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Degrowth Episodes and Public Health: Lessons from the Past?

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Abstract

After the collapse of the Communist Bloc in the 1990s Cuba experienced a severe economic crisis. In its drastic reduction in fuels, its negative economic growth data due to declining production and consumption rates and in its adaptations to shrinking resources, this so-called Special Period is the closest equivalent we have to an experiment in degrowth. So far, this and similar instances offer the only glimpse onto how degrowth might play out with real people in the real world. Remarkably, this period seems to have had tangible positive effects on public health, including decreased death rates due to diabetes, coronary heart disease and stroke. Looking at economic, social and agricultural reaction to the crisis, this paper identified consistent commitment equal access to high quality health care, a transition to organic urban agriculture and a high level of social capital as main reasons for this outcome. Balancing this result with negative outcomes of the crisis, the paper seeks to draw lessons for future degrowth scenarios.

Keywords

Cuba, economic crisis, Special Period, public health, urban agriculture, social capital

1 Introduction: Economic Crisis and Degrowth

After the collapse of the Communist Bloc in the 1990s Cuba experienced a severe crisis, economic decline and shrinking GDP. In a speech to the Congress of the Federation of Cuban Women in March 1990 Fidel Castro declared that the country was on the brink of a “special period in peacetime,” thus coining the name for a time marked by “austerity and sacrifice.” (Deere, 1991). The event has been compared to a real life and country-wide simulation of life after peak oil (Morgan, 2006). But potentially its significance goes further. The wikipedia article on Special Period reads: “The period radically transformed Cuban society and the economy, as it necessitated the successful introduction of sustainable agriculture, decreased use of automobiles, and overhauled industry, health, and diet countrywide. People were forced to live without many goods they had become used to.” (http://en.wikipedia.org/wiki/Special_Period). In many ways, this seems like a list of degrowth exigencies. Can the experience therefore serve as an example for a transition to a degrowth society?

There are sound arguments against these parallels: there was no planned, orderly transition from one economic model to another, chosen because it was considered more beneficial to people and the environment. There was little concept of a long-term goal or the path to get there. Instead, the 1990s economic crisis was just that, a crisis, often characterized by chaos, trial-and-error improvisation and sometimes dire despair. The process definitely saw losers. However, at the time of writing, we have no way of knowing whether the transition to a degrowth mode, if and when it comes, it will arrive in the happy orderly fashion desired but rather in chaotic leaps and bounces similar to economic crises of the past. In other words, in its drastic reduction in fuels, its negative economic growth data due to declining production and consumption rates and in its adaptations to shrinking resources, the 1990s crisis is the closest equivalent we have to an experiment in degrowth. So far, this and similar instances offer the only glimpse onto how degrowth might play out with real people in the real world.

2 The Crisis

For many observers Cuba had been a symbol of hope, an example that growth with equity was possible, that a corrupt underdeveloped country could turn into one where health, education, social justice and at least modest wealth was available for all. And despite obvious shortcomings, especially regarding political human rights, in many ways this image was true. However, the undoubted successes also glossed over underlying difficulties and by the 1980s it became clear that the country was better at distributing than at producing and that the system of “extensive growth” meant to increase output at par with input was becoming increasingly inefficient, requiring an ever increasing investment of resources to maintain the level of wealth and services the population had become accustomed to. However, labor was increasingly put to inefficient use in order to avoid unemployment (Carranza Valdés, 1996). Secondly, the economy depended on foreign trade, conducted at preferential prices within the Soviet Bloc, as essential goods, ranging from food to fuels and machinery, were imported. This system required a sustained high level of exports (Burchardt, 2001). Unsuccessful and misguided attempts to break out of the stagnation drove the country into a recession by 1986 (Meso-Lago, 2005).

Three years later, the collapse of the Soviet Bloc took these difficulties to a new level and added a whole new set of problems of a distinctly degrowth nature. Almost overnight, Cuba saw the end of a trade system which had supplied 85 per cent of its imports. Between 1990 and 1993, overall imports shrunk by 75%. Imported oil was cut in half from 13 million in 1989 to six million tons in 1993. This loss of oil was doubly disastrous because since 1983 Cuba had resold two to three tons of oil imported at below-market price which had turned into a major source of foreign currency needed to pay for imports. Between 1989 and

1993 Cuba lost 70% of its import capacity. For years, Cuba found it virtually impossible to borrow at the Western capitalist market while the East Bloc market was no longer available. Efforts to control the market through rationing at set prices as a means of safeguarding economic justice resulted in a burgeoning black market (Carranza, 1996). As a result, economic output declined rapidly, and by 1993, the worst year of the crisis, Cuban GDP had shrunk to 65.2 per cent of its 1989 size (Nayer and López-Pardo, 2005). Domestic production in many sectors came to a virtual standstill. Sugar production, the mainstay of the Cuban export-dependent economy, fell from 8 million tons in 1989 to 2 million tons in 2003, leading to the closure of about half the sugar mills (Mesa-Lago, 2005; Hoffman, 1996). According to Catherine Murphy, “[t]he break up of the Soviet Block in 1989 plunged Cuba into the worst economic crisis of its history.” (Murphy, 1999) To Altieri et al. it “marked the beginning of a new era in Cuban history”(Altieri et al., 1999).

The situation would have been devastating for any society and any government anywhere. It was further exacerbated by two hurricanes, by the decline of world prices for the main Cuban export products sugar, and by several acts of the US Congress which tightened the already existing embargo. Some authors, such as Carmelo Mesa-Lago, argue that the US policy “has been a negative factor ... but it is not the fundamental culprit of Cuba’s poor economic performance” (Mesa-Lago, 2005). This seems an overly friendly view for legislation clearly designed to increase economic devastation to the point of political collapse. In 1992 the Torricelli Bill prohibited all trade between all subsidiaries of US companies and Cuba (70% of which had been food and medicines) and banned all ships from docking in a US harbor for six months after having been in Cuba. In addition, it made ending trade with Cuba a precondition for US aid to other countries. These regulations were further expanded by the Helms-Burton Act of 1996, which facilitated litigation against the Cuban government and tried to prevent foreign individuals and companies from trading with Cuba (Murphy, 1999; Nayer and López-Pardo, 2005). With little preparation and forward warning Cuba was thrown back on its own resources. Without perceiving it in those terms, it was forced to live according to degrowth rules: produce and consume locally, change from energy-intensive mechanized to low-energy, labor-intensive production methods, replace long distance with face to face communication and live a simple, low consumption life style.

Initially, it felt not so much like laudable modernity but like poverty. The need for drastic steps was powerfully brought home when thousands of Cubans tried to leave the country as illegal migrants to the USA between 1990 and 1994, literally risking their lives on flimsy boats whose safe arrival in Florida was by no means assured. Even more alarming, on 5 August 1994 angry demonstrators protested against their government, threw stones against public buildings and shouted anti-Castro slogans. While eventually the degree of violence was very limited the event made clear that something fundamental had to change (Hoffmann, 1996). In reaction, Cuban authorities took measures designed to change the system as much as necessary but as little as possible: the legalization of the dollar in Cuba, of the acceptance of private remittances from other countries, of joint ventures, of small restaurants and of private (self-)employment for a list of professions. Some of these reforms were cut back when the economic situation seemed to improve, others, such as investment in tourism, were increased. In many ways it was a conservative policy. The goal was to get back to a growth mode on the basis of an export-oriented economy (Burchardt, 2001a; Mesa-Lago, 1996; Moreno, 1998). And in parts it was successful. After about 1996 the country experienced a gradual recovery, though its extent is contested and an assessment of economic performance is complicated by unexplained changes in the Cuban statistical system. Official GDP figures have increased, though production figures keep showing substantial and sustained decreases for most goods, notable exceptions being oil which increased five-fold between 1989 and 2003, as authorities tried to make up for the losses in petroleum imports, and nickel, which increased by 53% (Mesa-Lago, 2005).

The price of for the gradual – and partial - economic recovery after 1996 was high: the legalization of dollars divided the population into those with and those without access to dollars and thereby to the products in foreign currency stores. Several market reforms resulted in unemployment, further increasing inequality in a society which had traditionally been built on the promise of equity (Hearn, 2008). Besides,

a lot of the recovery was based on foreign money, flowing into Cuba either as private sums sent by relatives in the USA and elsewhere or as credits granted at very unfavorable conditions (Burchardt, 2001a; Carranza, 1996; Hoffmann, 1996). In addition, tourism, which increasingly came to replace Soviet support as a source of income, selectively benefitted some areas of the country more than others, systemically favoring regions which offered tourist attraction (Hearn, 2008).

Given these circumstances one might reasonably expect a drastic reduction of general well-being, first as a result of the crisis and then as a result of growing social inequalities. And this may, indeed, be part of the story, or otherwise thousands of Cubans would not have tried to reach Florida by boat. But there is another side to that story, one that involves adaptation to degrowth circumstances. And one of remarkable well-being deriving from that process. Well-being is difficult to define and to measure. Health, with its combination of material, physical, social and psychological aspects, serves as a valid and measurable proxy.

3 Public Health

The effects of the crisis on public health promised disaster. Shortages in fuel and chlorine resulted in a deterioration of water supply and solid waste disposal (PAHO, 1998). Average per capita calorie consumption fell from 2899 kcal in 1989 to 1863 kcal in 1993 and per capita protein intake was even more severely reduced. Inevitably, this decline in nutrition took its toll: the rate of newborns weighing less than 2,500 grams increased from 7.3 % (1989) to 9 % (1993), and between 1992 and 1994 more than 51,000 Cubans suffered from epidemic of neuropathy, a rare disease associated with vitamin deficiencies (Franco et al., 2008; Nayer and López-Pardo, 2005). It was quickly brought under control by extensive use of vitamin supplements, but it certainly sounded an alarm that public health was threatened (Hoffmann, 1996). In 1997/99 17% of the populations were recorded as undernourished, up from 8% in 1990/1992 (UNDP, 2002; UNDP, 2005). At the same time, there was a tangible decrease of the immunization rate for several infectious diseases between 1989 and 2002, a decline in available hospital beds as well as an increase in tuberculosis prevalence (Mesa-Lago, 2005).

Some indicators improved soon after the end of the crisis. Maternal mortality rates increased from 31.6 (1990) to 32.6 (1995) per 100,000 live births but had declined again by 2003 (to 31.1) (Nayer and López-Pardo, 2005). Undernourishment had decreased to 3 % by 2000/2002 (UNDP, 2005). Remarkably, infant, perinatal and child mortality rates all remained the same or improved slightly even during the worst years of the crisis, 1990 – 1995, and improved tangibly afterwards. Morbidity rates in several diseases, including syphilis and acute diarrhea also decreased (Mesa-Lago, 2005). Even more unexpectedly, key health indicators improved markedly during and after the crisis. The decrease in calorie intake coupled with increased physical activity brought about by the need to walk and cycle more resulted in a marked reduction in obesity (defined as a BMI of 30 or over). Obesity rates dropped from 11.9% in 1982 to 5.4% in 1994 in Havana, and from 14.3% in 1990 to 7.2% in 1995 in Cienfuegos, though levels rose again in both cities after the economic situation improved, to 9.3% in Havana (1998) and 12.1% in Cienfuegos (2001). The health effects became evident some years later. Between 1997 and 2002 age-adjusted diabetes mortality decreased by 51 % and age-adjusted stroke mortality decreased by 35%. In fact, age-adjusted overall mortality decreased by 18% (Franco et al., 2007). Both male and female life expectancy consistently increased before, after and during the crisis (UN Demographic Yearbook, 1997; WHO reports 1995 – 2003).

Several reasons for this development have been offered including universal and egalitarian access to health care, country-wide weight loss, more physical exercise and more nutritious home-grown vegetables and high levels of social cohesion (Nayer and López-Pardo, 2005; Franco et al., 2008). The relevance of these factors appears plausible and will be addressed below. The basic question of interest from a degrowth perspective is to what extent public health may have remained improved not *in spite of*

but *because of* the crisis. In other words: to what extent was the crisis beneficial for public health and what, if any, health benefits can we deduce for a degrowth model?

4 Coping Strategies:

4.1 Healthcare

Doubtless, the consistent commitment to universal access to high quality health care in Cuba was important. The health system was one of the achievements in which the revolutionary government had traditionally taken pride, and preserving it was therefore a high priority project. These efforts were remarkably successful. A 2005 pilot study by Nayeri / López-Pardo found no evidence that health care in Cuba had adopted elements of monetary or market access nor a black market, indicating that equal access was maintained throughout the crisis. Declines in the level of health care services during the 1990s applied mostly to secondary and tertiary health care which was most affected by the lack of imported supplies and medicine. Other difficulties included fuel shortages affecting transportation, disruptions in running water and shortages in supplies, ranging from textbooks to soap. The number of surgeries temporarily decreased.

These setbacks were accompanied by impressive improvements in other areas: between 1990 and 2003 the number of health care personnel increased by 36%, including an increase of doctors by 76%. Similarly, the number of hospitals, polyclinics, research institutes, elderly day care centers and other care facilities increased. These efforts are reflected in consistently high public expenditures for health care, both in absolute and in relative terms (Nayeri and López-Pardo, 2005; PAHO 1998). These numbers have been criticized as a costly and overstaffed medical system which used money which would be better used to safeguard drinking water, whose quality tangibly deteriorated (Mesa-Lago, 2005). Nevertheless, they presumably had a part in safeguarding low mortality rates. However, the health care system also included the cooperation of a dense network of a large number of volunteer community workers, whose contribution is even more difficult to quantify but should not be underestimated (Nayer and López-Pardo, 2005). Presumably its impact increased during the 1990s, as efforts aimed towards decentralization and an increased grassroots involvement (PAHO, 1998).

A lesson for a degrowth system would therefore suggest that health care expenditures would need to take a high proportion of state budgets and would presumably be supplemented by non-paying volunteer activities.

4.2 Food

In 1989 Cuba had a very long tradition of not producing its own food. Since colonial times its agriculture had been designed to produce plantation items such as coffee, tobacco and sugar, grown in monocultures and then exported to Europe and North America. This system, which used the best soils for growing exportable harvests instead of local food crops survived into post-colonial capitalist as well as into post-capitalist revolutionary times. After 1959, several land reforms turned holdings of large or middle land-owners into state property but otherwise reinforced an agricultural structure which produced mainly for the foreign market and imported large part of its food. Before the crisis this included 55% of calories, 50% of protein and 90% of fat consumed on the island. The majority of land was organized into vast agro-industrial complexes, while approximately twenty percent of the land remained in the hands of small farmers. The large and inefficient state farms required huge amounts of imported fuel, machinery, spare parts, pesticides and fertilizers as well as state subsidies, as their output remained sub-standard. By 1989 only 43% of the land was cultivated for local food needs and food imports accounted for more than half of

the calorie intake of the Cuban population (Burchardt, 2001a; Burchardt, 2001b).

While the production model remained stable across political systems, the revolution of 1959 resulted in a profound change in food policies. Changing from a pure market economy, in which access to food depended on purchasing power and was unevenly distributed, the state took over large part of the responsibility for food distribution through rationing and through a variety of offers including special cafeterias for workers and free meals in schools, child-care centers and hospitals. Thus, by 1970 roughly a third of the entire population received some food free of charge or below cost. As a result, per capita calorie intake is estimated to have decreased until the mid-1960s but to have risen afterwards until it reached almost 2900 in 1981, the highest number in Latin America except for Argentina. This number clearly exceeded the quantity recommended by the FAO. Protein intake went up by 31 percent between 1961 and 1981. Gradually, Cuba developed a problem of over- rather than underconsumption. In 1973, a study in the Marianao district of Havana found 20.2 percent of children in day-care centers to be obese (Valdés, undated). This was the situation when the economic crisis struck.

Virtually overnight the agricultural and nutritional systems became untenable. Between 1989 and 1992 imports of fertilizers declined by 81%, animal feed by 72%, fungicides and herbicides by 62% and agricultural fuels by 92% (Mesa-Lago, 1996). As purchasing power for food imports also collapsed food security was seriously jeopardized (Mesa-Lago, 2005; Altieri et al, 1999). Meanwhile, rationing, which had been gradually relaxed in the years before, was now tightened and included items which had been freely available before. Decreases in availability affected mainly those foods which depended on imports of animal feed, i.e. poultry, eggs, beef and all dairy products, but also wheat and beans, both part of the traditional Cuban diet. In January 1990, rising bread prices and lines in front of bakeries marked the difficulty of the situation. This problem was deemed particularly urgent since sufficient food was necessary not only for the Cuban population but also for the budding tourism industry which, it was hoped, would bring in foreign currency (Deere, 1991).

The government reacted with a *plan alimentario*, which entailed replanting fields presently used for sugar cane cultivation with vegetables, replacing missing mechanical energy with an increased use of manual labor (Burchardt, 2001b; Murphy, 1999). This strategy proved largely unsuccessful. Manual labor was unsuitable for the large agricultural units and lack of fuel prevented effective transportation, refrigeration, storage and distribution. By 1993 it was estimated that only a third of the harvest reached state stores, while another third rotted on the fields before it could be transported and the rest disappeared into the black market or other private channels (Burchardt, 2001b).

In September 1993 the government enacted a “third agrarian reform.” The large state farms were broken up into smaller units and given to cooperatives, so-called *unidades básicas de producción cooperativa* (UBPCs). The process resembled semi-privatization: the members of the UBPS, usually former employees at state farms, now became co-owners of the cooperatives with substantial freedom of decision through democratic internal structures and with the possibility to sell surplus production at local markets. However, the reform was somewhat half-hearted: The UBPCs were forced to sell most of their produce to the state at state-controlled, below-market prices, many of them remained in debt because they had to pay the state for houses, machinery and tools (though not the land) they had inherited, and the state retained the right to dissolve UBPCs which did not meet official expectations. Not surprisingly, many members continued to see themselves as employees rather than entrepreneurs, many UBPCs produced at a loss and the system as such has proved only mildly effective and attractive (Burchardt, 2001b; Hoffmann, 1996; Pérez Rojas and Torres Vila, 1998).

Thus, Cuba faced the multiple challenges not only of finding alternative production mechanisms for food for its population in ways that broke with familiar methods of the last decades but, lacking fuels and imported resources, to do so in decentralized manner all over the country and on the cheap with locally available resources (Altieri et al., 1999). The situation triggered a remarkable development: the spectacular growth of urban agriculture.

Interestingly, its origins lie in private improvisation rather than systematic planning as “urban gardens began to spring up all over Cuba, especially in Havana, as a massive popular response of residents themselves to the food shortages” (Altieri et al., 1999) Faced with hunger, people spontaneously began planting vegetables in back, front and side yards, balconies as well as any vacant ground they could lay their hands on. There was no tradition of urban gardening, which had commonly been perceived as backward rather than a form of leisure. Most people were acquainted only with large-scale and mechanized rural agriculture or had no agricultural experience at all (Altieri et al, 1999). They received help from the Australian Conservation Foundation, an NGO which disseminated knowledge about permaculture through a series of grassroots projects in Havana between 1993 and 2001. The Cuban government supported its activities but also demanded that it cooperate with state-affiliated partner organizations (Hearn, 2008).

However, this swift development did not come totally without its pre-history.

Given the ever-present fear of tightened or even total blockade by the USA, Cuban considerations of how to increase food self-sufficiency date back to the 1970s. The first *organoponicos*, raised rectangular containers filled with a mixture of soil and organic material, were installed in December 1987 in armed forces facilities by the Ministry of Defence. Almost two years before the fall of the Berlin Wall they provided home-grown vegetables to military employees, but instead of elements of an organic movement they were perceived as measures of national defence. In 1991 the first Civilian *organoponico* was erected in an empty lot in Havana (Koont, 2009). Gradually, this science-directed strand of government strategy fused with unplanned people’s initiatives.

By 1993 state authorities realized the potential of urban farming and began providing substantial support so that eventually, Cuban urban agriculture evolved in a form of public-private partnership (The following description is based on Altieri, 1999; Murphy, 1999; Koont, 2009; Bourque and Cañizares, 2005). Governmental policies helped by providing land, distribution opportunities, training and material. In 1994, the Ministry of Agriculture created an Urban Agriculture Department, extended in 1997, which cooperated with municipal authorities to make public and unused private land available for people who cultivated it. People who received *parcelos* or land plots (*parceleros*) or who gained usufruct ownership rights (*usufructuarios*) worked individually, in families or in neighborhood cooperation. Groups of farmers could organize as UBPCs, while enterprises formed *areas de autoconsumo*, plots that produced food for their own workers, and cooperatives and peri-urban state farms also became part of a growing sector of urban agriculture. Municipal agents provided training and counsel to new growers. Seed Houses (*Casas de Semillas*), publicly supported private businesses, sold crucial material such as seeds, tools, books, biofertilizers, worms and biological pest-control organisms. Crucial stimulus resulted from the decision in 1994, taken shortly after the protests and mass-emigration in August 1994, to re-legalize farmers’ markets (temporarily already allowed in the 1980s) where food could be sold at free market prices. Growers with a state contract could sell surplus goods produced beyond a state contingent, reserved for the rationing system, while private producers could sell for profit merely paying a sales tax (with a particularly low tax of only 5% in Havana in order to encourage urban provisioning).

In these circumstances, soon tens of thousands of people took to gardening (Murphy, 1999). By 1997, more than 26,000 people worked in 5,000 gardens in Havana alone. The majority constituted so-called popular gardens cultivated privately, often by retired men, mainly for self-provisioning, although many were expected to donate to childcare centers, hospitals etc. as a way of repaying the community for supplying the land. During the early years the food harvested generally stayed within the extended families, but increasingly gardeners organized into *grupos de horticultores*, which were actively encouraged by state extension workers in order to facilitate counseling and training. These popular gardens were supplemented by intensive gardens and *organopónicos*, cultivated in mixed state and private ownership as UBPCs or otherwise, by factory gardens supplying food for their workers, and by countless small household gardens.

Government and community support helped cope with the problems involved: scarce and unsuitable land, scarce water, poor quality soil, pests and diseases. Given the lack of industrial fertilizer and pesticides, this agriculture inevitably developed into organic farming with minimal external input, making use of organic soil and integrated pest management. Within a few years the program became spectacularly successful. While it did not make Cuban urban farmers self-sufficient it did provide a substantial amount of valuable nutritious fresh food. According to Cuban sources, by 1996, urban farms in Havana produced some 8,500 tons of vegetables, four million dozens of flowers, 7.5 million eggs and 3,650 tons of meat (Altieri, 1999). By that time, the worst years of the crisis were over. Remarkably, the program not only remained but continued to expand spectacularly. Production in vegetables and fresh herbs exploded from 4,000 tons in 1994 to 4.2 million ton in 2005, reflecting substantial increases both in land use and in per square productivity. By now, intensive, decentralized and organic farming was adopted as state policy. In an increasingly elaborated network of government agents provincial, municipal and local groups now set up policy guidelines, mobilize grassroots activities, provide training, promote new technologies, gather data, organize part of the marketing and generally supervise and control local activities (Koont, 2009).

Doubtless, this movement of urban, organic agriculture played an important role in providing food during the hungry years of the Special Period, though the degree of its contribution then and later is difficult to quantify. Certainly, Cuba did not achieve food self-sufficiency. A 2005 article estimated that “some areas” were “already producing 30% of their caloric intake.” By 2000, the Cuban Ministry of Agriculture declared that 64% of the national rice production and 58% of vegetables were produced through urban agriculture (Bourque and Cañizares, 2005) But probably its real impact was in quality rather than quantity, significantly increasing general intake in fresh vegetables and fruit and diversifying the diet in the process. In Havana, a city of two million inhabitants where available land is especially scarce, FAO recommendations of 300 grams of vegetables per capita were apparently achieved by 2005 (Koont, 2009). Some critics nevertheless highlight the shortcomings of the development. Mesa-Lago points out that food, especially meat, milk, rice and beans, continues to be imported, after 2002 mainly from the USA, and that between 1997 and 2003 the production of poultry meat fell by 45%, beef by 20%, milk by 7%, fish and shellfish by 45% and rice (1996-2003) by 26% (Mesa-Lago, 2005). Given the transition described, these numbers may reflect changes in eating habits in addition to failure in economic growth. And even if it falls short of feeding the country entirely with organically grown food within less than twenty years, the urban agriculture movement is noteworthy. According to Murphy it represented “the largest conversion from conventional agriculture to organic and semi-organic farming that the world has ever known” (Murphy, 1999).

Besides, the true value of the urban agriculture program goes beyond food security. Using manual instead of mechanical labor urban agriculture mitigated unemployment by providing numerous new jobs, and it helped soften the psychosocial impact of the crisis:

...urban gardens have also helped to empower many individuals and communities. They have renewed solidarity and purpose within neighborhoods, sustaining morale during the ongoing economic crisis. The popular gardens have helped to build community pride; they clean up vacant urban spaces that had once been local dumps, replacing these eyesores with greenery (Altieri et al., 1999).

Presumably, this combination of nutritional, environmental, psychological and social factors has affected public health in mutually reinforcing ways, going well beyond crisis management.

4.3 Mobility

Reduced mobility presented a serious health problem because until 1989 the population depended on long distance transportation for food. This was especially true for urban centers where cuts in fuels translated into cuts in food deliveries. Urban agriculture, therefore, increased access to food not only by producing it but also by making it available at numerous places directly at or near several production sites inside the cities (Koont, 2009). It therefore formed an essential part of decentralization, which reduced

the need for fuel-consuming transportation. It also reduced the carbon footprint of consumed food. Nevertheless, mobility obviously remained a problem as people needed to get to their places of work, of study or of social contact. This problem increased as the new touristic centers created demand for labor which could not be satisfied strictly locally (Gunn, 1996).

Theoretically, there are several ways of dealing with a drastic decline in available fuel:

reducing the energy needed for movement through more efficient transportation, changing the type energy used for mobility and reducing mobility. In Cuba, all three strategies were used, albeit in different degrees. Apparently, the authorities tried to emulate the decentralization achieved to a degree in agriculture for other areas. Thus, a documentary on the Special Period reports decentralization of universities and other places of education (Morgan, 2006). Little robust information about this was available, however, and presumably there are limits to this form of decentralization.

There are numerous reports about efforts to replace the collapsing system of bus transportation with improvised vehicles carrying large groups of people and by making it mandatory for drivers to take hitch-hikers along. In addition, more than a million bicycles were distributed, either imported from China or produced in Cuba (Deere, 1991). This measure had its drawbacks as deaths due to traffic accidents involving cyclists tangibly increased between 1990 and 1996 (PAHO, 1998). But presumably it also contributed to the reduction of obesity and diabetes and public health improvements noted above.

4.4 Psychosocial Stress

It is consensual knowledge today that psychosocial stress factors such as unemployment and social exclusion are prime determinants of health (Wilkon and Marmot, 2003). Doubtless, the Special Period was a time of substantial stress, exacerbated by an increase both in relative poverty and in overall social inequality. According to Mesa-Lago, who bases his claim on the estimates of several other researchers, the gini-coefficient rose from 0.22 in 1986 to 0.407 in 1999 and “the percentage of total income received by the poorest quintile went down from 11.3% to 4.3% over the same period, while the percentage received by the richest quintile rose from 33.8% to 58.1%” (Mesa-Lago, 2005). Clearly, rising inequality can have adverse affects on public health and general well-being. While an exhaustive study is beyond the scope of this paper, some aspects which appear to have mitigated the consequences of material disadvantage and social exclusion should be mentioned.

One important aspect involves those goods and services available to people irrespective of income, notably health care, which, as noted above, remained open to all citizens. Another addresses (un-)employment.

The drastic decline of industrial production, particularly the closure of sugar mills and plantations, inevitably resulted in excess available work. For reasons of ideology and social stability the government sought to prevent or mitigate unemployment (Burchardt, 2001a). The abolishment of Saturday as a workday in government offices distributed work reductions evenly and, for understandable reasons, proved popular and may not have resulted in appreciable reductions of productivity (Deere, 1991). By 2003, government measures had evolved into an elaborated system. Mesa-Lago provides the following numbers of people involved in various labor-absorbing activities, designed to obscure 5% to 28 % effective unemployment: 326,000 in more or less formal, labor-intensive agriculture; 238,000 of disabled persons, paid for formal or informal work in offices, at home or studying; 116,000 paid for studies at night school; 64,000 receiving a wage in the “study as work” program; 8,500 in a ten-month course on social work, guaranteed subsequent employment of university acceptance; 10,514 “interrupted” workers, receiving unemployment compensation. These strategies resulted in “a drastic change in the composition of the work force by sectors of activity between 1991 and 2002” with tangible decreases in manufacturing (-4.1), construction (-3.6), transport and communications (-1.3) and mining as opposed to increases in

community, social and personal services (7.8), agriculture (1.2) and commerce, hotels and restaurants (0.7). Mesa-Lago has a critical view of this development since “most jobs were created in community, social and personal services (which grew by 68%), but this was the sector that suffered the biggest drop in average productivity (-3.7%).” Thus, to him this policy is an example of “the often excessive priority given in Cuba to social over economic goals” (Mesa-Lago, 2005).

Indeed, in conventional economic thinking this policy is counter-productive to economic recovery since it prioritizes just those sectors with the least potential for growth. This, however, is precisely one of the strategies required in a degrowth system, since it decouples economic activity from material output, stressing human labor input (Jackson, 2009). Admittedly, in a full-blown degrowth or steady-state economy the social sector would be used for absorbing the labor made redundant by technological progress, in real life Cuba during the Special Period it absorbed the unemployment of a recession. In theoretical and long term perspective this may be a crucial difference. But in the tangible situation of 1990s Cuba it may have had a similar effect of stabilizing society during falling growth rates. In health terms, it presumably lowered collective stress levels considerably.

A similar, and related, role seems to have been played by the high level of social capital found in Cuba. Studies consistently confirm that the average individual benefits from participation in several layers of social networks, which coexist in ambivalent mixtures of competition and mutual reinforcement. Families, neighborhoods, state associations in various forms of local, municipal, party and special interest organizations, as well as religion in its Roman Catholic and santería and mixed forms all combine to provide material and psychological support. Apparently, the crisis served to connect rather than divide the various groups as government agencies skillfully integrated non-state initiatives and tied them to government or party institutions. A case in point was the 1991 decision to allow religious believers into the Communist Party, thus breaking with a long-time taboo. Ingrid Kummels has described how the informal cooperation between party officials and black market organizers developed into an illicit symbiotic relationship which both undermined and stabilized the political and social system. At the same time a lot of government distributions of food and other everyday products, often requiring time-consuming standing in line or early information about the arrival of scarce goods, functioned only because it was accompanied by a second system of self-organised procurement and re-distribution. Thus, it seems that the material well-being of the population depended only partly on government regulations but to a similar degree on mainly female networks of informal welfare that mixed socialist ethics of equity with capitalist entrepreneurship, religious charity and motherly humanitarianism (Kummels, 1996). Similarly, Adrian Hearn, in his 2008 study on the relation of religion, social capital and development, confirms a “growing interdependence of state and nonstate actors as they assume shared responsibilities for finding and maintaining a balance between commercial opportunity and community welfare” (Hearn, 2008). Thus, local or foreign NGO initiatives designed to increase a sense of belonging and shared responsibility in neighborhoods and to address socially undesirable developments such as drug abuse or juvenile delinquency need and usually find the support of local governmental agencies as well as that of non-state community organizers. Hearn describes the result as a “process of public-private relationship building” (Hearn, 2008). It is an ambivalent relation, in which the state feels threatened by an increasing number of local initiatives but, rather than fighting them, seeks to embrace and thereby influence and control them, while local NGO actors likewise try to maximize the benefits of their activities by engaging state support. This coexistence of state and non-state influences has been an important element of Cuban society since the revolution, but it took on a new dimension after 1989, as the desperate economic situation forced government authorities to be more welcoming to foreign and local private initiatives.

These analyses should not gloss over the fact that Cuba has never been a free society and that those who choose not to cooperate with state institutions but to openly criticize the party line or even to question socialism at large have run the risk of being imprisoned, sometimes tortured, prevented from finding work or forced to leave the country. Without doubt, this omnipresent danger must be counted as a source of psycho-social stress, though, again, it is difficult to quantify. Political persecution had existed since 1959

and certainly before, but the situation became more critical during the early 1990s and seemingly inadequate governmental reactions led to an increase of critical voices. A nervous government, already threatened by economic instability, reacted with increased repression (Schumann, 2001).

In this context, emigration can be seen both as a factor of increased stress – for those who stayed behind – and for stress release as a measure of getting away from a situation otherwise perceived to be intolerable. During the Special Period, emigration steadily increased although for most of the time Cuban authorities acted to prevent people from leaving the country. But as living conditions became increasingly difficult, more than 45,000 people in less than five years preferred to try reaching Florida on makeshift boats rather than wait for better times in Cuba. When the Cuban state capitulated and temporarily allowed all departures in August 1994, more than 30,000 people left within four weeks (Hoffmann, 1996; World Population Prospects, 2008). Clearly, this option is not available as a general element of degrowth transitions.

5 Conclusions

Can the Special Period in Cuba serve as a model for degrowth scenarios? To an extent it seems so. In its limitations on fossil-fuel energy, its promotion of local and labor-intensive activities and its reductions of any type of consumption in general, the period resembles visions of an economy suited not only to mitigate climate change but to satisfy central demands of long-term sustainable economy. In fact, key elements of developments during the Special Period look eerily like the “macro-economic interventions needed to achieve ecological and economic stability in the new economy” postulated by degrowth scholar Tim Jackson as essentials to arrive at sustainable prosperity:

- Structural transition to service-based activities;
- Investment in ecological assets; and
- Working time policy as a stabilizing mechanism (Jackson, 2009).

Notably the impressive development of organic urban agriculture seemed like a perfect means to solve several of Cuba’s pressing problems of the time which may be the pressing problems of the future: feeding people with fewer (fossil) resources, providing labor-intensive employment, enhancing the environment for growing urban populations and stimulating social inclusion through community building. In addition, the most positive lesson of this episode may be that despite the disastrous conditions in which it had to develop its overall outcome seems to have been beneficial to people’s health and thereby, one may speculate, to overall well-being. However, there are several points to keep in mind:

First, despite its beneficial effects the Special Period also had its negative aspects such as massive migration reflecting substantial despair, tangible government repression and rising social inequality. Any degrowth transition should try to avoid those and as of today we have no precedent of how this has been achieved.

Second, 1990s Cuba presents in many ways a unique case, not easily imitated elsewhere. Cuba could build on a firm tradition of high priority for health care. Cuba also had a highly educated population and a network of state organization in which further training could be communicated efficiently to its citizens. Transition policies were facilitated by the relatively small size and cohesion of the population (ca. 11 million people without pronounced geographical or ethnic differentiation) surpassed by some of present-day megacities. And Cuban population was used to a perception of living as an island, threatened by outside aggression, which presumably added to a sensation of a shared fate. A rich infrastructure of social capital supported government policies of group cohesion and group support but also group control in ways that had been familiar to citizens for decades. These initiatives helped turn the crisis into a group

experience more than individual hardship.

Third, the immediate crisis was brought on by external forces, perceived as fate rather than fault. Thus responsibility could be projected on outside forces so that authorities could focus on how to cope with these difficulties while largely escaping blame for causing painful socio-economic changes. In fact, in some ways the government gained stature in seemingly withstanding hostile outside pressure. Besides, the circumstances of the crisis depended on a unique combination of outside factors which made it clear to everybody that drastic changes were inevitable. Thus, it should be noted once more that key measures, such as the adoption of urban agriculture, were adopted not out of a sense of ecological responsibility but as a matter of despair (Cabrera Trimiño, 1998).

Therefore, any assessment of the Special Period in Cuba must take into account of its long-term effects which are beginning to show. What seems most obvious that they are few. By most accounts the Special Period is just that, a temporary period. It was not meant to be, nor was it primarily perceived as the beginning of a new era but as a time of exceptional hardship. Consequently, many of the effects, both positive or negative, are over: the country is back on track of economic growth, generally hailed as demonstration of the vitality of the Cuban economy. Part of the recovery depends on fuel-dependent long-distance tourism and remittances from relatives in capitalist Florida. Under-nutrition and mortality of the elderly have subsided again. But people also threw away their Chinese bicycles and returned to more sedentary lives, and with it obesity levels have also re-increased, though not to their original levels. Obviously, it is not easy to sustain degrowth life-style changes after a release of outside pressure, even when ostensibly beneficial to health.

Not easy, but nor is it impossible. By 2010, it is the urban agriculture, the organic food, the local markets and the diets rich in vegetables which have remained and are, indeed, being proudly expanded.

It is difficult to imagine how the specific circumstances could be imitated elsewhere but maybe some of underlying conditions could. Maybe a lesson could be that a transition is painful but may be healthful and eventually a matter of pride under certain condition:

- Social services are safeguarded
- The need for change is evident to everyone.
- The burdens of change appear shared by all in a reasonably equitable manner.
- There are non-destructive niches for people unwilling to take part in the overall transitional project.
- Government and non-governmental groups cooperate and create a belief in the collective capability to surmount difficulties.
- There is a credible perspective of gains which will eventually compensate for temporary hardship and long-term losses.

The lesson of Cuba, if there is any, cannot be that people will readily embrace a degrowth mode of living when it is offered to them, but nor will they automatically discard transformations even when they were originally linked to poverty and hardship. And eventually, they may be better off for it.

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