

MULTIPLE CRISES AND THE QUEST FOR SECURITY

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Introduction

Security is one of the most desired, but also most misunderstood goods. A widespread notion of it, as an individual good able to be enhanced by one-sided action, stands in the way of understanding its basic character as a public good. While the lock on the door may marginally increase one's security, even the measure by which it can achieve this largely depends on the state of public security. In some neighbourhoods, having no lock at all may still be more secure than having only a simple lock and door in others. Because of limited resources, societies dealing with developments perceived as new and rising threats to their collective as well as the individual security of their members will have to face the choice between investments in individual or collective measures. A widespread bias in favour of private precaution may not only waste resources but prove counterproductive. The following extends considerations brought forward in various contexts (Fischbach 2010 [a] [b], 2012).

The upcoming threats to security originate in multiple, mutually interacting crises. These are mainly:

1. the ecological crisis observable through worsening environmental conditions and a tightening shortage of natural resources;
2. the economic crisis unfolding from a protracted financial crisis into a depression seizing a growing number of countries and slowing down even the hitherto relentlessly growing threshold economies (Anderlini 2012), while further compromising their export-led development models;
3. the social crisis becoming visible in a deepening polarization of income and property (Saez 2006) and a growing precariousness of human reproduction even in areas until recently considered part of the wealthy capitalist centre.

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While each of these crises poses threats to human security independently of the others, their interaction tends to aggravate them all. Just to highlight some out of a wider network of mutually reinforcing factors:

A stressed financial system fails to service the most pressing investment needs. To resolve the central issues of the ecological crisis or, at least, to alleviate its most severe consequences, demands investment into the reengineering of the human-nature metabolism in the order of trillions of Euro in Europe alone. A financial system accustomed to exorbitant profits, but still laden with lots of bad debt and, therefore, increasingly risk-averse, does not seem to be in the position to finance that kind of investment, particularly, if its profit prospects are dim.

Inadequacy of public finance aggravates the multiple crisis. Public households already stressed through the bailout of financial institutions by turning private into public debt, through fiscal stimulus measures targeted at economic recession and confronted with a growing risk-averseness of banks and other investors raising the cost of refinancing their own debt, lack the resources to address the technological and infrastructural challenges posed by the ecological crisis as well as the challenges posed by deepening social fragmentation. Fear of state bankruptcy may turn out to be a self-fulfilling prophecy when distrust in the states' ability to service their debt becomes self-reinforcing.

Austerity exacerbates the economic downturn and debt load. Austerity measures implemented irrespective of macroeconomic considerations to calm financial markets tend to weaken the immediately affected and, via second-round effects, even distant economies, thereby worsening the debt position of public households (DeLong and Summers 2012) and further compromising their ability to meet social and ecological needs.

Neoliberal recipes paralyze public functions. A reduction of public services as advertised by the neoliberal policy recipes adhered to during the recent decades and, with dwindling financial scope of public households during the current financial crisis, gradually becoming a compulsory measure, not only reduces the capacity of public authorities for anticipatory planning and action to address the causes of crises or at least to moderate their consequences, but also tends to trigger, particularly in the upper social strata, counterproductive private action further deepening social fragmentation. A token event illustrating these developments was the apparent inability of public authorities to deal with the devastation of New Orleans through hurricane Katrina, let alone to implement adequate provisory measures (Reed 2006).

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Impoverishment aggravates the ecological crisis. Tighter public households and shrinking incomes in the lower strata, although advertised by proponents of austerity politics as readily available means to that end, do not necessarily translate into a reduction of natural resources consumption. Low-income consumers normally cannot afford high quality, durable goods. The rapid expansion of a sector specialized in low-cost goods (clothing, furniture, house-wares, etc.) made not to last, but to wear out quickly is, although facilitated by widespread patterns of consumerism, a by-product of a rising impoverishment. Waste, consumption of energy and raw materials is also on the rise as a consequence (Baumann 2012). Beyond that, austerity-induced cutbacks of services like public transportation squeeze users back to ecologically inefficient individual means of transportation.

Impoverishment destabilizes the financial system. While the proportionality of wages and productivity formed a centrepiece of the social contract in the prospering industrialized countries for decades after the Second World War, since the 1980s this contract has been broken everywhere. In the first decade of the new century especially in Germany, with stagnating or falling real incomes in the middle and lower strata (Busch and Land 2012: 122-123) and wide-spread impoverishment as a consequence. Soaring profits accompanied by sinking investment endow enterprises, shareholders, top-management and professionals with excess cash (Piketty and Saez 2006), which, with vanishing marginal consumption in the upper strata, is saved (FTD 20.12.2012). Consequently, polarization of income as well as private compensation for a lack or insufficiency of public social security systems creates the “global saving glut” (Bernanke 2005) that feeds “this crazy ocean of global liquidity” (Smick 2008: 3) which is, productive investment opportunities being rare as a consequence of lacking purchasing power by the masses, flooding financial markets and thereby feeding periodically ballooning waves of speculation.

Wealth accumulation aggravates the social and economic consequences of the ecological crisis. Financial wealth not finding profitable investment opportunities in production flows into speculative activities (e.g. with land, foodstuffs and mineral raw materials), thereby turning shortages caused by ecological, political or economical factors into magnified, sudden price peaks, burdening an already weak world economy and endangering the reproduction of a growing part of the world population (Schulmeister 2009: 60-64; Oxfam 2012 [a], [b]). Examples of this development are the price shock in cereals originating from extreme drought of summer 2012 in the US and India (Böge 2012), the price peaks appearing in conjunction with political unrest in oil producing countries (Grass 2011), or the

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disproportional acceleration observable in the price trends for industrial raw materials with each economic upturn in recent years (HB 11.01.2011).

Although there is only one Earth to be shared by mankind, with a multitude of resources, a further multitude of common institutions, the quest for security all too often leads parties to indulge in one-sided solutions. As long as a privileged part of mankind believes it could secure the less spoiled, less endangered areas and the lion's share of Earth's resources for itself by building heavily armed walls around it, investments into the preservation and amelioration of the whole earth and a transition to more moderate patterns of production and consumption may seem too costly. Although policies based on this perception will, eventually also, but sure enough, devastate the world behind the walls, investments in illusionary private shelters flourish: the boom in private panic-room construction experienced in the US during recent years (Schröder 2012) and the US practice of extensive incarceration are no less token of a wider current seeking shelter in options readily at hand – at least for the privileged –, while resigning vis-à-vis the problems more global in nature, than the policy of 'wallfare' – encircling those considered alien and dangerous, depriving them of dignity and all means necessary to take care of their livelihood by themselves, while providing them with just a precarious 'minimum' for physical survival – as practiced by the Israeli government in Palestine (Weizman 2011: 80).

Whereas this attitude is not limited to the US, the current presidential campaigns indicate its attractiveness. The easy way of economic growth based on the fossil resources currently developed at home is much more beguiling to either candidate than the hard way of fundamentally reengineering the economy (Brulle 2012; Luce 2012). Condoleezza Rice – former secretary of state and still a prominent Republican figure – states the idea very clearly: "We are developing alternative sources of energy but they will not replace hydrocarbons for a long time. It is a gift that much of our demand – possibly all of it – can be met domestically and in cooperation with US allies, Mexico and Canada." (Rice 2012)

The earth may perish, but the myth of the endless frontier continues: "Ours has been a story of possibility, not grievance and entitlement." (Rice 2012) Ecological brinkmanship seems to be the stated attitude and 'who is more afraid of ecological disaster?' the name of the game of chicken, the major powers increasingly get involved. Losers are considered the ones

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which forego opportunities of national power politics by turning the wheel too early.¹

A further example of security being a common good is the institution of a common European currency. Trying to secure monetary savings, accumulated – especially in the German case – through neo-mercantilist ‘beggar-thy-neighbour’ policies, by imposing economically and socially destructive austerity measures upon Southern European countries, will, together with the common currency, also lose the savings. Beggar-thy-neighbour policies, while sometimes successful when practiced by single small countries, turn out to be disastrous when adopted on a larger scale. A downward spiralling of the European and world economy and massive capital flight become imaginable. The latter, further withering the source economies while flooding the target economies, thereby damaging their competitiveness through appreciation, which, in turn, will legitimize further austerity measures, may push the financial system to the brink.

Widespread insecurity caused by joblessness and shrinking incomes bearing impoverishment and social unrest will become a European reality too (Ohanian 2012). In the US, in southern European countries and beyond, a significant fraction of the young is facing permanent exclusion from any career opportunity matching their education (Bond 2012; DeLong 2012). A spiral of tightened austerity, deepening social polarization, intensified repression and a flourishing, escapist quest for private shelter may be set in motion. New and higher walls will surface and ‘wallfare’ will become a widely adopted policy pattern. European unity and its institutions, once considered a decisive accomplishment on the way to overcome the legacy of war-laden European history, may even be at risk (Fischer 2012).

Ill-conceived remedies: the sustainability trap

There are few notions with a comparable success story: *sustainability* has made a career, emerging from the state of a technical term with currency limited to the language of forestry experts to that of a universally accepted notion promising solutions to problems as diverse as the crises affecting societies today. It is defined by the 1987 Brundtland report: “Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” (World Commission on Environment and Development

¹ The notions of ‘brinkmanship’ and ‘chicken game’ are due to Thomas Schelling and Herman Kahn who introduced them into the debate on nuclear strategy (Schelling 1960: 199-201; Kahn 1961: 291-295).

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1987). This definition is, however, far too general and probably not satisfiable because there is no way to ensure human survival by organizing man-nature-metabolism without limiting the range of choices available to future generations. It is also hardly debated, as solutions addressing specific problems with a claim to sustainability are bound to resource-economic models of the kind that already constituted the core of sustainability in forestry since centuries: from its beginnings in the 14th century in the form of the 'Nürnberger Nadelwalsaat' (Stromer 1996) through its first programmatic formulation by Hans Carl von Carlowitz (Carlowitz 1732) and its practice in forestry since then, to the concepts of renewable energy extracted from food crops, sustainability boils down to the reduction of arbitrary segments cut out of socio-ecological and socio-economic contexts to the production/reproduction of a limited set of resources – all too often a single one. Sustainability then means to take care of the reduced system in a way that it produces at least the same quantities of the respective resources as are taken away by human use during a period of time, or, if the task consists in the management of an evil such as waste, instead of a good, to make sure not more of the evil is produced than is removed.

A common trait of operative implementations of sustainability is their neglect for social interests besides that in the respective resource on the one side and a degradation of ecological diversity and quality, respectively, on the other. Sustainable forestry in Europe – although the scheme devised in 14th century Nuremberg did not necessarily imply monocultures – turned the woods into plantations of fast-growing pinewoods, thereby increasing their susceptibility for plant diseases, pest infestation and storm loss, while abrogating the former commons that had formed an essential part of the poor's livelihood (Radkau 2002: 247). For a limited period, until anthracite and steel increasingly took over, it attained its overall goal: creating, in the form of plentiful charcoal, energy security and, in the form of cut wood, construction material for the ascending mining, metallurgical, and building industries figuring prominently in the mercantilist schemes devised to enlarge the power base of the nascent absolutist states of Europe, at the price of greatly diminishing livelihood security of the poor and leaving behind an ecological legacy that the winter storms of recent years have finally made apparent (Indermühle 2005). It is this logic that applies equally to the models of extracting 'renewable energies' in the form of biofuel etc., from food crops. The dispossession of indigenous populations, the squeezing out of food production (Oxfam 2012 [b]) is not more accounted for than the discharge of CO₂ by building new plantations on untouched ground and the overall inefficiency of converting solar energy to biofuel as compared to alternative technologies (Böhm and Dabhi 2009).

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The yield of photo-voltaic technology per unit area is already fifty times that of biofuel (Schink 2012). Taking these aspects into account dispels the myth of 'renewable energy' from biological resources. The European Commission, although confronted with respective evidence, is hesitating to draw the conclusions (Ladleif 2011). The downside of increased energy security for the 'advanced' part of mankind consists in reduced livelihood security for many of those left behind, in an incredible waste of natural resources, and in, on a net-base, increased CO₂-emissions.

Regarding the ecological crisis, the issue is not only human survival, but human survival on human terms. The term 'unsustainable' attached to whatever matter or process conveys the misleading impression that it would come to an end by itself at some point, where a transition into a new quality will be enforced upon them because they are 'not sustainable' any more. But that point may lay in too distant a future, being a matter of "the long run" in which, as Keynes put it, "we are all dead" (Keynes 1923, 65). 'Unsustainable' developments may even more likely terminate in a violent, and most probably irreversible, breakdown than in a timely, coerced transition to more 'sustainable' patterns. Far more probable is a scenario in which the world slides downhill – subtly in the beginning, and then accelerating – while the opportunities, material resources, and vital forces required for a transition become more and more depleted.

Focusing on a limited set of variables representing resources in demand and factors manageable by the powerful, operative sustainability easily falls into the trap of reductionism, ignoring overall balances, issues of diversity, and the security interests of the powerless. Transferring such naïve sustainability recipes into the fields of society, economy and finance, e.g. to fiscal policy and social security, is likely to turn out even more destructive. Departing from the homespun assessment of debt being an evil and of savings being a good, the recipes of the so-called 'fiscal sustainability' and 'sustainable social security' call for the former to be reduced and the latter to be increased, forgetting the simple macroeconomic fact that monetary savings and debt must necessarily be equal. If everybody's expenditure is someone else's income, and so the sum of all expenditures must equal the sum of all incomes, if someone is saving, i.e. spending less than taking in, someone else has to spend more than she or he is taking in, i.e. incur debts.

A consequence of particular relevance ensuing from these correlations is the so-called 'saving paradox', which states the fact that individual actors, e. g. public households, may not be able to save arbitrary amounts without making the economy shrink: "the reactions of the amount of his consumption on the incomes of others makes it impossible for all

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individuals simultaneously to save any given sums” (Keynes 1936: 84). This applies particularly in a financial crisis when everybody tries to save and reduce debt.

Money saved is not necessarily turned into investment: it can just go into someone else’s consumption, but if everybody is saving this just means enterprises which incurred debts investing will not be able to repay these because they cannot sell all their products. Consequently, in the next step, they will reduce their investment in order to save and repay their debt, thereby shrinking the economy. Alternatively, they try to sell assets, thereby pushing asset prices downwards and debasing the balance sheets of all asset holders. So, everybody saving will set in motion a downward spiral of the economy. The only, but not exclusionary, ways out would be, either running a current account surplus, selling abroad the product and services not sellable inland, or running a fiscal deficit, letting the state take care of unused capacities (Kalecki 1969: 50-52). Neither alternative may be extended over arbitrary time spans (Brender and Pisani 2012). The latter accumulating destabilizing amounts of public debt inland, the former, while practicable only if there exists a demand for the respective goods abroad, accumulating destabilizing amounts of either public or private debt abroad (Brender and Pisani 2010), as exemplified by the German and Chinese policies of export championship (Schulmeister 2009: 48). A sustained current account surplus means unsustainable levels of debt abroad, risking the loss of the respective savings. Deficits and debts versus surpluses and savings form just mirror images of each other. Misconceived ideas of financial sustainability flood the financial system with excess liquidity, produce unsustainable amounts of debt, devastate the economy and the financial system, and, as a further consequence, society.

In particular, saving money will not solve the problem of ageing populations in advanced industrial countries like Japan and Germany. China, by the way, will, as a consequence of its population policy, run into the same problem before entering the club of advanced industrial countries. All demand by the non-productive elderly has to be met out of the current product – irrespective of whether it is derived from capital-backed life policies or redistributive social security schemes. The only way to secure its future satisfaction is by taking care of the productive potential then disposable: natural environment, knowledge base and skills, public services and facilities, industrial capabilities, etc. Tightened austerity will not build these vital resources. On the ruins of European societies, trillions of savings will not create security. They will be worth nothing.

While a more aggressive monetary and fiscal policy should form centrepieces of the required, immediate response to the unfolding crisis, a

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more secure financial, economic and social environment can only be built on a more balanced distribution of income and wealth. The excessive money savings that come with trade imbalances and deep income inequality mean excessive liquidity, feeding financial bubbles, on the one hand, and excessive debt, probably never to be paid back, on the other, leading to financial instability, economic depression, social unrest and insecurity.

The great failure: mistaken approaches to human-nature metabolism

Human survival on human terms will surely imply a path of mitigation, curbing the polarization not only of wealth and income, but also of social capital in general, while bridging the divides that split societies apart. Inequality as an incentive for an unchecked progression of material production does not match, not only with the limited resources and the limited capability to absorb waste earth puts at the disposal of mankind, but also with the very fabric of a human society providing security and a certain quality of life to its members. Beyond a certain threshold, increased material production does not increase human well-being, but the security and well-being of all members of society, even that of the better-off is, irrespective of the level of material production, heavily impaired by inequality (Wilkinson and Pickett 2010). Redistribution suggests itself as the more convincing way to increase human security and well-being than endless material growth stimulated by inequality. In a limited world, doubling the material output in order to improve the income of the lower strata by a few percents is a dangerous kind of inefficiency (Skidelsky 2012; Skidelsky and Skidelsky 2012).

But the goal of human survival on human terms has its technological side, too: this means reengineering human-nature metabolism to the point where a completely new fabric of the socio-technical conditions of life emerges. The requirements of reengineering human-nature metabolism go far beyond developing 'renewable' energy sources. They will encompass all material aspects of life, making them subject to the principles of parsimony, durability and reusability. The overall goal is not a life in scarcity but a decent, good life without waste and, particularly without waste of time for the production of unnecessary goods. Renewable energy will have a role within a reengineered human-nature metabolism, but energy security requires more than merely developing energy sources.

A case in point is the mistaken policy of the German 'Energiewende'. It is not sufficient to develop energy sources. The issue is providing energy of the adequate quality in matching quantity at the moment and the place

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where it is needed, and, of equal importance, to shape the demand – the qualities and quantities requested as well as the time and place where this occurs – in a way that avoids waste and optimises resource utilization. This is a system-level task calling for system-level solutions. The list of policy failures attributable to the German ‘Energiewende’ in this respect is open-ended.

Providing subsidies to the producers of renewable energy, without consideration of aspects like technological and capital efficiency, power distribution, service continuity, etc. means wasting scarce financial, material and skill resources, deepening social inequality by directing funds from all customers to upper/middle-class land- and home-owners, and risking the failure of the whole conversion process. Uncoordinated plans for offshore wind-parks, delayed power grid construction, missing buffer facilities that could level phases of excess and deficit power, and even missing adequate construction equipment may turn ambitious wind-energy projects into waste-paper (Haas 2012; Fichtner 2012; Gassmann 2012).

Similar patterns dominate the solar energy sector. Inefficient, socially and economically destructive technologies like biofuel receive subsidies along with more viable ones. A subsidy scheme that does not enforce coordination and a path that leads to a coherent, balanced energy provision based on the most efficient technology and organizational patterns turns scarce funds into rents easily harvested by the well-off.

Announcements of e-cars, made by the automotive industry to demonstrate it is up to the requirements of ‘sustainability’, are silently withdrawn, after demand was lacking, security failures have surfaced, the problem of limited e-car range was found to have no solution in the immediate future, and nobody seemed likely to build the necessary network of e-filling-stations (Hucko, Fischer 2012). While road-based transportation is relentlessly expanding, its efficiency is decreasing (Hops 2012). The German government does not seem to have a clue about the energetic conversion of a sector that accounts for approximately one third of primary energy consumption – besides hoping for the next moves of the automotive industry.

Inaction is the pattern observable in a field that accounts for another third: heating and climatisation of buildings – particularly incomprehensible because it is this one where we do not have to wait for fundamental technological breakthroughs. The technology for the equipment and building design schemes that provably save lots of energy are there and well-known. But even the reductions in CO₂-emissions, officials in Germany and other advanced countries are so proud of, look

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less impressive when scrutinized more closely: sure, there has been some genuine reduction, but significant amounts of CO₂-emissions ‘saved’ have actually been exported by the manufacturing of products consumed inland being outsourced to threshold countries with lower environmental standards (Peters et al. 2011).

With Germany – although this assessment should be made subject to some qualification – considered a leader in the technologies and policies of the ecological turn and the ‘Energiewende’ forming the respective token project, the failure of the latter will prove detrimental to the prospects of similar policies globally. ‘If the Germans cannot do it – who can?’ is likely to become a standard phrase. However, the failure would not come unexpected for students of German policies in the fields of ecology and technology, but as the consequence of a lack of an overarching vision and respective agenda already discovered by the *Peer Review on Sustainable Development Policies in Germany* (Stigson et al 2009: 15-17). If the record of German policies in the field of energy – a field emphasized much by official declarations – is already weak, this is all the more true for the issues raised by the ecological crisis in the broadest sense. These issues and the responses they require – the reengineering of the artefact universe² as well as of the material and mental forces of production for parsimony, durability and reuse – are hardly recognized as all-encompassing tasks, let alone addressed adequately.

Shortcomings like this do not come as a miracle but as pieces of a larger pattern: the neoliberal obfuscation has not only erased the idea of large-scale planning from the public mind, but also eroded any ability to implement it. Even industry representatives finding fault with missing state planning as in the case of the mismatch between renewable energy development and power grid construction (Gassmann 2012) should be taken as an indication of a fundamental aberration. Politics suffers from a thorough paralysis affecting its cognitive, conceptual and operational faculties. It is not only missing funds, or, more precisely, the diversion of funds to alternative uses, but a ban on all comprehensive approaches. A rather sad consequence flowing from this state of affairs is that the likelihood of the ecological crisis to be tackled fundamentally is rather small.

² The artefact universe encompasses items like buildings, furniture, housewares, clothing, communication equipment, bicycles, cars, etc., as well as items less visible from the everyday point of view like chemicals and seeds, infrastructures and settlement patterns.

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Put into its proper historical context, the expectable failure of the mistaken approaches to fix human-nature metabolism has further ramifications. Departing from the thesis brought forward by Busch and Land, which identifies lacking resource efficiency as a decisive factor in the shift from, in their words, “Fordist capitalism of participation” to its neoliberal variant (Busch and Land 2012: 138-151), this failure will mean a further prolongation of the latter. If the redistribution of labour income to rents and the recycling of the respective monetary savings through an expanding financial industry that is at the core of neoliberalism, emerged as an ad-hoc fix to the resource scarcity that brought the model of mass-production and mass-consumption that is central for Fordism under increasing strain, a failure to redress this scarcity would mean the continuation of the material conditions that gave birth to the former. This may be the material secret of the “strange non-death of neoliberalism” (Croach 2011). If the highest incomes increasingly take the form of rents, this is not by accident but due to the basic neoliberal mode of allocation, which, incidentally, contradicts its ideology. These are the rents earned by the oil-rich, the raw materials- and the energy industries being based on the possession of or access to land, the rents earned by the luxury goods industries being based on possessions in the symbolic territory of brand marks, the rents earned by the upper strata of the high-tech industries being based on a combination of the latter mode and technological factors breeding monopolies, the rents earned by the financial industry originating from a state-awarded benefice: the license to create and transform money. But consistency of ideology and practice has never been its hallmark.

The lack of an ecological alternative that increases resource efficiency by at least one order of magnitude means, even in the face of its intellectual bankruptcy, the perpetuation of the neoliberal fix, and with it the perpetuation and, with progressive resource scarcity, the intensification of the financial, economic, and ecological crises and the insecurity they breed.

Rising tensions and the quest for alternatives

As argued above, the financial, economic and ecological crises will very likely deepen and mutually reinforce each other in the years ahead. This will also mean a deepening of the social crisis and a degradation of human security. Livelihood will become increasingly precarious for a growing number in the lower social strata and even the position of much of the middle strata will come under attack. The recent, successful attacks on the wages of the core workforce in the US industry are token events (Ruch

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2012). A coarse overview of the many ramifications that originate from the interacting crises is as follows:

1. The global financial/economic crisis means
 - a. shrinking/stagnating economies,
 - b. shrinking/stagnating incomes and joblessness,
 - c. overburdened and underfunded public households,
 - d. lacking funds for research, education, infrastructure and social compensation, depleting the economy's growth potential and weakening social cohesion,
 - e. lacking finance for investment targeted at the ecological crisis.
2. The intensified ecological crisis means
 - a. reduced availability and rising prices of natural resources, stalling the industrial production and spreading malnutrition, hunger and social unrest,
 - b. heightened competition for the access to usable land and natural resources leading to social and political tensions,
 - c. an increasing number of disasters of growing severity as a consequence of worsening environmental conditions through pollution, climate change, land overuse, erosion etc., displacing whole populations and further depleting mankind's nutrition base.
3. The deepened social crisis means
 - a. widespread and protracted joblessness, weakening social cohesion and invalidating skills, further depleting the economy's growth potential,
 - b. impoverished populations less likely to give their children adequate education, further depleting the economy's growth potential and society's problem-solving faculties,
 - c. extension of the hidden economy and the spread of pre-modern, regressive forms of social-economic organization like clientelism, clan- and mafia-like structures, militias, religious commitments, etc., that erode existing or stifle nascent forms of modern political organization,
 - d. land overuse by displaced populations lacking the technical means to manage human-nature metabolism in a sound way, further intensifying the ecological crisis.

Social fragmentation, rising tensions within and between nations accompanied by dwindling material and mental resources available to attack the pressing problems posed by the multiple crises are probable

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prospects. In the face of these likely developments, the quest for alternatives suggests itself and is recognizable worldwide, whereas a shared analysis of the crises' roots, as well as a common vision of the goals and required course of action, are missing, let alone forms of organization that could bundle the fragmented protests in order to form a transformative power.

Whereas many of the worldwide protests are against one or the other form of deprivation – the protest of indigenous populations against deprivation of the land that gave them subsistence through agro-, power-, or mining-industrial mega-projects, the protest of the uprooted masses in the metropolises of the periphery against sharp rises in the food price depriving them of their livelihood, the protest of the youth in the metropolises of the capitalist centre against the financial and economic crises, depriving them of the chances to equal their parents in finding an occupation matching their education and affording them a comparable standard of living – it seems almost impossible to find a common denominator. The problem of the latter group, of course, seems to be a luxury to the first and second group, but even between them there is potential for conflict, as experienced by leftist governments in periphery states trying to redress their backwardness through forced development in order to support the masses. If resources are scarce, it is difficult to do so without touching the interests of indigenous populations and provoking disproportionate awareness by western media.

The uprooted masses in the metropolises of the periphery are not homogenous. There is a fraction of the young who do not share the – parent-given – affluence of their peers in the centre, but a comparable education and the quest for that kind of western-style affluence with all its features: a nice, sizeable flat or house equipped with all the standard gadgetry, a car, travelling abroad regularly, etc. It is this fraction that finds the loudest repercussion in the western media and political class. It is a youth that looks like its peers in the West: preferring the same brands – although mostly wearing the clones considered illegal by western juridical standards – using identical electronic gadgetry and digital services to communicate, and dreaming of freedom and a good life. It is the youth that staffed what was christened the 'Twitter revolution' or 'Facebook revolution' by the western media – a youth that, although looking similar to its peers in the West, is still much different and living in an altogether different world, and, as far as it is similar, rather is a minority – and revolutions that are, at best, stalled. One of the core shortfalls of the view that predominantly perceives similarities lies in the ignorance of socio-economic factors: e.g. the lack of a socio-economic base that would afford

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the mass of the young a life oriented on individualistic and consumerist values – factored out the problem that a revolution that would just result in the emulation of western lifestyles is not going to solve the problems of the multiple crises.

The overwhelming victory of religious and conservative forces in the countries that stood for the ‘Arab spring’ tells the truth about their socio-economic fabric. The ethnic, religious and political fragmentation of Iraq, once considered the most advanced of the Arab countries with a modern health- and education system, its domination by militia, mafia-like, and other pre-modern forms of socio-economic organization, after being bombed and embargoed, to put in General Curtis LeMay’s words dated from the time of the Vietnam war, “back to the stone-age”, reemphasizes the same narrative. Syria has a good chance to follow suit.

The delusion of digital revolution

While authoritarian regimes in the Arab world have recently come under pressure from mass movements demanding – not in the first place, but somehow still – democracy, western democracies have become more and more authoritarian. Authoritarian, however, in a way that is quite distinct from that of traditional authoritarianism centred on the figure of a strong leader. It is not a charismatic personality, but the almost unnoticed supersession of democratic bodies and procedures by teams of elite experts, predominantly drawn from industry, finance and related think tanks, and intransparent consultation processes that abrogate democratic principles and turn democratic institutions ineffective. And they do so not blatantly by a *coup d’état*, but silently and even with the consent of the elected representatives, who seemingly do not see an alternative to their own disempowerment. “There is no alternative” – this master-slogan of neoliberalism coined by Margaret Thatcher has won their minds. The way in which the liberalization of financial markets has been cast into European legislation during the last two decades and the austerity policies designed by bureaucrats of the European Union (EU), European Central Bank (ECB) and the International Monetary Fund (IMF) – bodies lacking democratic legitimacy – have recently been imposed on Southern European countries – in Italy and Greece by replacing the elected governments through expert bodies – represent impressive paradigms, indicating that we have entered an era of “post-democracy” (Croach 2004).

Whereas the crisis of democracy is observed in many quarters of the political sphere, agreement about its position within a wider analytical framework is much weaker. Within the context of the argumentation

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presented here, the crisis of democracy is to be seen not as an autonomous process but rather as an epiphenomenon, i.e. as the political reflection of the more fundamental forces interacting at the core of the ecological, economic and social crises. Like those crises, the crisis of democracy sparks a search for counter-currents. High expectations are placed on the use of so-called 'second generation' digital or social media, which would, beyond the organizing of all kind of activity, enable a new quality of democratic participation.

The 'Twitter revolution', along with the established practice of dissenting groups of all kinds in the advanced countries – it is not only Occupy Wall Street and environmental activists, but also right-wing groups, the Salafiyya, etc. who entertain their own digital infrastructure – have proved the organizational faculty of digital media. Though the biggest demonstrations in post-war Germany – several hundred thousand against the 'Nachrüstungsbeschluss' more than three decades ago – have been organized without, nobody doubts that digital media would make such an effort much easier – if only such a degree of mobilization would once again occur.

Yet the immense organizational power of digital media has its downside, too: dissenting informal groups, sub-cultural currents, etc., will not build up through the net, but, once established, may communicate and organize more efficiently, even gain internal cohesion, but lose visibility, contact with each other and society at large, while retreating from a physical space progressively colonized by commercial interests. They may be selectively governed, supervised by the authorities, and subdued or highlighted by the media. For every voice reaching the public, there may be millions unheard, for every cause brought forward by digital media, there may be thousands successfully suppressed. In this way, digital media are complementing social fragmentation and the splintering of physical space (Fischbach 2005: 114-116, 250-251).

While the whole of cyberspace remains intransparent for the public at large, it is increasingly becoming the opposite for the authorities as well as for powerful private organizations. The myth of the invincible, uncontrollable internet has become popular in the 1990s, based on the false historical premise of its origin as a military communications network designed to withstand a nuclear war (Fischbach 2005: 101-112), and trapped many political and social activists into believing that by its very nature it could evade and defeat censorship and repression. The fact that the, albeit limited, success of the 'Twitter revolution' was gained against technologically backward administrations is mostly overlooked.

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Technological progress – e.g. network processors able to deeply inspect and filter data flows by the way while performing routing operations, software tuned to analyze huge volumes of data, etc. – will turn cyberspace into the equivalent of Bentham's panopticon. Advanced routing technologies enhancing the Internet's performance (Fischbach 2008) may be put to supervisory and repressive uses. The Internet can increasingly be supervised and controlled, including the elimination of unwanted content.

Beyond the ability to supervise and control the flow of data in the Internet goes the capability for direct cyber-attack on individual computers. The range of options reaches from intrusion for espionage purposes over 'kidnapping' and using computers as bases for further attacks, to outright destruction of data and hardware. Cyber-attacks may be directed against individuals, organizations, firms, and, of course, nations. The agents behind them are firms, criminal organizations, and states, i.e. their intelligence agencies and military. Recent findings indicate that the technological complexity and sophistication involved in cyber-attacks has reached a new level (Grunwald 2012). They open a new theatre of warfare. With the launching of the Stuxnet malware against Iran's nuclear program (Sanger 2012, Messmer 2012 [a]), the US has crossed a critical threshold, thereby fundamentally changing the meaning of security in the digital age by setting the agenda for an open ended digital arms race (Benedict 2012; Kemp 2012; Messmer 2012 [b]).

Modern societies dependent on complex infrastructure are highly vulnerable to cyber-attacks (NW 07.08.2012). Beside the communication networks themselves, the power grid, railways, airports, power plants, industrial production facilities, and even buildings equipped with climatisation and communication systems depend on computers, software and communication networks and therefore display the same kind of vulnerability. The vision of networked, intelligent production systems based on standardized hardware and software components as well as standardized interfaces and protocols – as suggested by Siemens AG, the world leader in industrial automation (Schindler 2012) – let alone that of a networked universe of intelligent, communicating artefacts populating not only industrial facilities, but the space of our everyday life (Broy 2010), will greatly augment this vulnerability. Insecurity will acquire a new dimension. Digital media, once dreamed of as a liberating force, may turn into a nightmare.

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Conclusion

The almost complete absence of a comprehensive understanding of the multiple crises, as well as of a respective package of coordinated measures directed at its resolution, from the discourse of policy circles is a hardly avoidable observation. The crises' driving forces unfold and interact almost unchecked. Unless the many splintered counter-currents not only unite, but also create a vision of a more equitable social contract centred on the common good, and capable of becoming hegemonic, prospects of human security will remain dim. But even if that happens, their success will depend not only on political, but also on technological factors: without the fundamental reengineering of man-nature-metabolism already mentioned, a mankind counting almost ten billion members will not be able to survive on human terms. Democracy could develop historically only on the base of a certain human mastery over nature. Until now, the fruits of that mastery and, with it, democracy have been available to a privileged minority only. The technological terms of that mastery did not allow for their generalisation, let alone the universal distribution of their fruits. The kind of mastery over nature that is to be achieved with the fundamental reengineering of man-nature-metabolism will have to reconcile sufficiently stable and liveable natural conditions with a level of material supply that enables an equitable, and on this condition, democratic world society.

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