

# THE BURDEN OF HISTORY: THE INTERGENERATIONAL CONTRACT AND MODERNITY'S PONZI LEGACY

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“If I am not for myself, who will be for me? But if I am only for myself, then who am I?  
If not now, when?” (Hillel the Elder, Pirkei Avot 1:14)

Brussels, April 17th 1958. Roughly 13 years after the end of WWII, in the middle of the quarter century Golden Age, the world gathers in the capital of Europe to celebrate the opening of the first post-war World Fair and the burgeoning modern society.<sup>1</sup> Brussels and visitors of the Exhibition are drenched in enthusiasm, eager to show their faith in this newly born modernity.<sup>2</sup> But the veil of ignorance that shrouded the golden generations has now dissipated.<sup>3</sup> Contrary to what was *conveniently* assumed, modernity *is* costly. Present and past cohorts that experienced its benefits paid for it by running a formidable Ponzi scheme, borrowing ever more intra- and intergenerationally and hoping that the next generation would foot the bill. This violates the intergenerational contract as it places an ever heavier burden on subsequent generations. Should we want to lift that burden, we ought to develop binding values that make a continuation of this Ponzi modernity impossible.

Modernity as the permanent quest for satisfaction of human wants and needs, domestication of the natural environment and the weakening of intergenerational human interactions is part of the ‘first world’ *ethos*. It seems to be the new religion, people’s 21<sup>st</sup> century opium: modernity in its current form appears to be unstoppable and its inertia makes adaptation a daunting challenge, making Humankind its *voluntary* prisoner. This is not without consequences.

For instance, ‘human load’ (Rees and Wackernagel (1996)) has long exceeded nature’s carrying capacity: as a matter of fact, the world economy exceeded the Earth’s biocapacity in the early ’70s and currently overshoots it by a factor of 1.5 and rising. The world economy thus uses more resources than what is produced by the Earth’s biological systems over a year, implying that existing stocks of resources are consumed to fuel current activity. These stocks are consequently no longer available to future generations. In its

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<sup>1</sup>Note, however, that a smaller Exhibition took place in Port au Prince in 1949.

<sup>2</sup>In this essay, modernity refers to the techno-industrial society that emerged after WWII.

<sup>3</sup>The term “veil of ignorance”, although borrowed from Rawls (1991), does not, in any way, echoes Rawl’s underlying concepts.

own (albeit modest) way, Belgium contributes to that state of affairs.<sup>4</sup> This implicit debt accumulation does not only characterize modernity in its environmental dimension. The financial system used to fuel it also leads to a significant accumulation of debt, which is continually passed on to subsequent generations.

Thus, past and present cohorts paid for their modernity by running an ecological and financial Ponzi scheme. In that sense, modernity is a monster that mortgages later cohorts' future and thereby breaches the intergenerational contract. Whether they like it or not, younger generations are bound to cope with that legacy. In Belgium, and elsewhere in the 'first world'.<sup>5</sup> This leaves them with the difficult task of redefining society's objective and modernity's substance. A preliminary question though is why is this modernity failing to fulfill the generational contract.

## Expo '58, modernity's missing shadow prices and Ponzi's legacy

In the years preceding the Exhibition, Brussels was deeply transformed under the influence of architectural and social modernism: wooden avenues became urban highways, old stylish buildings were substituted for constructions conforming to the idea of functionalism and standardisation (Congrès Internationaux d'Architecture moderne (CIAM) (1933)) and local shops were progressively replaced by supermarkets.

Modernity, then, was in its infancy: naive like a kid, innocent like a child. Per capita GDP in Belgium was multiplied by 2.09 between 1960 and 1980 (World Bank (2014)) and labour productivity steadily increased at an average annual rate of 4.3% over the period 1970-1980 (OECD (2014)). Along with these improvements, modernity expanded the range of opportunities, widened the spectrum of *possibles*. Unfortunately, there is no "free lunch" and, absent appropriate social mechanisms and norms, these developments happened at the expense of future generations' rights and opportunities. Let's see exactly how.

In 1928, F.P. Ramsey asked "how much of its income should a nation save?" (Ramsey (1928)). Economic principles command that, for a *static* optimum to be reached, a nation saves (i.e. accumulate wealth) until the marginal satisfaction derived from the stock of wealth equals the marginal satisfaction derived from its consumption. A similar question can be asked about natural resources: "how much of its natural resources should a nation preserve?". Again, optimality is found where the marginal value of the stock of natural resources, i.e. the *shadow value* of the remaining stock of the resource, is equal to the marginal satisfaction derived from the consumption of that resource. Obviously, one does not directly observe these shadow prices, only market prices are observable.<sup>6</sup> Thus, for the

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<sup>4</sup>Information and data about the Ecological Footprint can be obtained from the Global Footprint Network at <http://www.footprintnetwork.org/en/index.php/GFN/>.

<sup>5</sup>While this statement applies to other (if not all) parts of the world, including developing countries, the author shall insist on the case of Belgium, for the burden of modernity is arguably heavier in the 'first world' and because it is the country he is most knowledgeable about.

<sup>6</sup>However, that it is not because one cannot observe these prices that these cannot be computed. For a quick introduction to shadow prices and their computation for natural resources, see the following page of the Encyclopedia of Earth: <http://www.eoearth.org/view/article/155993/>.

economy to reach the static optimum, market prices ought to reflect shadow values.<sup>7</sup> Yet, nowadays, market prices of resources used to fuel the industrial metabolism of modernity do not appropriately reflect their shadow value. Hence, one consumes resources beyond what would be socially optimal from a *static* point of view. In that respect, Belgium's economy is no exception to what is currently the rule: no adequate taxation system has so far been put in place to bring market prices of resources consumed by its economy closer to their shadow value.

But this static inefficiency would arguably be less problematic if its consequences were not accumulating over generations at different times and in different places. However, because the constraints of Belgium's optimisation problem are currently incomplete it is possible to transfer the burden of these consequences inter and intra temporally. That is, Belgium's modernity only survives thanks to its inter- and intratemporal Ponzi structure, transferring the burden of accumulated ecological and financial debt either to contemporaneous cohorts outside the geographical boundaries of its territory (without *physically* paying it back) or to future generations of human beings (Vanderheiden (2008)). In this respect, the case of Belgium is illuminating: from 1908 onwards, a territory 77 times larger than that of Belgium became its dependence.<sup>8</sup> This territorial expansion fueled an unprecedented rise in wealth of the metropolis at the expense of the colony.<sup>9</sup> Moreover, Belgium's Ecological Footprint has been permanently above its biocapacity since computations began in 1961, the former averaging 7 Global Hectares (GHA) per capita over the period 1961-2007, the latter averaging 1.29 over the same period.<sup>10</sup> Consequently, Belgium has been running an ecological deficit for several years, eventually leading to the formation of an ecological debt.

This ecological debt has a financial counterpart. Indeed, the ecological burden could probably not have been allowed to grow so large, had financial debt not reached sky-high levels. In Belgium, private and public financial debt have been steadily accumulating over the second half of the twentieth century. For instance, consumer credit as a share of GDP increased from nearly 3% in 1995 to 4.9% in 2012. This figure is even more telling if we add mortgages: household indebtedness as a share of GDP then increases from 20% in 1995 to 51% in 2012 (Statistics of the National Bank of Belgium (2014)). Gross public debt as a share of GDP increased from 76.1% in 1980 to 137.8% in 1993 to subsequently steadily decline until the 2007-2008 financial and economic crisis where public authorities were forced to take over significant amounts of private debt. Currently at 99.8% of GDP, Belgium's public debt represents a financial last for future generations.

Although largely self-sustaining, these phenomena are reinforced by a fading sense of responsibility of individuals towards society. Their "sphere of concern" does not extend beyond their own family, sometimes not even beyond their own self. How then, could it

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<sup>7</sup>A *static* optimum characterizes an optimal situation at one point in time whereas a *dynamic* optimum refers to a collection of static optima over time.

<sup>8</sup>Belgian exploration and administration of the Congo Free State started in 1877 under the sponsorship of King Leopold II of Belgium.

<sup>9</sup>Many of Brussels' most charming arteries were built using proceeds of the natural wealth extracted from Congo.

<sup>10</sup>Note that analyzing the problem at the country level only helps to get an idea of the *ecological load* of each country and ecological deficits at that level are not problematic per se (as long as other countries run compensating ecological surpluses). The problem arises when the world as a whole runs such a deficit.

extend to distant peers or non-existent future beings? At the time of writing, no moral principles nor social norms prevent existing cohorts from shifting the burden of their behavior onto later generations. These are to be built.

## Expo '58: rewind, replay?

That the present Ponzi modernity is failing is close to an evidence. The question is though: *was* another modernity possible? In other words, would you have, in your early twenties, facing the Atomium on the Boulevard du Centenaire, done anything different? Even if we were able to rewind the tape of History, that is very unlikely, for you would have been shrouded in the same veil of ignorance. But if we asked “*is* another modernity possible?” then the answer would be different. Why? Because we are, today, more conscious than ever of the consequences of our modernity. This alone constitutes a decisive advantage compared to previous generations as well as a duty to act, to develop a new value-system. Which one?

First, clear mechanisms ought to be put in place to bring Belgium’s economy closer to the static social optimum. This will only be achieved when market prices will reflect the true shadow values of natural and financial resources.

Second, since the market is a social institution and that it is thereby prone to imperfections (Nietzsche (1972)) adequate constraints (moral principles and social norms) must be put on the optimization problem and, more generally, on the economy as a whole. In 1977, Garrett Hardin proposed that social norms and moral principles be subordinated to the constraints imposed by the concept of carrying capacity, famously suggesting that animals of a herd be killed if the herd size is more than the carrying capacity of their pasture (Hardin (1977)). Does this amount to say that the size of the herd of human beings should be *voluntarily* reduced so as to bring it back within the Earth’s carrying capacity? Probably not. But the fact remains that Humankind ought to live within the Earth’s carrying capacity. Hence a society should adopt moral principles and social norms that ensure this. It should, above all, ensure that the burden of a country’s modernity not be transferred to later generations. Put differently, one ought to impose a “no-Ponzi game” constraint.

Given the poor altruistic disposition of human beings, designing this new value system may require guidance from a *social planner*. This is why the government needs to intervene to build the missing intergenerational bridge. Representatives ought to design policies that ensure a minimal equality of opportunity (Rawls (1991)) across generations. And yet, this too might prove difficult as political leaders, influenced by current –not future– voters, may sacrifice long-term objectives for short-term electoral profit. Hence, is Belgium’s political system appropriately designed for governing bodies to tackle long-term challenges?

To conclude, because of the long-lasting effects of economic activities on the environment and of the intergenerational consequences of debt accumulation, sustainable economic development involves an implicit contract between generations : current generations must engage with future ones to exploit resources in a way that will secure *inter-temporal* prosperity. Similarly, current generations must avoid accumulating inconsider-

ate amounts of financial liabilities that would be passed on to later generations. This requires a new value-system. The first step towards the construction of the 21<sup>st</sup> century value system is therefore for every one of us to ask him- or herself which values are to be reborn. Only then will a constructive consensus building process emerge. Contemporary societies may well be modernity's voluntary prisoner, but they can choose to be prisoner of a *different* modernity. They are the sole custodians of their future; it is time they start acting accordingly.

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