December 2008
First published on SublimeOblivion.com

An Analysis of Russia's Economic Crisis: On the Importance of Self-Sufficiency in Liquids

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In this essay, I analyze three major areas of concern about the current Russian economy - the debt burden, balance of payments and future fiscal sustainability. Although on paper Russia is comfortably solvent, rolling over debt has been problematic for Russia Inc. because of the shutdown of its traditional financing mechanisms, cheap American credit and foreign direct investment, coinciding with an avalanche of collapsing commodities. The underdevelopment of its domestic financial system forced the government to respond in an improvisatory, but swift and effective, way. Although Russia's capital account will go deep red, the current account should remain in the black, or at worst will take on a pinkish hue; as such, the balance of payments will remain manageable, given the country's huge foreign currency reserves. The consolidated budget may run a small deficit due to dwindling oil revenues, a smaller tax base and increased spending, but it will be easily financed out of the state's rainy day funds. Growth in GDP will be small or stagnant, but the social impact will be mitigated by an expanding safety net. After the crisis, Russia will emerge with a stronger, more self-sufficient domestic financial system - and just in time to enjoy a new oil bonanza.

The fast shrinkage of Russia's foreign currency reserves, plummeting oil prices and the weakening ruble means that pessimists and Russophobes[1] of all stripes are having a field day. They prophecy the collapse of the currency, soaring inflation, and the disintegration of the 'Putin system' as populist unrest undermines it from below and *silovik* clans fighting over dwindling oil rents rend it apart from above. Relying as they do on unsubstantiated claims fitted to support a flawed narrative of Russia as a virulent kleptocracy governed by economic illiterates, their predictions are once again doomed to come to naught - much like prior auguries of fascist takeover or ethnic disintegration[2] after the 1998 crisis. This article will reveal why.

In the new millennium, loose US monetary policy and perverse regulations channelled cheap credit into a massive housing bubble. This explains why the US 'enjoyed' a consumer boom, even though the G.W. Bush period was historically unique in that median household incomes never exceeded the peak level attained prior to the last recession[3] (the dotcom bust after 2000). The borrowing binge spread to Russia in 2005 and intensified up to 2007. Even as the government shed off its debt with the help of

soaring oil revenues and squirreled away 600bn $ in foreign currency reserves, its private banks and national champions gorged themselves at Greenspan's trough to finance domestic and foreign expansion. But all unsustainable things come to a point where they can not longer be sustained, and by 2007 that junkiest of junk, the subprime loan market, began to come apart at its seams.

Amidst the gathering thunderclouds, many believed Russia to be an 'island of stability' in the gathering credit crisis[4]. Not only did Russia now possess enviable macroeconomic fundamentals, it lacked direct exposure to subprime mortgage-backed securities, possessed an underdeveloped mortgage market and Russian households' leverage remained the lowest amongst Europe's emerging markets[5]. Even as the Western banking sector began posting major losses from fall 2007 and the first convulsions began (Northern Rock in November 2007, Bear Stearns in March 2008), the Russian economy went into overdrive because of loose monetary policy amidst soaring oil prices.

An orderly slowdown began from around May 2008 in Russia. Drying global liquidity and uncertainty prompted a worldwide 'flight to quality', leading to a reversal of capital flows from Russia. This was reflected in the decline of the RTS, which peaked in May and started on the long decline that would take it from 2500 to around 600 today[6]. Contrary to conventional wisdom, the chart was roughly linear and suggests that the overriding cause was the credit crunch, and not the politics of Michel, TNK-BP and the Ossetian War, whose effect was limited to short-term fluctuations.

Although up until recently this was the most visible facet of the Russian economic crisis, it was also the most irrelevant. Share ownership is very limited, so the effects on wealth were limited outside oligarchic circles; furthermore, most economic sectors are weakly tied to the RTS, much of whose capitalization could even be described as 'prestige listings'. (In contrast, a great deal of American savings are locked up in stocks and equity financing plays a key role in the Anglo-Saxon 'shareholder' model). Thus, the 35% fall in the US S&P is far more damaging to the American economy than the much larger fall in the RTS. It must also be noted that stockmarkets in most emerging market stocks plummeted as well, although Russia was at the higher end.

The real crisis was unfolding in soaring credit costs and plunging commodity prices due to the incipient global economic crash. During the fat years, Russia bought up foreign currency reserves (e.g. T-Bills, US state-guaranteed mortgage securities, etc) to prevent an excessive ruble strengthening, which would have hurt manufacturers and exporters. However, this starved the local market of capital, thus forcing the domestic corporate sector to access foreign debt finance - therefore the rapid rise in official reserves were matched by a corresponding rise in private indebtedness, albeit the latter proceeded at a slower pace and allowed Russia to remain a large net creditor nation. This was a conservative and pricey choice, since the interest on the borrowing was substantially greater than the yields on Russia's sovereign assets, thus forcing Russia Inc. to pay a 'very substantial "spread" between the yield on its assets and the cost of the private debt

in return for this foreign intermediation'. In light of the global credit crunch, it ended up providing only an 'illusory degree of security' for a 'hefty price'[7].

This is because now the Russian corporate system faced a triple whammy as credit availability dried up, existing creditors demanded repayments and the commodity prices on which their balance sheets depended plummeted. The peak in the global liquidity and confidence crisis came in September-October and marked the tipping point in Russia's real economy. In response, the Russian government mounted a 'swift, appropriate and proportionate' policy response[8] to ensure the continued functioning of the banking system. To assess their chances of success, I will cover three interrelated areas of concern - the debt burden, balance of payments and future fiscal sustainability.

Despite the big debts incurred by Russian companies, overall the country remains very much in the black - its half a trillion US dollars in corporate liabilities are more than compensated for by the private sector's half a trillion in net foreign assets and another half trillion in the Central Bank's foreign currency reserves[9]. Thus the main problem facing Russia, unlike the US, is one of short-term liquidity rather than long-term solvency[10]. This implies that the real issue at hand is the repayment structure of Russia's foreign debt - all those net assets will not be of much use if companies can't raise the cash quickly enough to repay their short term loans. Of the total debt, some 120bn $ is due 'on demand' or sometime in Q3 or Q4 2008 - that is, almost a quarter of the total debt is short-term, including more than 40% for private financial institutions.

To counter this problem, the CBR began selling down its foreign assets, starting with US agency bonds (Fannie Mae, Freddie Mac, etc), and using the proceeds to inject much-needed liquidity into the financial system. For instance, the CBR placed a 50bn $ deposit at VEB development bank to reduce the rollover risk of short-term external debt and provided 35bn $ in subordinated debt to the three state-owned banks Sberbank, VTB and Rosselkhozbank. (Incidentally, these withdrawals constituted a major part of the 110bn $ fall in the CBR's foreign currency reserves since September; not defence of the ruble from speculators and Russian bank runners, as some commentators would have it.) These measures are not bail-outs like those of AIG, or even implicit guarantees of debt as with Citibank or Fannie Mae and Freddie Mac; the underlying assets are mostly healthy, since Russia saw little of the alchemical debt restructuring that plagues the Western financial system. Unlike with the American taxpayer-funded buyup of 'toxic assets' – which truly are worth nothing because of the implosion of the US housing bubble, the final fiscal cost for Russia is likely to be modest.

The second area of concern is the balance of payments, which consists of the sum of the current account (mostly the trade balance) and the capital account (mostly foreign direct investment, or FDI). Let's look at each of them in turn. Throughout the past decade, Russia enjoyed a healthy current account due to steadily increasing oil prices, which accounted for the bulk of its exports by value. Their collapse in recent months means that in theory it now runs the risk of a current account deficit, since imports have also soared.

At least until recently, most economists were predicting oil prices would remain around 70-80$ per barrel next year; now, some are predicting collapse to 25$[11]. So let's assume a median price of 50$.

A quick glance at Russia's trade balance history and a few quick calculations dispel all the doom-mongery[11]. The last time the mean oil price was at 50$ per barrel was in 2005, when Russia earned a total of 117bn $ from oil and oil products exports (I assume volumes remain constant - the recent drop off in exports will have cancelled out post-2005 gains[12]). The second major component in Russia's export structure is natural gas - virtually all of it is sold to Europe on long-term contracts, so let's conservatively assume it will decline from an annualized 70bn $ in 2008 to 50bn $ next year. The rest of Russia's exports come to an annualized 156bn $ in 2008. About half of those are metals, which have plummeted along with other commodities; the others are chemicals and machinery, which I assume will remain roughly constant - thus, let's assume this segment will add up to 78bn $ in 2009, i.e. equal to H1 of 2008 (of course, in practice the weakening of the ruble will boost exports of machinery and chemicals). Adding up 117bn $ in oil, 50bn $ in natural gas and 78bn $ in other exports give us 245bn $ in total exports.

Although total annualized imports in 2008 were 271bn$, they will almost certainly fall next year. Creeping ruble devaluation coupled with credit contraction means that imports of foreign cars - the biggest contributor to Russia's non-oil trade deficit - will plummet. Global deflation will lower the costs of food imports, amongst other things. Therefore, Russia's overall trade balance will almost certainly remain in the black - assuming exports of 245bn $ and imports of 223bn $ in 2009[13], we get a trade balance of 22bn $. Even in the worst case scenario of a 10% reduction in export volumes and a collapse to 25$ oil (which would translate to a Urals blend price of around 20$), oil exports will fall to 26bn $ and result in a still manageable trade deficit of 49bn $ - which amounts to about 10% of the CBR's foreign currency reserves.

The World Bank expects the Russian capital account to go deep red, deteriorating to 50bn $ for 2008 and 100bn $ for the next year[14]. This is because of the near cessation of FDI inflows (due to global 'flight to quality') and debt repayment obligations for 2009. Therefore, Russia's overall balance of payments will almost certainly go red next year - assuming all the above, to the tune of 78bn $ in the medium scenario (50$ oil) and 149bn $ in the low scenario (25$ oil). However, considering the current 450bn $ in the CBR's reserves, meeting Russia's import needs will not present a major problem even in the context of a global depression.

Incidentally, the problem with some emerging markets is that they ran up huge current account deficits, paid for by strong but fickle capital inflows. Due to the aforementioned 'flight to quality' and debt repayment issues, their capital account went deep red and started draining rather than bolstering their reserves. Furthermore, a sizable chunk of their exports are commodities (Latvian wood products, Ukrainian metals), which have

plummeted in value. Borrowing is not a realistic option because of the punitive CDS spreads on their sovereign debts. Suffice to say, they're not in a good situation and considering the extent to which Latvia and Ukraine are already faltering, it will be hard or impossible for them to avoid a big devaluation, plunge in imports and severe contraction in aggregate demand and GDP.

Talking of devaluation, a fall of the Russia ruble by around 20-35% again the dollar by 2009 is inevitable[15] and a creeping correction is already under way, with the CBR gradually widening the ruble's trading band and giving it room to fall. The conventional wisdom is that the CBR should stop frittering away its reserves in an ultimately futile defence of the ruble that will only benefit speculators, and allow a sudden devaluation. Perhaps. But there are several caveats and good points to the current approach.

Firstly, as pointed out before a major part of the decline in reserves would have been accounted for by the government's program of quasi-fiscal stimuli. Much of the rest is due to the dollar's appreciation. Russia's basket of foreign currency holdings is 45% dollars, 44% Euros, 10% pound sterling and 1% yen. Thus, its dollar-denominated reserves have fallen much faster than if one were to denote them in Euros, for instance. Since early August, sterling and Euros have fallen by around 20% against the dollar[16]. According to my back of the envelope calculations, the loss in reserves due to this currency effect is around 65bn $ or around 45% of the total[17]. This is an important and often overlooked component to the typical alarmist headlines about plummeting Russian reserves.

I would like to take a moment to debunk one of the more boneheaded predictions of imminent Russian economic collapse. The reasoning goes that because the reserves declined by 25bn $ in the past week, it must mean all of Russia's reserves will be exhausted in 20 weeks. Firstly, I'd refer them to the 'fallacy of linear extrapolation'[18]. Secondly, as we showed above, Russia's total withdrawals from its reserves would have already been mostly accounted for by exchange rate effects and the government's anti-crisis measures.

Secondly, as we noted above a lot of debt repayments are scheduled for the last half of 2008 - around 120bn $, or 23% of the total[19] of 527bn $, compared with 103bn $ for the whole of 2009. The rest are due later. As such it would make sense to repay foreign creditors now, when the ruble is still strong, and weaken it for the next year when the pressure will slacken. It is true that there are disadvantages to this slow approach - for instance, people know that the ruble will weaken substantially, but they don't know when or how quickly. This creates uncertainty and hampers investment because of 'jump risk'[20]. And the longer the ruble remains strong, the greater the strain on manufacturers and exporters. So I think it is reasonable to expect the CBR to accelerate the ruble's decline after the New Year, or even fully take the floor from under it if they're brave.

In conclusion, rather than engaging in the frantic defence of the ruble the media wants to paint, it is far more likely that the great bulk of the decline in the CBR's reserves was due

to currency effects and withdrawals to fund urgently needed quasi-fiscal measures to fight the real crisis – insufficient liquidity and mounting corporate debt repayment obligations.

The final component of my analysis is the effect the crisis and government measures are going to have on Russia's long-term fiscal sustainability. In this case, there is even less ground for worry that with debt or balance of payments. In their second to last biannual report on the Russian economy, the World Bank concluded that at constant prices of 60$ per barrel Russia would have to keep its non-oil primary fiscal deficit below an estimated 4.7% of GDP to maintain long-term fiscal sustainability[21]. Despite this year's record oil windfall, the recent commodity bust and increased government spending may drop this year's figure below that of 2007, when it was at 2.9% of GDP - but still well below the 4.7% marker, as it has been ever since the 1998 Russian financial crisis.

Obviously, that condition will almost certainly be unfulfillable in 2009. Lower taxes will take a smaller slice of a slowing or stagnant GDP. Meanwhile, there will be increased spending on social support for the unemployed, pensioners and homebuyers, as well as on health, education and infrastructure. The Finance Minister Kudrin predicts a possible budget deficit of 1% next year[22], which would be met by transfers from a rainy day fund - of which Russia certainly has no shortage of. Nonetheless, Russia has been a paragon of fiscal responsibility in the past decade and as such, barring a very highly unlikely economic collapse, longterm fiscal sustainability is assured.

Probably the main risk of this approach is inflationary. Although global deflation and the credit have markedly slowed down Russia's inflation rate in the last few months, the prospects of higher-priced imports (due to ruble devaluation), monetary loosening and fiscal aggressiveness, and the probability of a strong resumption of aggregate demand next year poses substantial inflationary risks.

Instead of a conclusion, I offer several falsifiable predictions that could be used to assess the overall validity of the views presented herein in the future - though feel free to treat the later, more visceral forecasts with the amount of salt you think it deserves. The US economy will continue deleveraging and will bottom out by 2010 once a critical mass of formerly private liabilities finish being transferred to the public account. Obama will spend deeply on public infrastructure, greater social support and industry bailouts, further accentuating US fiscal imbalances - the budget deficit will exceed a trillion dollars, making up more than 10% of GDP. Economic collapse is postponed, not averted, since the administration will lack the discipline to fundamentally reform spending, encourage savings and address the looming issue of Social Security benefits at a time when many baby boomers start retiring. Growth in China and many other emerging markets, including Russia, returns to a decent clip sometime earlier, perhaps around mid-2009 - albeit badly singed by the credit crunch, their financial systems are fundamentally sound and solvent and their countercyclical fiscal measures will reignite aggregate demand. Oil prices will remain around 40$ in the first half of 2009 (higher if OPEC manages to

cooperate amongst themselves and other major extractors[23]), but the incipient recovery starts raising them in the second half, resulting in an average price of 50$ for the year. Oil prices will accelerate upwards in 2010 on the heels of a strong global recovery.

Russia will recover from a short but sharp recession in the first half of 2009, and overall growth for the year will be at 0-3%; it will accelerate back up to 5-8% in 2010, although unemployment will keep rising into that year. In 2009, the balance of payments and budgetary balance follow the trajectories I plotted out in this essay; in 2010 they will all strong recover. A wave of consolidation will occur in the Russian banking industry, Russia Inc. will close the oil windfall-foreign intermediary-cheap credit loop that was its prior financing mechanism and the country will emerge with a stronger, self-sufficient financial system. The oligarchs, Moscow and the middle classes bear the brunt of the crisis, while the provinces, agriculture and domestic manufacturing benefit, thereby reinforcing already latent tendencies in national development.

All vital demographic statistics, with the exception of the total fertility rate, improve during this period - the expanding social safety net checks mortality increases, but the confidence crisis temporarily dents the former. The overall humanitarian impact is insignificant compared to the Soviet collapse and even 1998. The crisis will force Russia to prune regulatory inefficiencies and cut down the bureaucracy, enhancing the prospects for long-term growth.

Since Russia is still a rock of stability amidst dangerously overextended east-central European countries, it is likely that its position and influence in the region will rise following the crisis – although for obvious reasons these political predictions are on much looser footing than the economic. That said – much of the post-Soviet space will become a ruble zone after 2009. Relations with Ukraine greatly improve after the generous aid Russia bestowed upon its cold, starving multitudes following the utter economic apocalypse that precipitated the peaceful protests that overthrew its Orange regime and replaced it with a friendly administration seeking integration into Eurasian economic and security structures.

The 2010 global recovery is powerful but very inflationary. With international credit channels once again unblocked, the consequences of the Fed's liquidity flooding will make themselves felt. In the worst case, we could see dollar hyperinflation, albeit highly inflationary is more likely. This will ease away the burden on America's trade deficits and debts. Therefore foreigners become less willing to buy up US debt, the world's central banks resume moving away from the dollar and the greenback will fall sharply relative to other currencies. Oil prices will accelerate upwards, due to recovering demand and falling supplies (new supply additions from megaprojects are slated to fall from 2008 on, and this will only be exacerbated by current delays in new oil extraction infrastructure due to low prices; meanwhile, the rate of oil depletion in existing wells continues to accelerate[24]). This culminates in another spike, bringing us 250-400$ oil by 2012-13. By this time the survival of a US superpower in 'imperial overstretch' becomes increasingly

uncertain – a scenario looms in which the dollar loses its status as a global reserve currency, interest payments on US debt veer asymptotically upwards and the American empire goes into liquidation. This would be a seminal, world-historical event that would precipitate yet another collapse of commodity prices, global increase in chaos and the return of autarchy and totalitarianism – in the words of Spengler, "the masses will accept with resignation the victory of the Caesars, the strong men, and will obey them" [25].

Or maybe not. At this point the future splits into two. Down the path described above, the newly-emergent multi-polar system continues to mindlessly pursue materialistic growth, in the process straining against the energetic and environmental limits to growth and unleashing brutal, wasteful resource wars that doom humanity into the abyss of the Olduvai Gorge. Down another, there emerges a framework for global cooperation promoting peace, population limitation, conservation, and advanced nano-manufacturing and AI technologies, thus ushering in the green Communist utopia that is the technological singularity. The choice, desert or forest, will be ours…

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1 In particular, I am referring to the economic commentary over at *Streetwise Professor* (Craig Pirrong) and his supporter Michel - although I consider it biased and conservative with the facts, some of their arguments deserve mention (http://streetwiseprofessor.com/).
2 According to several sources (http://www.cdi.org/russia/johnson/7259-10.cfm, http://exile.ru/articles/detail.php?ARTICLE_ID=8518&IBLOCK_ID=35).
3 According to the US Census Bureau, real household median income peaked in 1999 and has stagnated through to 2007.
4 This phraseology was first used by Kudrin at the World Economic Forum in Davos in January 2008.
5 See p.5 of *Hope* by Eric Kraus (http://nikitskyfund.com/files/tnb/Hope.pdf). According to Eurostat and Goldman Sachs, loans to Russian households make up less than 10% as a percentage of GDP, compared to 20-40% amongst most east-central European emerging markets and more than 40% in Latvia and Estonia. Some Googling reveals a figure of about 100% for both Britain and the US.
6 The RTS (http://www.rts.ru/) has an easy function whereby one can view its history for the past day, week, month, 6 months, year and 3-year period.
7 I owe this explanation to *Hope* by Eric Kraus (http://nikitskyfund.com/files/tnb/Hope.pdf).
8 For a detailed breakdown of the credit crisis in Russia and the government's response, see the *17th Russia World Bank Report* (http://siteresources.worldbank.org/INTRUSSIANFEDERATION/Resources/rer17_eng.pdf).
9 Data from Central Bank of Russia (http://www.cbr.ru/). The 193bn $ liabilities of the banking sector are mitigated by its 114bn $ in assets. Although the total size of Russia's external debt stock in Q2 2008 was about 527bn $, overall solvency is assured by the financial sector's net foreign assets of 450bn $ (Q3 2008) and foreign currency reserves that peaked at 598bn $ in August.
10 See p.3 of *Things That Fall Apart* by Eric Kraus (http://nikitskyfund.com/files/tnb/Things_That_Fall_Apart.pdf) for a disturbing insight into the long-term unsustainability of American profligacy.
11 The 70-80$ prediction was made by the World Bank a month ago; as the depth of the global economic slowdown became clearer in recent times – including that of China, on which hinged hopes of a recovery – Merrill Lynch warned that prices may drop to as low as 25$ (http://weblogs.baltimoresun.com/business/hancock/blog/2008/12/merrill_lynch_oil_could_fall_t.html). However, their 'main scenario' is still at 50$.

11 Data from CBR. All annualizing is based on data for H1 2008.
12 Russian oil extraction peaked, probably permanently, in 2008. The combination of high taxes on oil exports and plummeting prices have led to a big drop off in export volumes to 2004 levels in November (http://www.guardian.co.uk/business/feedarticle/8110057).
13 CBR. Imports of 223bn $ imply a mere reversion back to the level of 2007.
14 Again, see *17th Russia World Bank Report* (http://siteresources.worldbank.org/INTRUSSIANFEDERATION/Resources/rer17_eng.pdf).
15 Goldman Sachs predicts 20%, while Troika says it could be 35% if oil falls to 30$ per barrel next year (http://www.bloomberg.com/apps/news?pid=20601087&sid=aV9a5OPsFqYk&refer=home). It should be noted that such a decline would be comparable to the falls in the Korean won, South African rand or numerous other emerging market currencies that have already occurred.
16 http://finance.yahoo.com/currency has exchange rate data going back 5 years.
17 Back of the envelope stuff. (46+0.8*(54))/100 = 0.892 is the dollar-denominated decline due to currency effects, with the 46 representing the portion in yen and dollars, and the 54 representing the Euro and sterling component. Multiplying that by peak reserves gives us the expected value in the absence of any other transfers in or out of the CBR's reserves: 0.892*598 = 533bn $, or a dollar-denominated loss of 65bn $. Currently the reserves are at 455bn $, so the total loss has so far been 143bn $, so the loss due to currency flunctuations is around 45% of the total.
18 Fallacy of linear extrapolation – it's not in Wikipedia's list of fallacies, but I think it really should be. Anyway, let's demonstrate it with US total public debt. According to *Debt to the Penny* (http://www.treasurydirect.gov/NP/NPGateway), this increased by about 1tn $ in the last 3 months. Now if I reasoned like a typical Kremlinologist (or paid Russian info-warrior), I would immediately start writing about how the debt will explode by 4tn within the year and treble within five years, leading to American economic apocalypse. In practice, those three months covered the period when the Fed was borrowing money for its TARP's and bailouts, and as such the increase is entirely logical and expectable.
19 See CBR for the payment schedule of Russia's external debt (http://www.cbr.ru/eng/statistics/credit_statistics/print.asp?file=schedule_debt_e.htm).
20 A good argument from Craig Pirrong, *Streetwise Professor* (http://streetwiseprofessor.com/?p=1053).
21 See *Longterm Fiscal Sustainability of the Russian Federation* by the World Bank, 2008 (http://siteresources.worldbank.org/INTRUSSIANFEDERATION/Resources/rer16_Che2_Eng.pdf).
22 See http://www.reuters.com/article/marketsNews/idUSLK36695720081120?sp=true
23 I use the term 'extractors' rather than 'producers' on principle. Oil is a non-renewable resource that is extracted out of the Earth and later processed into useful products; it is not 'produced'.
24 See Fig.3 in IEA WEO 2008 - World Oil Forecasts on the Oil Drum (http://www.theoildrum.com/node/4792). There are many reports of expensive projects being delayed due to today's low oil prices, which makes them risky and potentially unprofitable - not to mention oil companies' problems in accessing credit. The Financial Times recently had a story on how the rate of oilwell depletion is accelerating, because a larger percentage of oil is coming from smaller fields that deplete quicker (http://www.reuters.com/article/GCA-Oil/idUSTRE49S0BB20081029).
25 Oswald Spengler in *The Decline of the West*, published in 1918. He prophesied the decline of materialism, money, and intellect, in general, the liberal West, in the 20th century. I believe his work is relevant to the 21st century too; our mindless, *democratic* materialistic pursuits are already straining against the energetic and environmental limits to growth. Unless drastic measures are taken to mitigate this slowly unfolding crisis, far vaster than the 2008 financial crisis, it may discredit the globalized capital and democracies that promoted it, and usher in political collapse, anarchy and 'strong men'; and with them in charge, hopes for preventing a generalized collapse of advanced industrial civilization fade away.