists –, China, India, and Australia. In 1919, it suddenly disappeared, having killed around 30 million people, about one third of which in densely populated, poor India.

This disastrous experience certainly played a role in the wave of revolutionary movements that rolled over Europe in the following years. But even if this was the time when some of the most significant breakthroughs of modern art – from Joyce's writing to Picasso's painting and Eisenstein's film-making – were achieved, it is a period remembered more for the rise of totalitarian ideologies and regimes than for cultural achievements on a par with those of the Renaissance.

Nowadays, the HIV-Aids epidemic confronts large parts of humankind with a similar challenge. Epidemiological research suggests that it is quite possible that even larger epidemics will arise in the years to come. At the

time of writing, avian flu is in the headlines around the planet. Toxic pollution may well acquire similar dimensions. Chemical, nuclear, and biological pollutants have the potential to cause human suffering and large numbers of death in many parts of the world, in particular in developing countries.

How will humankind respond to the experience of large-scale diseases, toxic pollution, and the clear risk of even larger future human health disasters? One possibility is to stick to existing patterns of development, another one to engage in spirals of increasingly destructive conflict. The present paper explores a third possibility: a creative process leading to new forms of solidarity in an age of globalization.

2. ILLNESS AND TWO FORMS OF SOCIAL SOLIDARITY

Since the origins of humankind, the reality of illness is tied to the possibility of solidarity. For obvious reasons, the rules defining rights and obligations in case of illness have always been closely related to analogous rules with regard to the elderly.

Three basic mechanisms are involved in such rules. First, there is the need to deal with uncertainty: we do not know for sure when we will be hit by illness and death. Second, there is the opportunity to improve everybody's lot by exchanging some resources for health care: a little time – or other resources – by the healthy and the young makes a huge difference for the ill and the old. As everybody is likely to play both roles in the course of time, everybody is better off by accepting some obligation to help. Third, there is the problem of free-riding: some sense of solidarity must be consolidated to make sure that people actually fulfill those obligations.

All three mechanisms can be mobilized quite effectively in face-to-face networks between people sharing long stretches of their lives. This may be a key reason why, until the 19th century, solidarity with the ill – as with the elderly – was rooted mainly in kinship and in religious practices. The latter are geared to kinship via rituals of marriage, baptism, burial, and more. And it is obvious that the phenomenon of social solidarity is closely linked to the Christian concept of *Caritas* (Benedict XVI, 2006).

Since the origins of humankind, being ill meant being dispensed from various obligations towards one's community, while being entitled to care from various members of that community. Sometimes this entitlement included help from a person with a healing role, like a Shaman. In the course of history, the happy few endowed with exceptional power or

wealth could summon healing services from others, but for most people kinship and religion remained the basis for the solidarity they needed in case of illness.

It is useful to relate this situation to a fundamental institutional dichotomy rooted in Roman law: the polarity of private and public law. Private law deals with interactions between physical persons, public law deals with interactions between the legal person constituted by a state and either other states or physical persons. This dichotomy is particularly relevant when it comes to property rights: private property rights are rights of physical persons to take action with regard to things (in Ancient Rome, a slave was a thing, too); public property rights are rights of states to take action with regard to things.

Along these lines, one can distinguish two forms of social solidarity, private and public. Private solidarity is rooted in kinship and religion (and to some extent plain neighborhood). As far as we can tell, it characterizes human culture since its origins at least several tens of thousand years ago. Public solidarity is rooted in people being members of the same state – a phenomenon that seems to have emerged for the first time in Mesopotamia less than ten thousand years ago. It seems that the differentiation of a public and a private domain was one of the most significant steps in the evolution of human culture.

The social solidarity required to deal with illness originated in the earliest forms of human culture and remained a matter of private solidarity for millennia. (An important exception is the solidarity provided by states to soldiers injured in wars). With the expansion of market institutions, things changed in a fundamental way, leading to current systems of health care and social security (Achenbaum, 2003; Kingson and Berkowitz, 1993; Tomasson, 2002).

This development took place in several steps. First, the old patterns of solidarity broke down as reliable means to deal with illness. They did so for a variety of reasons. The development of the market economy weakened older linkages of social solidarity that could provide non-monetized health care – in particular by severing them through migration. Moreover, the pattern of industrialization associated with the spread of the market economy was extremely unhealthy for large numbers of people, both in their workplaces and in their homes. As illness often brings old people closer to death, these problems made the situation of the elderly particularly difficult. A further reason is linked to the fact that various forms of health care became services traded on markets, along with medical drugs.

Episodes of illness often are random events, and once people started to live in a market economy, such episodes often required expenses that exceeded the financial means available in the given situation.

New forms of solidarity were called for, but they did not develop smoothly. In a second step, trade unions as well as a wide variety of friendly societies – including bodies like the Ancient Order of Foresters as well as the Masonic Order – provided sickness insurance to their members, i.e., insurance for health-related loss of income. Again, face-to-face networks with considerable continuity were involved in dealing with the three mechanisms highlighted above. In the setting of formal insurance schemes, the problem of uncertainty leads to the one of adverse selection, the problem of free-riding to the one of moral hazard. Trade unions and friendly societies were able to handle these problems by the solidarity organized via their well-articulated networks. The workers' movement turned this solidarity into a dramatic challenge of emerging capitalism – much as later on a similar movement, with important linkages to the Polish Pope John Paul II (Luxmoore and Babiuch, 2006), challenged communism in Poland.

Out of the resulting turmoil, in the third step far-reaching institutional innovations evolved. In Europe – and Canada – nation states organized systems of social security and public health (Freeman, 2000). They included provision of health care, but also systems of sewage and drinking water as well as various forms of support for the elderly. This meant that private solidarity in the face of health risks was substituted for by public solidarity. By helping its citizens to cope with the risks of illness and ageing, the nation state could strengthen a sense of national identity in its citizens – an effect consciously mobilized by Bismarck in establishing the German pension system.

In the U.S., the role of the nation state in health insurance was much weaker. In 1929, a group of Dallas teachers invented a scheme under which they would pay a hospital a regular fee in order to be able to go to the hospital when the need would arise. The American Hospital Association encouraged such schemes, state-level legislation freed them from various insurance-related regulations and from taxation. In 1934, the American Medical Association adopted a set of principles for similar schemes relating to physician services. Seeing the success of these schemes, private insurance companies entered the market, too. They handled the adverse selection and moral hazard problems by focusing on groups of employed workers. The elderly and the poor were left out by

this development, and in the 1960s national health insurance schemes – Medicare and Medicaid – were introduced to address their needs. But of course now there was a huge adverse selection problem: these programs had to serve a fraction of the population with above average health risks and below average incomes.

As for pensions, private companies took the initiative in the U.S. After a series of smaller initiatives, in 1940 General Motors established the first large-scale private pension plan. Such plans became widespread, and so the risk of their failure through bankruptcy became a serious issue. In the 1970s, therefore, legislation established a national body offering re-insurance for private pension plans.

Meanwhile, it is increasingly doubtful whether nation states will be able to successfully provide the social solidarity required to deal with illness and ageing in the globalized world we have entered (Sheehan, 2002). Several factors need to be considered here. Science-based medicine has led to highly sophisticated, but also very expensive, treatments for a variety of illnesses. With existing schemes of health insurance, these treatments can be sold in large numbers even if few people can afford them out of their more immediate financial resources. Moreover, public health systems combined with increasing economic welfare have led to spectacular increases in life expectancy. This implies rapidly growing costs for retirement schemes and additional costs for health insurance systems. For health care alone, in the U.S. the costs rose from about 7% of GDP to 15% over the past three decades (Holtz-Eakin, 2004, Table 3). Other industrialized countries show similar patterns, and the fraction of GDP earned by the elderly reached even higher levels.

By itself, there is nothing wrong with large and increasing amounts of income being spent to finance retirement and health care. In a globalized market economy, however, there is something worrying when financial streams of the order of magnitude of half the GDP are administered by nation states. Experiences as well as theoretical analysis suggest that a market economy tends to get inefficient if it is exposed to too much government control. Of course, one can argue that health care and social security involve public goods that must necessarily be provided by the state. However, globalized health risks as well as global demographic developments involve public goods not at a national, but at a global scale, and nation states cannot easily provide those (Kaul *et al.*, 2003; Feachem, R.A., Sachs, J., 2002).

Moreover, the demographic and economic situation of most developing countries makes it extremely difficult to establish nation-based systems of social security and health care. As a result, in a globalized economy engendering new health risks for everybody, and especially for the elderly, billions of people are exposed to these risks without a sound structure of governance to deal with them.

3. HEALTH CARE IN ATOMISTIC MARKETS

Faced with these challenges, the idea of cutting back the role of the state in favor of market solutions to the problem of human illness is gaining influence. This idea is based on the historical success of two remarkable innovations in handling money: credit and insurance.

Credit links the act of an agent A entitling an agent B to spend some amount of money X with a promise by agent B that at a later moment in time he will give some amount of money Y to agent A. $(Y-X)/X$ then is the nominal rate of interest implied by that particular credit (to the extent to which a suitable rate of inflation can be indicated, the real rate of interest is the nominal rate divided by the rate of inflation).

Insurance is based on contingent contracts, i.e., contracts where an agent A pays some price P to an agent B while B promises that under a series of pre-specified conditions C_1, C_2, \dots, C_n , agent A will get payments $X=f(C_i)$, $i=1,2,\dots,n$. An insurer sells a number of such contracts in such a way that he can expect the sum of his revenues to be larger than the payments he will have to make. This requires two things. On one hand, the conditions specified in the contracts must be such that it is highly unlikely for conditions triggering large payments to be realized simultaneously in most contracts. On the other hand, the buyers of the contracts must have a strong interest to avoid running into those conditions without compensating payments.

The latter phenomenon is known as risk aversion: often, people prefer a limited payment to be performed with certainty to a large loss that may happen as a random event. If people were immortal, this would mean that in the long run their average stream of payments would actually be larger than if they would accumulate wealth individually and pay their random losses out of this wealth.

In reality, however, most people die long before they had a chance to accumulate enough wealth to pay for health care in case of serious illness.

Under these circumstances, health insurance redistributes income from the healthy to the ill in ways that make both of them better off: the healthy live without the anxiety generated by the possibility of falling ill without the means to cope with illness, and the ill receive the means needed for that purpose (Nyman, 2002).

The basic mechanism is a Pareto improving set of transactions, i.e., a set of transactions whose result is preferred by all parties to the original situation. To the extent that this mechanism requires nothing than the invisible hand of the market to turn individual egoism into a collectively desirable outcome, one may describe it as the operation of an atomistic market.

With this background, we can now consider an ideal type of health care and retirement pensions as being provided exclusively by private businesses. This takes three kinds of firms: producers, insurers, and banks (of course one company may perform several of these activities). Producers deliver health services and medical drugs along with other goods and services. Insurers offer contracts for health insurance. With health insurance, the insurer gets a payment for each time period (say, each month), while the insured gets a payment in case of illness, where the amount of the payment depends on the kind of illness and on the treatments available. When somebody gets ill, he can then buy various health services and medical drugs, all of which are strict private goods in the sense introduced above.

In the ideal-typical situation to be considered here, retirement then is based on private saving organized by banks. During their economically active life, people accumulate savings on bank accounts, and during retirement they live by running down these accounts. As the time of death is not known in advance, however, this is not sufficient. In addition, there is a need for retirement insurance. Here, the fee must be paid in advance. If the insured then lives longer than average, he gets a pension from the insurer. If the life of the insured is shorter than average, his remaining wealth goes to the insurer (this helps reducing the fee for retirement insurance).

If inflation does not run out of hand and all incomes are high enough, this is certainly a feasible scheme for retirement. Although the lives of different people have different duration, the basic mechanism of such a scheme still is the use of part of current production to sustain the livelihood of the elderly. If the proportion of retired people in the population increases, everybody's consumption can still increase as long as production per capita increases, too. The growth of production per capita, in turn, depends to a considerable extent on the fraction of past output ded-

icated to gross investment. Besides a relatively stable rate of inflation and a sufficient level of the lower incomes, then, such a retirement scheme also requires that a sufficient fraction of gross income be dedicated to gross investment. If these conditions are met, even a population with a rapidly increasing fraction of retired people can avoid a pensions crisis.

Schemes for health care and for retirement financing, then, require different mechanisms. Nevertheless, they should not be analyzed in isolation, if only because health risks tend to increase with age (Alemayehu and Warner, 2004; Hogan *et al.*, 2001). A combination of credit, insurance, and saving yields an ideal concept for how to finance health care and retirement in a market setting. Given the remarkable capability of a market economy to satisfy people's wishes and needs, there is little doubt that a creative response to global health risks will heavily rely on these instruments. However, additional instruments are needed to cope with the rather severe limitations of atomistic markets in the face of those risks (Jaeger *et al.*, 2001).

4. THE IMPORTANCE OF CLUB GOODS

A useful model of an atomistic market can be framed with a set of two kinds of agents: households and firms. Households may be characterized by utility functions and initial endowments, firms by production functions. Firms produce goods and services and exchange them with each other and with households; households supply labor services and own the firms. The goods and services are private in the following technical sense: if a good or service enters the production function of a firm, it cannot enter any other production or utility function; and if a good or service enters the utility function of some household, it cannot simultaneously enter the utility function of any other household.

Under a series of non-trivial additional conditions, one can then show that no institutional arrangement can yield better results than a competitive market. Better, that is, in terms of the preferences of the households, and given a set of technologies and a distribution of initial endowments. This result is important because it helps to understand what happens if goods are not private in the sense defined above. One then gets so-called external effects that make the atomistic market inefficient.

Private goods are often contrasted with public goods, i.e., goods that enter all production and/or utility functions at once. This is a theoretical

limit case never to be found in practice. What really matters are club goods, i.e., goods that are necessarily used jointly by some set of firms and/or households. In the presence of club goods, the operation of atomistic markets can be improved by establishing suitable clubs, i.e., collective agents jointly using some good or service in such a way as to operate internally according to non-market rules and externally as a participant in the market.

Of course, firms, households, states all are clubs in this sense of the word. However, while in atomistic markets these operate as disjoint entities, in more complex markets collective agents overlap in a rich variety of ways. To overcome inefficiencies due to externalities generated by some club good, then, one needs to either find some existing club that can take care of it or to establish a new club that fits the case.

In practice, the expression 'public good' is used with regard to some restricted community, typically inhabitants of a nation state. In this sense, public goods are a special case of club goods, with the inhabitants – or the citizens – of a nation state forming the relevant club. The concept of global public goods can then be used to advocate the emergence of a global government, along lines first drawn by Kant in his essay on the need and possibility of 'perennial peace'.

But already Kant saw that a society of nations that have learned to interact peacefully may be a more realistic goal than a single global government. It may also be less dangerous, because the existence of multiple nation states provides a system of checks and balances that might be hard to match in the setting of a global government. This problem would become especially serious if the power of such a government would be geared to a monopoly of force on its territory – which then would be the whole planet.

A creative answer to global health risks may require more imaginative solutions than an extrapolation of the nation state to the global level (Ostrom, 1998). Such an answer may be facilitated by thinking about the importance of global club goods. A particularly important example of such a good is the professional knowledge developed and maintained in health-related institutions – hospitals, medical schools, pharmaceutical companies, etc.

Currently, scientific knowledge is geared to the power of a few nation states (and thereby more closely to military purposes than is often acknowledged). In the field of health as in other fields, this has led to a situation of opaque and sometimes missing accountability, and thereby to an incentive structure that leaves room for improvement (Fried, 1998). It

has also led to claims of certainty in areas where a more pragmatic approach seems warranted (Feyerabend, 1978; Jaeger *et al.*, 2001; Servan-Schreiber, 2004). Even global environmental change may be such a field.

Accountability in the development of health related knowledge will be particularly relevant in view of global health risks. Managing these risks will require sophisticated systems of health data that raise serious issues of privacy. And the expanding use of genetic engineering will confront us both with new opportunities to reduce health risks and with risks unknown before. Global governance for human health needs to take this into account.

5. THE POTENTIAL OF VOCATIONAL SOLIDARITY

We live in a world increasingly shaped by truly staggering flows of money directed at short-term gains without sound incentives to pursue goals like poverty reduction, fostering peace, and avoiding environmental risks. These are not simply noble goals for idealists. In the age of nuclear weapons, they are essential goals for responsible behavior. There is a need for global mechanisms that combine a real capability to shape long-term developments with a robust system of checks and balances (Shiller, 2003).

One possibility to develop such mechanisms is by creating vocational groups that can pool the savings of people linked by shared vocational knowledge. In view of global health risks, it is worth considering the possibility that people working in the health sector might form one or several international associations pooling and managing the savings of their members. Similar groups may emerge in other sectors. In a way, they would renew the tradition of friendly societies and trade unions that lays at the origins of the American system of health insurance. And they would enable associations like the American Medical Association, which played such an essential role in the development of that system, to help address its current shortcomings.

By now, the largest investors on global financial markets are pension funds (Drucker, 1996/1976). These funds, however, are currently managed without in any way involving the people on whose savings they thrive. Vocational groups actively managing the savings of their members can modify patterns of social solidarity – in particular, the solidarity between generations (Shubik, 1981) – at a global scale. And as there would be a plurality of such groups competing with each other for members, they would provide a structure of checks and balances.

Such vocational groups would simultaneously possess global financial clout and have access to the professional knowledge of the broad economic sectors they represent. With this background, they would be in a position to provide an efficient mechanism for managing many large-scale health risks. The mechanism would work as follows. Any firm wishing to engage in some activity deemed risky by the law would need to be certified by a vocational group owning a critical amount of assets. The group certifying the operation would then accept unlimited liability for damages caused by the firm. The firm would be granted great freedom from regulations in its activity, while being held accountable for its action by the vocational group.

Vocational groups could quite naturally act as trustees of that global club good, vocational knowledge (Abbott, 1988). They can confer educational degrees on the basis of suitable tests, they can run schools leading towards these degrees, and they can run research institutes detached or combined with those schools. To deal with the health risks associated with global change does not require a static kind of knowledge settling the relevant questions once and for all. It requires a co-evolution of professional practice and the environment in which this practice takes place. Treating vocational knowledge as a global club good means to establish such a co-evolution. In the long run, this may enable scientific traditions to make even more effective contributions to the solution of global problems than they have already begun to do.

The understanding of vocational knowledge as a club good is highly relevant for the debate about how best to translate the health costs of globalization into incentives for medical R&D (Archibugi, Bizzarri, 2005; Kremer, 2000; Nosek, 2004). It may well be that in the longer run neither private companies nor nation-states or organizations formed by these agents will be the most appropriate agents to promote vocational knowledge about the health risks associated with global change. Vocational groups may turn out to be a superior alternative.

The possibility of vocational groups to operate as trustees of vocational knowledge resonates with Catholic social thinking (Dougherty, 2003; Nell-Breuning, 1936), but also with very different traditions of social theory (Durkheim, 1997/1893). Unfortunately, it is difficult to discuss this possibility in a dispassionate manner because it is also related to the radical experience of Spanish Anarcho-Syndicalism. Things are even more difficult because somewhat similar ideas were entertained in Fascist circles. However, it is neither a sign of strong democratic values

nor a step towards intellectual progress if the analysis of global club goods like vocational knowledge is blocked by an inability to distinguish between the use of a misleading idea and the abuse of a potentially fruitful idea. In the latter case, the task is to free the idea from its abuse in order to gain new insights from it.

Such insights are needed if we are to understand the health risks involved in global change (Epstein, 1999) and the factors influencing the differential vulnerability of people to those risks (Ribot *et al.*, 1996). They are needed if we are to take 'global dimensions seriously, in regard to the formation of international solidarity and the constructions of identity patterns that go beyond national borders' (Sen, 1999, p. 116). Exploring the potential of vocational groups to create global solidarity is an essential way of taking seriously 'the range of multiple identities accessible to individuals and makes 'justice' applicable to a corresponding diversity of socio-political realities, independent of the idea of national frameworks' (*loc. cit.*).

6. CONCLUSION: THREE PRACTICAL STEPS

If a truly creative response to global health risks is to emerge, this is likely to take several decades. Nevertheless, there are steps that can be made with a time horizon of a few years. Three such steps shall be mentioned here.

First, the risks of toxic chemical pollution can be reduced by developing suitable systems of certification and liability. In the short term, there is no way of doing this via a vocational group of people active in chemical industries. But it is possible to require any company dealing with risky chemical substances to be member of an industrial association representing a critical volume of assets. Such associations would be granted considerable freedom from government regulation in return for unlimited liability for damages caused by its members. This would provide an incentive structure where the professional knowledge of the firms involved would be used to keep risks within acceptable limits as set by liability law. And it would provide credibility to firms claiming that some technology is actually safe according to state-of-the-art knowledge.

Second, prevention and treatment of large-scale episodes of illness can be fostered by encouraging and supporting global networks of health professionals to monitor both risk indicators for such events and successful medical practice when dealing with them. This would have three

advantages. First, it would help collecting valuable information in a cost effective manner. Second, it would provide an opportunity to limit the tendency of governments and companies to weaken standards of privacy in dealing with this kind of data. And third, it would prepare the ground for the kind of vocational solidarity discussed in the previous section as a possible component of a long-term response to global health risks.

Third, the linkage between epidemics, poverty, and malnutrition can be addressed by a focused effort to realize the potential for sustainable development currently untapped in the world region most dramatically affected by the HIV epidemic: Sub-Saharan Africa. This implies a Marshall-plan style initiative of perfectly feasible proportions. The historical Marshall Plan did not simply organize a flow of money into Western Europe. It was a remarkably efficient scheme to strengthen critical institutions in Germany and other Western European countries (De Long, Eichengreen, 1993). In particular, credits were given in foreign currency and had to be paid back in local currency. This fostered imports into Western Europe and helped to reconstruct the German financial sector. Moreover, the whole initiative was consciously developed so as to build up the expectation that Western Europe would experience significant economic growth. This expectation greatly amplified the effect of the financial flows involved in the scheme.

A remarkable feature of the historical Marshall Plan was the extent to which it was based on learning by doing. A critical mass of highly competent people in different institutions were able to implement a shared vision, learning from preliminary successes as well as from partial failures. This capability would be even more important with regard to Sub-Saharan Africa. Launching a similar process is possible with a financial stream considerably smaller than the more than 50 billion Euros spent annually on German re-unification or on the aftermath of the Iraq war, as long as there is a clear long-term commitment – for about three decades – to maintain the process. Already after a first year of operation, it would be essential to review encouraging and discouraging developments, and to repeat such a review on an annual basis. Clearly, the whole operation might fail for many reasons, in particular lack of trust between investor and recipient countries. But it seems worth to take such a risk to avoid the clear and present danger of a destructive spiral of socio-economic development.

Along such lines it is possible to generate employment and strengthen vocational groups in Sub-Saharan Africa. This would help to build on the amazing degree of reconciliation – another form of solidarity – that has

been achieved in several countries of that region. The rich nations on the planet are in a position to launch such an initiative, and by so doing they could regain a sense of historical purpose that might be an even greater benefit than the economic return that can be expected from growing trade with a successful Sub-Saharan economic region.

REFERENCES

- Abbott, A. (1988), *The System of Professions. An Essay on the Division of Expert Labor*, Chicago, The University of Chicago Press
- Achenbaum, W.A. (1986), *Social Security: Visions and Revisions*, Cambridge, Cambridge University Press.
- Alemayehu, B., Warner, K.E. (2004), The Lifetime Distribution of Health Care Costs, *Health Services Research*, 39 (3), 627-642.
- Archibugi, D., Bizzarri, K. (2005), The Global Governance of Communicable Diseases: The Case for Vaccine R&D, *Law & Policy*, 27, 33-55
- Benedict XVI (2006), *Encyclical Letter 'Deus caritas est'*, Vatican City, Libreria Vaticana.
- De Long, J.B., Eichengreen, B. (1993), The Marshall Plan as a Structural Adjustment Programme, in Dornbusch, R., Nöbling, W., Layard, R. (eds.), *Postwar Economic Reconstruction: Lessons for Eastern Europe*, London, Anglo-German Foundation for the Study of Industrial Society.
- Dougherty, R.J. (2003), Catholicism and the Economy: Augustine and Aquinas on Property Ownership, *Markets & Morals*, 6, 479-495.
- Drucker, P. (1996/1976), *The Pension Fund Revolution*, New Brunswick, Transaction.
- Durkheim, E. (1997/1893), *The Division of Labor in Society*, New York, Free Press.
- Epstein, P.R. (1999), Climate and Health, *Science*, 285, 347-348.
- Feachem, R.A., Sachs, J. (2002), *Global Public Goods for Health. The Report of Working Group 2 of the Commission on Macroeconomics and Health*, Geneva, WHO.
- Feyerabend, P. (1978), *Science in a Free Society*, London, New Left Books.
- Freeman, R. (2000), *The Politics of Health in Europe*, Manchester, Manchester University Press.
- Fried, S. (1998), *Bitter Pills: Inside the Hazardous World of Legal Drugs*, New York, Bantam.

- Hogan, C., Lunney, J., Gabel, J. Lynn, D. (2001), Medicare beneficiaries' costs of care in the last year of life, *Health Affairs*, 20, 188-195.
- Holtz-Eakin, D. (2004), *Health Care Spending and the Uninsured. Testimony before the Committee on Health, Education, Labor, and Pensions of the United States Senate*, www.cbo.gov/Search.htm.
- Jaeger, C.C., Renn, O., Rosa, E.A., Webler, T. (2001), *Risk, Uncertainty, and Rational Action*, London, Earthscan.
- Kaul, I., Conceicao, P., Le Goulven, K., Mendoza, R.U. (2003), *Providing Global Public Goods. Managing Globalization*, Oxford University Press.
- Kingson, E.R., Berkowitz, E.D. (1993), *Social Security and Medicare: A Policy Primer*, Westport, CT, Auburn House.
- Kremer, M. (2000), *Creating Markets for New Vaccines*, Harvard University, Mimeographed.
- Luxmoore, J., Babiuch, J. (2006), John Paul's debt to Marxism, *The Tablet*, 14.1.2006.
- Nell-Breuning, O.v. (1936), *Reorganization of Social Economy: The Social Encyclical Developed and Explained*, New York, The Bruce Publishing Company.
- Nosek L.J. (2004) Globalization's costs to healthcare. How can we pay the bill?, *Nurs. Adm. Q.*, 28, 116-21.
- Nyman, J.A. (2002), *The Theory of Demand for Health Insurance*, Stanford, Stanford University Press.
- Ostrom, E. (1998), Scales, Polycentricity, and Incentives: Designing Complexity to Govern Complexity. In: Guruswamy, L.D., McNeely, J.A. (eds.), *Protection of Global Biodiversity: Converging Strategies*, Durham, NC, Duke University Press, 149-167.
- Ribot, J., Magalhaes, A.R., Panagides, S. (eds.) (1996), *Climate and Social Vulnerability in the Semi-Arid Tropics*, Cambridge, Cambridge University Press.
- Sen, A. (1999), Global Justice. Beyond International Equity. In: Kaul, I. et al. (eds.), *Global Public Goods. International Cooperation in the 21st Century*, Oxford, Oxford University Press, 116-125.
- Servan-Schreiber, D. (2004), *Healing without Freud or Prozac: Natural approaches to curing stress, anxiety and depression without drugs and without psychoanalysis*, London, Rodale.
- Sheehan, P. (2002), *Health Costs, Innovation and Ageing, Working Paper No. 9*, Centre for Strategic Economic Studies, Victoria University of Technology, Melbourne.

- Sherman, P.B., Oakley, E.F. III (2004), Pandemics and Panaceas: The World Trade Organization's Efforts to Balance Pharmaceutical Patents and Access to AIDS Drugs, *American Business Law Journal*, 41, 353-59.
- Shiller, R.J. (2003), *The New Financial Order: Risk in the 21st Century*, Princeton, Princeton University Press.
- Shubik, M. (1981), Society, Land, Love, or Money: A Strategic Model of How to Glue the Generations Together, *Journal of Economic Behavior and Organization*, 2, 359-385.
- Thomasson, M. A. (2002), From Sickness to Health: The Twentieth-Century Development of U.S. Health Insurance, *Explorations in Economic History*, 39, 233-53.