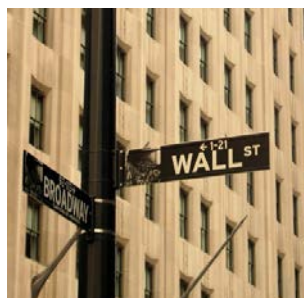




Sustainable Consumption Transitions Series Issue 1

SCORAI Europe Workshop Proceedings:
Sustainable Consumption During Times of Crisis
First Trans-Atlantic SCORAI Workshop
May 1, 2012, Bregenz, Austria



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Content	
Introduction	5
Growth vs. Degrowth	
Diversity in economics as a necessary condition for post-growth <i>Christoph Gran</i>	7
Towards a Systemic Understanding of Sustainable Consumption and Economic Growth <i>Michal Sedlacko et al.</i>	20
Sustainable Consumption in Central and Eastern Europe – a Survey <i>Ágnes Zsóka and Gyula Zilahy</i>	42
Discussant contribution: Growth vs. Degrowth <i>Felix Rauschmayer</i>	62
Discussion Report: Growth vs. Degrowth <i>Tullia Jack</i>	64
Beyond Growth: exploring the alternatives	
Healthy, wealthy and wise? <i>Christiane Ax and Friedrich Hinterberger</i>	67
Craft Economies in Japan: The Re-Emergence of Alternative Economies in a No-Growth Context <i>Stephen McCauley</i>	79
Socio-technical configurations for green growth <i>Harald Rohrer and Michael Ornetzeder</i>	89
Discussant Contribution: Beyond Growth <i>Tom Bauler</i>	102
Discussion Report: Beyond Growth <i>Christoph Gran</i>	105
From austerity to transformation: macro policies/ strategies	
Managing Cultural Dissonance in the Transition to a Postconsumerist Future <i>Maurie Cohen</i>	107
Austerity and economic crisis <i>Michael Redclift</i>	125
Institutional Change for Strong Sustainable Consumption <i>Joachim H. Spangenberg</i>	137
Discussant Contribution: From Austerity to Transformation <i>Antonietta Di Giulio</i>	151
Discussion Report: From Austerity to Transformation <i>Marlyne Sahakian</i>	154
Pathways for Change	
Happy sustainability as a lifestyle <i>Maria Csutora</i>	157
Pathways to Sustainable Living in Times of Crisis <i>Ralph Pietrowski et al.</i>	169
Social and solidarity based economy, what opportunities for sustainable consumption in times of crisis and beyond? <i>Marlyne Sahakian</i>	191
Discussant contribution: Pathways for Change <i>Ruth Kaufmann-Hayoz</i>	207
Discussion Report: Pathways for Change <i>Julia Backhaus</i>	209
Annex	212

Introduction

The problem

Research over the past four decades has demonstrated the limits of economic growth and the social and environmental problems associated with contemporary consumption-oriented lifestyles. Efforts to reform unsustainable patterns through development of cleaner production technologies and facilitation of different household decision-making processes have not lead to significant reductions in aggregate material and energy throughputs. At the same time, public policies, commercial inducements, and global media images continue to vigorously promote resource-intensive consumption practices. Meaningful transitions toward sustainable consumption require confronting existing consumerist culture and consumer models and formulating long-term visions based on systemic transformation.

The challenges and opportunities presented by crisis

Recurrent financial and ecological crises have triggered extraordinary responses from national and transnational governments, multilateral organizations, and central banks. However, it is questionable if and how much these events have instigated new public awareness about the systemic interconnections among growing resource scarcities, widening income disparities, increasing unemployment, pervasive institutional failure, and others. The current wave of instability prompts numerous questions about prevalent consumption patterns in affluent countries and holds challenges and opportunities for scholars and practitioners seeking to envisage more sustainable pathways.

Across much of Europe, austerity policies are prompting reductions in household consumption by, for example, cutting social welfare payments and increasing taxes. While this material downsizing has potential to lower certain sources of ecological stress, it is also emblematic of widening inequality, declining governmental capacity, and increasing political instability. In some especially hard-pressed countries we are already seeing adaptive responses such as the rediscovery of bartering and localized trading as ways to meet daily needs. Though public discontent is spreading, uncertainty remains about whether current forms of political expression will be sufficient to achieve systemic changes consistent with more sustainable consumption, and whether links will be made between activist movements and sustainable development communities. A striking prototype could be Japan, where economic growth has stagnated for more than twenty years and the recent tsunami-induced disasters have compounded the country's despondent economic mood. Indeed, one result may very well be a repackaging and relaunching of the growth paradigm.

The goal and main theme of the workshop

The ongoing financial crisis—and the flaws that it exposes in the current system of economic organization—signals a need to go beyond customary approaches for conceptualizing sustainable consumption and to envision how we might configure entirely new systems of consumption. This workshop will bring together an international group of researchers and practitioners for focused consideration of these challenges and opportunities.

From SCORAI to SCORAI Europe

Founded in North America and inspired by the European SCORE! Network (2005-2008), SCORAI is an international network of professionals working to address challenges at the interface of material consumption, human fulfilment, lifestyle satisfaction, and technological change. SCORAI hosted its first Trans-Atlantic workshop around the theme, "Sustainable Consumption During Times of Crisis" in Bregenz (Austria), on May 1, 2012. Following this successful event that brought together researchers from North America and Eastern/Western Europe, a session dedicated to SCORAI to present and discuss workshop outcomes with a wider audience took place within the larger European Roundtable for Sustainable Consumption and Production conference (May 2-4). In that session, participants unanimously agreed that creating a SCORAI Europe network would help strengthen the sustainable consumption community in Europe, both in terms of research and practice. Shortly afterwards, SCORAI Europe was launched. Its goal is to support a community that contributes forward-thinking, innovative research in the area of sustainable consumption, while also bridging academic research with mainstream thinking and policy-making. SCORAI Europe will work closely with European Roundtable for Sustainable Consumption and Production (ERSCP) and our sister SCORAI organization in North America, as well as other research networks that are focused on the challenges of addressing the society-environment nexus from a consumption perspective.

To learn more about SCORAI, please visit: <http://www.scorai.org>, where you will find a dedicated web page for SCORAI Europe activities.

To become a member of SCORAI Europe, please join the SCORAI EUR listserv: <http://scorai-eu.opendna.com>.

For more information on SCORAI Europe, please contact: scoraieurope@gmail.com.

Growth vs. Degrowth

Diversity in economics as a necessary condition for post-growth

Christoph Gran

Carl von Ossietzky Universität Oldenburg and AK Real-World-Economics

Introduction

The promise of rising prosperity fuelled by continued economic growth still serves as the dominating paradigm, not only in the so-called highly industrialized countries (HIC) but globally. The vision has become an ubiquitous concept in politics, business, the media and in economics, where economic growth is stylized as the main economic and political troubleshooter for almost any problem.

In recent years increased criticism of the pursuit of an ever-expanding economy as the main economic and political goal suggests that this has to be reconsidered and that new concepts for development are required.¹ Yet most politicians cling to the myth of the next economic boom lurking just around the corner as an easy way out of the current economic crisis. This situation, however, is highly problematic: crucial issues for society such as social security, public debt or pensions are based on the assumption of ever increasing GDP levels and fall apart in the absence of growth.² Assuming that a non-growing GDP may very well become a probable case, new concepts are absolutely essential, otherwise social cohesion is in danger. But does economic theory, including political consulting, provide any concepts to handle a situation with a constant or contracting GDP?

The main thesis of the paper is that mainstream economic theory, by focusing only on the special case of growing economies, structurally hooks society on growth. Opening up economics to concepts that imply limits to growth, for example ecological economics, is therefore a necessary condition to enable society to adapt to the post-growth circumstances.

The paper is structured as follows: part one focuses on the question whether further economic growth is still a desirable and realistic policy-option. In part two the contribution of mainstream economics delivering the intellectual basis of the growth path is highlighted, followed by an introduction to an alternative economic approach. The conclusion summarizes the paper and gives an outlook to further steps.

¹ Whether the arguments formulated in this paper are transferable to the global south goes beyond the scope of the paper. With the concepts of “buen vivir” or “sumak kawsay” a Latin-American version of the debate with interesting overlapping contents is taking place.

² Throughout the paper growth and GDP growth are used synonymously.

Beyond growth?

The critique of economic growth is quite broad and probably as old as the idea of growth itself. Because it inhabits many different dimensions, an extensive debate goes beyond the scope of this paper. As a first approach, the critique can be structured around four different dimensions:

1. Is economic growth delivering what it promises?
2. Is economic growth still tolerable from an ecologically perspective?
3. Is economic growth the right means to enhance welfare in HIC?
4. Is continued economic growth feasible?

Economic growth is disappointing

In November 2009 Chancellor Angela Merkel gave her first government declaration as the elected leader of the conservative-liberal German government. She stated that:

„Wachstum zu schaffen, das ist das Ziel unserer Regierung. [...] Ohne Wachstum keine Investitionen, ohne Wachstum keine Arbeitsplätze, ohne Wachstum keine Gelder für Bildung, ohne Wachstum keine Hilfe für die Schwachen. Und umgekehrt: mit Wachstum Investitionen, Arbeitsplätze, Gelder für die Bildung, Hilfe für die Schwachen und – am wichtigsten – Vertrauen bei den Menschen.“³

In a nutshell this means that growth is the essential strategy of the government to foster investment, jobs, education, help for the poor and confidence. The list can be extended at random, for instance the reduction of debt or the mitigation to climate change. In the book *Managing Without Growth*, P. VICTOR analyses different promises of growth and comes to the conclusion that since 1980, growth *“has not eliminated unemployment or poverty. The distributions of income and wealth have become more unequal, economic growth has exacerbated, not been a panacea, for environmental problems...”* (Victor, 2008: p. 168)

Authors⁴ from a broad political spectrum come to similar conclusions stating that the effectiveness of economic growth is questionable. To clarify; growth can indeed correlate with certain positive outcomes - it certainly did during the post-war era, but for the last 30 years the correlation becomes weaker, sometimes negative – as in the example of global CO₂-emissions, which in 2007 were *“almost 40 per cent higher than they were in 1990”* (Jackson, 2009: p. 71).

It would seem that growth is not always the appropriate strategy; indeed with regard to climate change, a closer look reveals quite the contrary.

Economic growth is ecologically harmful

Since the beginning of the industrial revolution, global GDP has been growing tremendously, more than 20-fold in the last 100 years alone. At the same time, both the inputs of material and energy into the economic system and the corresponding outflows of waste and emissions grew (Krausmann et al., 2009), augmenting the environmental

³ <http://www.bundesregierung.de/Content/DE/Regierungserklaerung/2009/2009-11-10-merkel-neue-Regierung.html> [accessed 30 May 2011].

⁴ For example (Bartmann, 1996; Daly, 1996; Thomas, 2000; Hinterberger et al., 2009; Miegel, 2010; OECD, 2011).

pressures, leading to phenomena like the massive extinction of species and climate change. To avoid the devastating consequences of unmitigated climate change the Intergovernmental Panel On Climate Change (IPCC) calls for an immediate and radical reduction in global emissions (Pachauri and Reisinger, 2007). Following Tim JACKSON's arguments (Jackson, 2009), the required technical improvements to decouple GDP and greenhouse gas emissions seem quite unrealistic. The rebound effect and rising population make it almost impossible to reduce emissions on the scale necessary. As a result the likelihood of unchecked climate change increases. The International Energy Agency's (IEA) chief economist Fatih Birol seems to share this view, stating that in the face of all-time record rising emissions in 2010 the possibility of holding global warming to safe levels is likely to be just *"a nice Utopia"*⁵. Of course there is always the possibility of surprising technical improvements, leading to the needed decoupling, but, given the actual patterns, scepticism is recommended. The implication is bitter at a first glance: if ecological sustainability is desired, GDP should not increase. Hereby the Green New Deal – the core strategy of RIO +20 – is put into a new perspective. Green Growth denies the limits of a decoupling strategy and pretends additional consumption can be sustainable. Another view seems more plausible: sustainable consumption means less consumption.

For a modern society this seems odd. Also from its underlying economic perspective where more goods stand for more choices and possibilities to foster welfare. Here a new perspective is helpful. What if a growing GDP – after a certain level – is not increasing welfare?

GDP is not equal to welfare

Many authors (Binswanger, 2006; Daly and Cobb, 1989; Layard, 2005; Victor, 2008; Abdallah et al., 2009; Diefenbacher and Zieschank, 2010) have shown that for rich countries the positive correlation between GDP and happiness fades out. Figure 1 is an example for the United States showing the decoupling of income and happiness for the United States on an individual level.

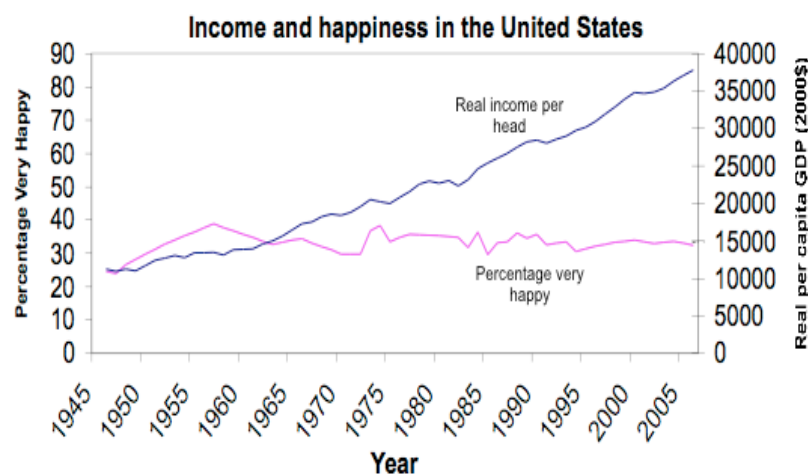


Figure 1: Income and happiness in the United States⁶

⁵ <http://www.guardian.co.uk/environment/2011/may/29/carbon-emissions-nuclearpower> [accessed 30 May 2011].

⁶ Source: Layard (2005).

BINSWANGER (2006) gives an explanation. He describes how the “*treadmills of happiness*” prevent a rising income from making any substantial contribution to individual happiness, for example the positional treadmill: individuals compare their status to that of their neighbours, colleagues or family members – changes in income do not make individuals happier, once all income rises. Another explanation is provided by the hedonic treadmill, which argues that individuals become accustomed to their consumption level, constantly generating new demands which then leads to the multi-option treadmill: as a result of growth consumers have to decide between a huge variety of products. Since time is limited this leads to a tyranny of consumption and frustration. Altogether the treadmills prevent rising GDP levels from enhancing welfare. As a promising perspective for a post-growth society, it is not the level of income then, but rather other factors like the distribution of income within society that are crucial (Wilkinson and Pickett, 2009).

It is not only from the individual perspective that GDP is not the right indicator but also from a macro perspective. DIEFENBACHER and ZIESCHANK developed the National Welfare Index (NWI), a successor of the Index of Sustainable Economic Welfare (ISEW) and the Genuine Progress Indicator (GPI), which take into account the fact that GDP omits central aspects of welfare, such as income distribution or the condition of the environment. Taking these and other factors into account, a decoupling of GDP and welfare can be shown, i.e. an increase in GDP is not automatically connected to an increase in welfare. The first three arguments dealt with the effectiveness of GDP, arguing that growth was not always the right tool. The last point states that capitalist societies sooner or later run out of growth. Keeping in mind that almost crucial parts of society depend on growth, severe consequences arise.

The end of growth

Three arguments can be used to show the implausibility of further growth. One is *statistical*, the second argument is rooted in the history of economic thought and the third argument takes a look at the resources needed for growth. Altogether one has to be very optimistic – if not a dreamer – to believe in further growth for HIC. In other words: the following data would seem to indicate that we are approaching the end of the growth era; Indeed, with growth rates near zero or even less, we might already be living in a post-growth era.

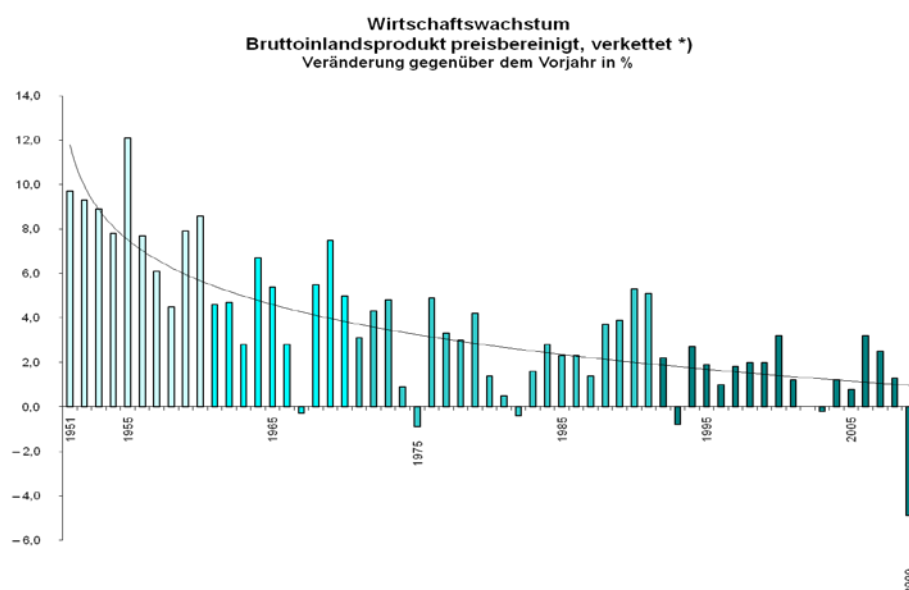


Figure 2: Growth rates GDP, Germany 1950-2008 (price adjusted, chain-linked)⁷.

Figure 2 shows, representative for a HIC, the growth rates of the German economy for the last 60 years illustrating that the relative rates approach asymptotically towards zero. The explanation is easy: to grow at a constant rate – let's say three per cent per year – exponentially growing absolute increments were necessary, which is not the case. On average the German GDP grows around €20 billion per year (Diefenbacher and Zieschank, 2010: p. 22) which means that in the long run the growth rates approximate zero, a relationship that was quite familiar to all classical economists from A. Smith over D. Ricardo or J.S. Mill up to J.M. Keynes. They assumed that because of declining profit rates the accumulation process would come to an end sooner or later (Luks, 2001). The question was not if economic growth was coming to an end – that much was clear – but rather when this would happen and whether people would be scared of it or embrace it.

The last reason for the implausibility of growth is taking into account that prosperity as it is known today is based on the occurrence of cheap resources, especially oil. Peak oil is not somewhere in the future, but now (Heinberg, 2005; Murray and King, 2012). Certainly substitutes for oil and other resources can be found but regarding the entropic intensity, renewable resources score by far not as well as oil, which makes it unrealistic to sustain the level of consumption and production the global economy has reached. Furthermore, the short supply of scarce resources combined with ever increasing demand in developing countries might cause such huge price increases that economic activity will probably cool down.

Altogether, continued economic growth seems rather unrealistic: for modern societies addicted to growth, this is certainly not good news.

To sum up the critique: it is questionable whether economic growth is the adequate tool for meeting essential goals of society. Furthermore, evidence suggests that HIC seem full-grown with a high probability of low or negative growth rates. Given the difficulty of decoupling GDP and resource consumption, non growing or declining GDP levels would seem like a promising direction to follow in order to meet the requirements of the IPCC.

⁷ Source: Federal Statistical Office Germany.

Bearing in mind that the correlation between GDP and welfare is questionable, GDP-independent strategies [including $\Delta Y \leq 0$] need to be developed, supplemented by the introduction of new (welfare) indicators.

Although evidence is strong, most policies still focus on GDP growth. One reason can be found in mainstream economics, which provides the foundation of growth based development. The thesis introduced here is that post-growth development can not be pursued until economics opens up and gives more space to heterodox theories, for example ecological economics to develop perspectives which are not dependent on growth.

The role of mainstream economics

"The ideas of economists and political philosophers, both when they are right and when they are wrong, are more powerful than is commonly understood. Indeed the world is ruled by little else. Practical men, who believe themselves to be quite exempt from any intellectual influences, are usually the slaves of some defunct economist."(Keynes, 1936, chapter 23)

Looking at the role of economics regarding the ongoing financial crisis, it becomes clear that the prevailing world view is part of the problem: the belief that free markets are efficient and lead to the best results once they are unleashed have provided the intellectual basis for politics at least since the late 70s, early 80s. W. STREECK, Managing Director of the Max Planck Institute for the Study of Societies (MPIfG), points out that the efficiency of markets is part of most politicians and citizens world-view, preparing the ground for the crisis. An earlier questioning of mainstream economic theories, especially when they serve as guiding principles for societies, might have prevented the present crisis (Streeck, 2009).

Concerning growth the situation is quite similar. Here, it is not the belief in efficient markets but the faith in unlimited economic growth which is *"both possible and desirable"* (Kerschner, 2010: p. 1) and is persistent in most people's minds. (Welzer, 2011).

Although certain elements of the link between growth and welfare, for example the focus on increasing exports, can be found in mercantile thinking, the systematic analysis began with Adam Smith in the late 18th century. He described the importance of the division of labour and industrialization for the wealth of nations and emphasized the importance of individual self-interest as a precondition for market economies to deliver prosperity (the invisible hand). This worldview was further developed by David Ricardo who elaborated the central importance of free trade; by specializing on certain products and trading them with other countries more goods and consequently more welfare were created. Altogether three central elements of modern economics can be identified which led to the central position of continued economic growth: selfish individuals acting in a market economy with the division of labour and free trade as leading concepts. The resulting production and exchange of more and more goods is thought to improve welfare at least since Adam Smith and is seen as a synonym for progress. It is this causal relationship that is omnipresent in politics and most economic theories down to the present day. Not only in neoclassical economics, which began to unfold in the late 19th century, but also in Keynesianism.

The mechanistic foundations of economics

In order to understand just how economics influences society's belief in growth, a look at the emergence of neoclassical economics is helpful, especially the orientation towards physics (Mirowski, 1991) and the attempt to become a hard science. Looking closer at the theory of general equilibrium (TGE), a core piece of neoclassical economics, reveals central points of criticism. The TGE serves as the mathematical proof of Adam Smith's invisible hand proving that the individual maximization of utility in a market economy leads to an optimal result (Mas-Colell et al., 1995). The concept of equilibrium is symbolic for neoclassical economics following the tradition of mechanistic philosophy, which was very popular among *"scientists and philosophers until well into the last half of the 19th century"* (Georgescu-Roegen, 1977). The intrinsic problem here is that the theory of general equilibrium inhabits a mechanistic view that leads to the structural exclusion of natural foundations and an overemphasis of technology. Why is that?

First of all the mechanistic perspective underlying the general equilibrium states that every process is predicable and reversible if only there were enough information (Laplace's demon). By integrating the laws of thermodynamics into economics (Georgescu-Roegen, 1971) it can be deduced that every process using energy and material is unidirectional and not reversible. BAUMGÄRTNER ET AL. (Baumgärtner et al., 2001) apply this conclusion to the industrial production of consumer goods, stating that every production including fossil fuels inevitably generates (high entropy) waste materials. With this concept of joint production they emphasize the structural blindness of mainstream economics, where the main focus lies on the circulation of consumer goods and money as its main category.

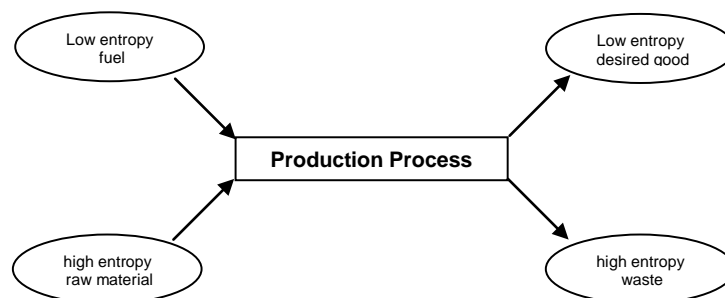


Figure 3: Joint production⁸

From a thermodynamical point of view the perspective changes drastically highlighting the natural foundations of the economic process. External effects appear as structurally part of the production process, revealing the systemic negation and violation of natural boundaries. From this perspective it becomes clear that the ex-post internalization of external effects is not at all sufficient.

The TGE also illustrates the omnipresence of physics in neoclassical economics with attendant consequences for society. Concepts like equilibrium, monotonicity or elasticity are all metaphors borrowed from mechanical physics. The ramifications for society become clear by looking first of all at the monotonicity of preferences, which states that more (of a good) is always better (Duffie and Sonnenschein, 1989), hereby implying a strong consumerist attitude. One real-world consequence can be seen in daily life. More of a good, namely, more income (GDP), suggests a better life. Four per cent growth is better than three per cent, regardless of the generation or distribution of the additional income, regardless of the questionable correlation between well-being and income. Another

⁸ Source: (Baumgärtner et al., 2001: p. 366).

potentially problematic assumption is the elasticity of substitution between natural and man-made capital. As SOLOW underlines, it should not be less than unity if an economy is to grow forever (Solow, 1974): the so called weak sustainability. This belief in technological solutions is part of the discourse on sustainable development which inevitably leads to the dominating technical optimism. A good example is the current campaign *"Growing Sustainable"*⁹ by the Initiative for a New Social Market Economy (INSM), a market-orthodox think-tank. Showing a polar bear sitting on an ice float they state that *"less CO₂ needs more growth"* because *"technical progress helps saving resources, reduces energy consumption and makes environmental protection affordable"*.

Having looked at some central assumptions of neoclassical economics, the contribution of economic theory to the development of society becomes obvious: a structural ignoring of natural boundaries combined with a strong belief in technology. But does that mean economics is not able to react to the critique raised in part one of the paper?

Critique of growth and mainstream economics

This section deals with whether mainstream economics is able to react adequately to the critique raised in chapter two. Firstly, regarding the end of growth, the orientation on physics is problematic: by formulating putatively all-time valid concepts, economics became a mathematical science, out of context from historical, cultural or ecological circumstances (Manstetten, 2002). Growth became an *"axiomatic necessity"* (Georgescu-Roegen, 1977: p. 266) playing a central role in informing policy, especially through the widespread use of Computable General Equilibrium Models (CGE-Models). This way the described structural negation of nature and the faith in technological solutions are fed into society. The handling of the current transition into post-growth times not only seems impossible from this point of view: economics is structurally producing the societal dependence on growth. Additionally, by cutting off the historical roots, classical reflections on the long-term limits to growth were abandoned (Luks, 2001). As a result, not only is modern economics incapable of providing any substantial analysis, even worse: it claims to have found the sole explanation of human behaviour, thus preventing other (heterodox) approaches from being incorporated into the research and teaching of economics. The orientation on 19th century physics has led economics and with it western society into a dangerous dead-end street not capable of reacting adequately to the current historical circumstances.

Secondly, with regard to the focus on GDP as the main strategy for development and indicator of progress, it becomes clear why, despite all persisting criticism, no other perspective is possible. The explanation can be found in what DALY described as the preanalytical vision (Daly, 1996). This concept, originally called vision by SCHUMPETER (Schumpeter, 1965), describes a basic set of assumptions or worldview everybody has, before the analysis starts. Focusing on efficiency and utility maximization using monetary categories as the main describing category ignores the described connection between industrial production, depletion of the resources and pollution, in other words the systemic violation of natural boundaries. The focus is on the economy with a growing GDP as the main indicator of success. Nature is not part of the market system from the very beginning and can, if at all¹⁰, be internalized ex post through adequate prices. In this logic

⁹ <http://www.insm.de/insm/ueber-die-insm/INSM-Anzeigen/Anzeigen-Wachstum-2012.html> [accessed 6 March 2012].

¹⁰ Various authors criticise the limits of this approach. Compare (Bruns, 1995; Bartmann, 1996; Daly, 1996; Common and Stagl, 2005).

natural limits are secondary and growth can continue forever. This explains why the focus remains on GPD – at the expense of the ecological foundations.

Such one-sidedness becomes obvious looking at current textbooks, for example G. MANKIWS Principles of Economics (Mankiw, 2008). The word *growth* appears 87 times, whereas *ecology* not at all. Growth is described as one central category of an economy, without discussion as to whether it is the right tool for achieving certain goals like full employment, fair incomes or sustainable development. A reaction to the critique raised in part one is not visible, limitations to growth is not even seen as a problem.

To sum up, prevailing (mainstream) economics is delivering the theoretical base for the societal belief in continued growth combined with an unquestioned faith in market and technical solutions. One reason can be found in the orientation towards physics that economics has taken. Research is one-sided not only delivering the basis for society's belief in continued growth but preventing other theoretical approaches, for example ecological economics, from becoming part of the agenda. 20 years after the Earth Summit in Rio concepts like green growth, technical engineering or emissions trading still dominate the discourse. The massive extinction of species and the ongoing climate change, both irreversible processes, are being tackled with instruments coming from mechanistic economics (Pigouvian tax, certificates etc.) suggesting that technical solutions, in other words an internalization of external effects, render the solution. There is no doubt that these concepts can be part of a solution but only up to a certain degree. That the reliance on growth might be part of the problem is not being discussed, neither in economics nor in politics. On the contrary: thousands of economists are (mis)educated year by year repeating the prevailing dogma of growth forming the future politicians, businessmen, policy advisers, journalists et cetera. Here, Einstein's timeless quotation shows the dilemma we are in: *"We can't solve problems by using the same kind of thinking we used when we created them."*

Alternatives

It has been argued that there is a strong connection between society's belief in the benefits of continued economic growth and economics, impeding an adequate reaction to the above formulated critique. Therefore restructuring the research agenda and the curriculum of economics is a necessary condition for society to abandon its dependence on growth and to be able to function in a post-growth era. Ecological Economics¹¹ seems to be an adequate answer to the critique raised in part one of the paper¹² and will therefore be introduced in more detail at the beginning of this chapter. The second step illustrates how the history of economic thought not only gives interesting insights into a post-growth perspective but also helps as a means for self-reflection and must therefore be part of the curriculum. Finally, the outlines of a macroeconomic model are presented as an example of how new indicators and alternative policies need to be brought into economics.

Adjusting the analytical framework

In the last part of the paper the blindness of mainstream economics (including Keynesianism) towards nature was highlighted. It was described how the belief in

¹¹ For example (Georgescu-Roegen, 1971; Daly, 1996; Common and Stagl, 2005).

¹² The consideration of other theoretical approaches like Postkeynesianism or Evolutionary Economics goes beyond the scope of this paper, but might nevertheless lead to a productive restructuring of economics.

technical solutions is part of economics and consequently of societal approaches to solving the prevailing ecological crisis. Broadening the analytical framework of economics with regard to the interaction of the economic and the ecological system is therefore mandatory to overcome both the structural negation of natural boundaries and the technological optimism. A promising approach can be found within ecological economics with H. DALY'S metaphor of a *"full world"* (Daly, 1999). It illustrates that the economy can only expand until it reaches the natural limits and underlines the significance of the preanalytical vision. It is important to remember that mainstream economics sees the ecosystem as a subsystem of the economic system. While the focus is on the production of goods and services and the analysed unity is money (GDP), nature is – if at all – ex post internalised into the market. Combined with an elasticity of substitution between natural and man-made capital not less than unity infinite growth is possible. Ecological economics takes a different approach: here the economic system is embedded into the ecosystem, natural boundaries are structurally included. As the world is limited, the economic system sooner or later reaches its natural limits leading to a *"full world"*. Combined with a certain technological pessimism (elasticity of substitution between nature and capital less than one) endless growth is obsolete. Consequently the focus is not on monetary flows but on (stocks and) flows of matter and energy from one system to the other. By using the analytical framework of ecological economics the focus on GDP-growth is abandoned. Instead the perspective of a development within the natural limits of the ecosystem is taken.

History of economic thought

Theoretical diversification by including present theories like ecological economics into the curriculum is not enough and must be accompanied by the study of the history of economic thought. It is helpful for two reasons:

First of all, there are many treasures to be found in the history of economic thought. As LUKS (2001) describes, all classical economists from Smith to Keynes were aware of the end of growth. The question was whether they would be afraid of it or embrace it, like J.S. Mill and J.M. Keynes who have a positive attitude to such a state. Studying their texts might be instructive for economists and society and can give useful insights into the direction society can take in the current era of low growth rates. A good example is KEYNES' essay on The economic possibilities for our grandchildren: he describes his vision of our time, where 3 hours a day or 15 hours a week¹³ should be enough to *"to satisfy the old Adam in most of us!"* who *"will be so strong in us that everybody will need to do some work if he is to be contented"* (Keynes, 1931: p. 369). From his point of view the main challenge lies in using the spare time wisely: *"I see us free, therefore, to return to some of the most sure and certain principles of religion and traditional virtue-that avarice is a vice, that the exaction of usury is a misdemeanour, and the love of money is detestable, that those walk most truly in the paths of virtue and sane wisdom who take least thought for the morrow. We shall once more value ends above means and prefer the good to the useful. We shall honour those who can teach us how to pluck the hour and the day virtuously and well, the delightful people who are capable of taking direct enjoyment in things, the lilies of the field who toil not, neither do they spin"* (p. 371).

Secondly, by looking at the roots of the discipline, economists will become aware of the limits of the prevailing doctrine. The history of economic thought is characterized by ever

¹³ A contemporary publication of the New Economics Foundation recommends 21 hours a week (Coote, 2010).

changing theories and methods. The unidirectional approach modern economics has developed into is misleading: the marginal, neoclassical framework is only one among many others. A vivid science accepts all kinds of theories and looking at its own history broadens the horizon – an essential quality for economists – potentially leading to an open-minded attitude where problems and not methods are central.

Macroeconomic alternatives: first steps

The challenge lies in finding answers to the question, how society must develop to function on a sustainable level and which indicators can measure such a state. Concerning the GDP it can only serve as a first approach, as SCHNEIDER ET AL. put it: *“what happens to GDP is of secondary importance; the goal is the pursuit of well-being, ecological sustainability and social equity”* (Schneider et al., 2010: p. 512).

From a macroeconomic point of view there is an urgent need to develop models implying these indicators and mapping possible perspectives of steady-state and/or degrowth development¹⁴. One approach is presented by the Canadian economist P. VICTOR (2008) who, in his book *“Managing Without Growth – Slower by Design, not Disaster”*, explores different scenarios of a transition to a post-growth society. Lacking comprehensive data he uses *“GDP as the measure of the size of an economy”* (p. 203). He shows how under certain conditions like the radical shortening of the working week and a shift in investment from private to public goods a stable development with a non growing or even declining GDP is possible. Since the focus is still on GDP it is only a first approach to the macroeconomics of post-growth, more research integrating the ecological footprint¹⁵ or indicators of well-being is pending. But, for illustrating that a stable development is possible with a constant or contracting GDP and exploring the yet unknown post-growth world it is indispensable.

Conclusion

This paper has argued that society is hooked on economic growth despite the fact that its deficits are becoming more and more obvious and although the era of continued growth is coming to an end. It was shown that one reason for this dependency lies in economics as a science which delivers the theoretical foundations of the ongoing societal belief in economic growth and spreads this doctrine into society. For society to be capable of adapting to a post-growth reality the underlying economic doctrine has to diversify and integrate approaches like ecological economics and the history of economic thought both into the curriculum and into research programmes. It is important to understand that the foundation of economics – utility-maximising individuals acting in a market economy with the division of labour and free trade as main categories – led to continued economic growth becoming one of the main tenets within society. The ongoing economic crisis is at the same time a crisis of non growing market economies including the economic foundations society is leaning on. Therefore approaches beyond growth, markets and technological solutions seem promising, for example ecological economics, the rediscovery of the commons (Ostrom et al., 1999) or the regionalisation of global value chains resulting in the decommercialisation of daily life (Paech, 2012). It's the leisure time, beyond consumer goods and the struggle for status, which has to be filled with life.

¹⁴ For example (Kerschner, 2010; O'Neill, 2011).

¹⁵ The ecological footprint stands for an “ecological accounting” comparing the human demand for resources with the capacities of the ecosystem. <http://footprintnetwork.org/de> [accessed 23 March 2011].

Certainly a challenge but not impossible to cope with. It looks like Keynes' grandchildren will have to live the 15 hour week – in the end they might even enjoy it.

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Towards a Systemic Understanding of Sustainable Consumption and Economic Growth

Lessons from Different Consumption Areas

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Introduction

When the Brundtland report popularised the concept of ‘sustainable development’ in 1987, it also emphasised the need for developing more sustainable consumption patterns: “Sustainable development requires that those who are more affluent adopt lifestyles within the planet’s ecological means” (WCED, 1987: 9). The commitment to sustainable consumption has been confirmed at the 1992 Earth Summit in Rio and in a number of programmes initiated by international organisations and governments at all levels. It would seem that government action on sustainable consumption can be characterised by focus on the individual consumer (perhaps using misleading models of consumer behaviour) and on improving environmental efficiency of consumption rather than addressing scale issues or the social context and systemic dimensions. Over the last decade several strands of research on sustainable consumption (particularly sociological and anthropological research which has until now not been influential in policy making) have provided increasing amounts of evidence which suggests that this dominant policy approach might be the reason for the relatively modest success of sustainable consumption initiatives.

To contribute to the discussion we are testing the usage of systems thinking methods for the purpose of knowledge brokerage between science and policy aimed to help ‘manage the contradictions of sustainable consumption and economic growth’. The project *Linking Research and Policy Making for Managing the Contradictions of Sustainable Consumption and Economic Growth* (acronym RESPONDER) is one of the knowledge brokerage (KB) projects funded by the European Commission through the Seventh Framework Program for Research and Technological Development (FP7) to increase use of available evidence and scientific expertise in sustainable development and environmental policy making. The unique approach of RESPONDER lies in the attempt to bridge not only the science–policy gap but also the ‘pro-growth’–‘beyond growth’ discourse gap (i.e. we are linking four communities: ‘pro-growth’ scientists, ‘pro-growth’ policy makers, ‘beyond-growth’ scientists and ‘beyond-growth’ policy makers). To achieve this, the project utilises systems thinking to exchange knowledge about problems in which concerns of sustainable consumption and economic growth come together. We suggest that the representations of system structure, visualised in the form of causal loop diagrams, help to better understand

the problems of sustainable consumption in several ways. This paper aims to present the method of participatory systems mapping, adapted for the purposes of the project, and to demonstrate to the reader several of these ways, or 'types of insight' as we term them, resulting from the use of the visual tool of causal loop diagrams for understanding the links between system structure and system behaviour in problems related to sustainable consumption.

The next section introduces the discursive context of the RESPONDER project and presents our definition of sustainable consumption. The third section describes how systems thinking can be useful in a knowledge brokerage context and describes our objectives and approach. The method of participatory systems mapping (PSM), developed for the purposes of the project, is explained and placed in the organisation of project's tasks and events. The fourth section provides a theoretical framework of our CLD usage and on five different ways of engaging with CLDs in detail demonstrates the different types of insight produced. The fifth section is devoted to conclusions.

The competing discourses of sustainable consumption

Over the 1990s and 2000s a number of programmes on sustainable consumption has been initiated by international organisations such as UN or OECD as well as by a number of national governments and the European Union (Fuchs and Lorek, 2005; Berg, 2011; Fuchs, forthcoming). Most of these programmes share the same basic understandings and, contrary to the call of the Brundtland Report, are quite far from any serious challenge to the lifestyles of the affluent. First of all, sustainable consumption is not seen to be in contradiction with continued economic growth in the rich countries, and there is no mention of reserving consumption growth for poor people. As UNEP states in 2000: "sustainable consumption is not about consuming less, it is about consuming differently, consuming efficiently, and having an improved quality of life" (UNEP and CDG, 2000). The policy documents on sustainable consumption stay within the framework of the ecological modernisation discourse that emphasises win-win strategies: consumption can become more sustainable, new business opportunities emerge, and quality of life improve, all at the same time. This should be achieved by increasing the resource efficiency of consumption, encouraged mainly by market-based policy measures. Labelling of green products combined with information campaigns should help consumers to make informed choices and thus make it profitable for business to provide green products. Simultaneously, environmental taxation of resources, in particular energy and water, and of emissions of polluting substances could promote resource efficiency and reduce pollution. The actual toolbox included other instruments like direct regulation (bans on problematic substances, tightening of building regulations) and subsidies to consumers, e.g. for insulation, but direct regulation was not promoted as a part of the win-win repertoire (Christensen et al., 2007). Politically, it was an attractive strategy to translate the alleged consumer sovereignty in free markets to consumer responsibility: if consumption does not become more sustainable, consumers can be blamed. The focus on improving the efficiency of consumption has been termed 'weak sustainable consumption' (used by Fuchs and Lorek, 2005, as a differentiation from 'strong sustainable consumption' which focuses on the pursuit of fundamental shifts in consumption patterns and reduced levels of consumption in the rich countries).

Considering the results of the first twenty years of consumer-oriented environmental policies, results have surely been achieved – nevertheless, there are grounds for criticism. For instance, the combination of compulsory energy labelling, energy taxes and information campaigns has increased the efficiency of electrical appliances significantly,

and various measures have reduced heat consumption per square meter. At the same time, however, critics point to an increase in the number of appliances and the area of heated space that counteract the achieved energy savings. In other cases, like transport and travelling, it has not been politically acceptable to follow the 'recipe': since mobility is considered decisive for economic growth and personal freedom, economic instruments have not been applied effectively, and energy consumption has increased considerably. Many areas of consumption are not addressed by environmental policies, and consumer-oriented environmental policies have not in any way questioned the continued rise in material living standards, the ongoing renewal of consumer goods, or the costly individualisation of consumption.

A new and related field of research developed over the last 20 years and interacted with policy making (for anthologies see e.g. Princen et al., 2002; Jackson, 2006; Reisch and Røpke, 2004). It has collected knowledge on environmental impacts of consumption, with the consumption clusters of food, mobility and housing identified as having particularly large impacts (Hertwich, 2006). A lot of research applied an individualistic perspective and concentrated on the understanding of consumer behaviour, trying to explain the attitude-behaviour gap and investigating the results of various interventions like taxes, eco-labels and information campaigns. Some research saw a solution in the identification of different consumer groups and lifestyles and addressing them in different ways. Nevertheless, under 'green consumption' it is perfectly possible for consumers to demonstrate their 'greenness' by carrying out a large number of token green practices and simultaneously increase their environmental impacts considerably. Large segments of consumers have developed a sort of 'compartmentalisation' where only some categories of consumption are considered in environmental terms, while much ordinary consumption and increases of normal standards go unnoticed.

Concurrently with the individualistic-oriented consumer research, more sociological and anthropological perspectives were developed (Gronow and Warde, 2001; Southerton et al., 2004). Here the embeddedness of consumption activities within wider social, economic and technological frameworks was emphasised, and the interplay between systems of provision and consumption practices was explored. So far this strand of research has not been influential in policymaking, but this may be about to change. Maybe the limited results of the win-win strategies in terms of the overall environmental impacts of consumption have contributed to a search for broader approaches. The individualistic-oriented research increasingly tries to take 'context' into account (Thøgersen and Grønhøj, 2010), and sociologists try to develop more policy-oriented advice that goes beyond the traditional ABC (attitude-behaviour-choice) approach (Shove, 2010). Simultaneously, bottom-up experiments with more sustainable consumption and production patterns emerge and call for studies on the possibilities for scaling up (Seyfang, 2009).

Concepts which roughly correspond to the directions of these strands have been developed also in other sustainability literatures. It is possible to organise the literatures into a discourse focusing on the individual and 'weak' sustainability (with concepts of ecological modernisation, green consumption (Princen et al., 2002), responsible consumerism or virtuous circle (Hobson, 2002: 132)), a discourse focusing on the individual and 'strong' sustainability (e.g. voluntary simplicity), and a discourse focusing on the social/systemic dimensions and 'strong' sustainability (de-commodification or bioregionalism (Sale, 1985)). The RESPONDER project can be seen as tied to the last discourse. First of all, the challenge of sustainable consumption is considered in a global perspective where the focus on improved efficiency in consumption is replaced by 'strong sustainable consumption'. Sustainable consumption is thus characterised along three objectives: a reduction of the overall consumption of resources to steer the socioeconomic

system away from natural limits; the ethical challenge of redistribution of resource appropriation from rich to poor within and between nations; and the striving to achieve well-being, quality of life or a 'good life' (Buen Vivir) (see Scholl, 2011). Second, consumers are not only considered in the role of buyers on a market, but also as practitioners that carry out meaningful practices and, at the same time, fulfil roles in broader socio-technical systems. Nevertheless, we do not push for a specific systemic understanding, but rather expect that the mapping exercises – even though constrained by the language of CLDs – expose a plurality of systemic aspects to facilitate policy-relevant learning.

Operationalising systems thinking in the context of knowledge brokerage: the RESPONDER method

Systems thinking is a discipline developed from feedback concepts of cybernetics and servomechanism engineering theory (Senge, 1990). It provides a framework for holistic thinking while addressing complex societal issues. The prime of systems thinking is about seeing 'wholes' instead of 'parts', making sense of interrelationships between system components to understand what drives dynamic behaviour. Richmond (1993) advanced a set of critical thinking skills which cater for more holistic policy-making processes, including: i) dynamic thinking (the ability to deduce dynamic behaviour patterns rather than focusing on events), ii) closed-loop thinking (the ability to think in feedback terms leading to recognition of process interdependencies and endogenous causes of systemic change), and iii) operational thinking (the ability to understand the physical processes and 'how things really work').

Approaches involving clients in systems thinking, applied since the 1970s, have over recent years evolved into, e.g., group model building (Vennix, 1996) and mediated modelling (van den Belt, 2004) which enable a participatory dimension in systems thinking and system dynamics modelling. Since the end of 1960s, and particularly since *The Limits to Growth* (Meadows et al., 1972), systems thinking has had a rich history in areas of sustainable development, natural resource management and ecological economics, with increasing usage in participatory settings in the context of public policy making in recent years (e.g. Hare et al., 2003; FLUF, 2010; van den Belt et al., 2010). While providing structured platforms for active engagement of inter-organizational stakeholder groups in policy and decision-making processes, these methods foster co-production of knowledge and group learning as outcomes of the modelling process (Videira et al., 2009). They constitute settings which enable deliberation among participants and stimulate the development of critical thinking skills, such as the recognition of interconnections and feedback processes. In the area of sustainable consumption, the importance of systems thinking has been increasingly recognised over the last years (see, e.g., Klingert, 1998; Geels et al., 2008; Timmer et al., 2009a, 2009b; Mont and Power, 2010; Soderquist, 2010; Prinett, 2011). Nevertheless, as of now, a thorough application of systems thinking resulting in useful insights is quite rare (see, e.g., Nemecskeri et al., 2008; Jackson, 2009; Green et al., 2010).

The RESPONDER projects applies the method participatory systems mapping, i.e. participatory development of and discussion over causal loop diagrams (CLD), in the context of knowledge brokerage. The concept of knowledge brokerage builds on the assumption that policy making is a rational process and that its outcomes can be improved by bringing in missing knowledge. The primary reason for missing knowledge is lack of structural coupling and compatibility between knowledge production (the social systems of science) and knowledge use (the social system of policy). These social systems differ across a whole range of features including e.g. incentive structures, working cultures, time

horizons or language/discourses used (see e.g. Caplan, 1979; Mitton et al., 2007; EC, 2008: 13–19). In terms of knowledge they possess in particular different perspectives on salience, credibility and legitimacy of knowledge (Cash et al., 2003). It is therefore suggested that strengthening of the structural coupling of these social systems requires knowledge translation mechanisms and intermediary agents (knowledge brokers). Various scholars have suggested that KB can also create platforms and spaces where multiple types or categories of knowledge or multiple stakeholders can come together in a non-normative environment (see, e.g., the social change framework by Oldham & McLean, 1997; Sheate and Partidário, 2010). Findings also suggest that the uptake of policy-oriented research is significantly increased when its users are involved in all its stages (Jones, 2009: 19), i.e. when greater dialogue between knowledge producers and knowledge users occurs. Until recently empirical evidence was available mostly from the public health sector (e.g. CHSRF, 2004, Estabrooks et al., 2008, Keune et al., 2008, Pyra, 2003, Ward et al., 2009), but through the Seventh Framework Programme the European Commission currently funds a number of projects, including RESPONDER, with the purpose of supporting knowledge brokerage on various issues related to sustainable development.

The RESPONDER setup

The objective of RESPONDER is to promote sustainable consumption and help improve the management of its social, economic and political contradictions with economic growth through development and facilitation of a knowledge brokerage process. To achieve this, RESPONDER attempts to link four communities – ‘pro-growth’ scientists, ‘pro-growth’ policy makers, ‘beyond-growth’ scientists and ‘beyond-growth’ policy makers – through the neutral and transdisciplinary language of participatorily constructed causal loop diagrams, ‘system maps’.

Causal loop diagrams (CLDs) are probably the most-utilised systems-thinking visualisation tool since the 1960s (see Forrester, 1968). They have been shaped in particular by systems dynamics and cybernetics. Two widely recognised uses of CLDs are the transformation of verbal descriptions into feedback structure during early stages of model conceptualisation (Goodman, 1974), and the presentation of a ‘distilled’ understanding at the end of the whole modelling process (Morecroft, 1982). Since an underlying principle of systems thinking is that the behaviour of a system is the result of the structure of its elements, a CLD provides an endogenous explanation for observed behaviour. Jackson (2011) also suggests that CLDs are useful for exploring behavioural hypotheses and presenting an established (i.e. non-controversial) evidence-based and systematised knowledge. In RESPONDER we reflect the established use of CLDs while at the same time test their use for knowledge brokerage. In more detail, we use CLDs to (i) transform perceptions and mental models of individuals and groups into a causal and feedback structure, (ii) expand the boundary of thinking by enabling exploration and exchange of knowledge and paradigmatic and value positions accepted in various communities in the process, (iii) identify knowledge gaps through comparison with evidence-based and systematised knowledge, and (iv) formulate hypotheses about causes and effect and insights regarding system’s behaviour and identify potential leverage points.

The RESPONDER project contains a number of events in which the participants engage with CLDs. 10 events are devoted to five different consumption areas (sustainable food consumption, sustainable mobility, sustainable housing, sustainable consumer electronics and sustainable finance/household savings and debt) and each consumption area is

addressed by two workshops (rounds 1 and 2) set about 9 months apart (see Figure 1). This paper was written when almost all of the workshops of round 1 have taken place (January–May 2012), which enabled us to reflect on our usage of the ‘participatory systems mapping’ method. Figure 1 also shows the steps of development of the CLDs as the sequence was applied for all five consumption areas in round 1. The sequence alternates participatory input and ‘off-line’ expert work.

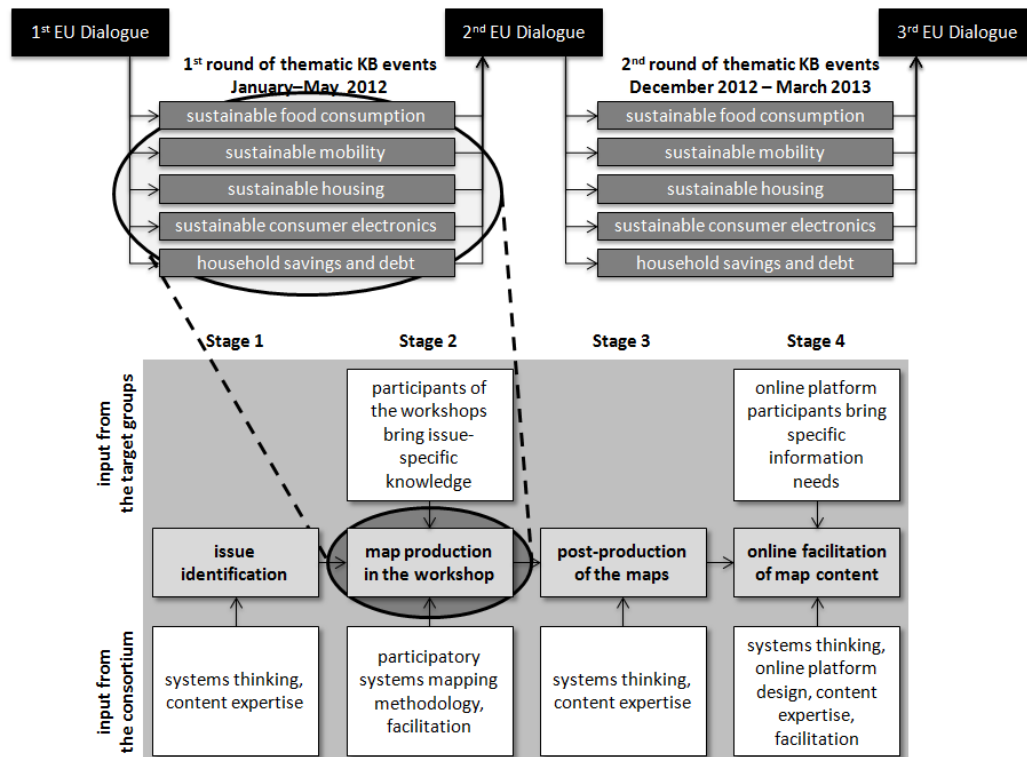


Figure 1. Structure of the RESPONDER events and of the CLD engagement process.

1. In the first stage, on the basis of desktop research and their ‘content expertise’ in macroeconomics, ecological economics and consumer research the consortium experts identified 3 ‘issues’ per consumption area to be mapped during the workshops. These issues reflected particular empirical problematic questions which linked sustainable consumption with macroeconomic (growth-related) concerns. For the second round of events the problem issues will on one hand build on the progress made and knowledge needs identified in the first round, and on the other hand, to increase policy relevance in relation to the Europe 2020 strategy and ‘green growth’ initiatives, linked to either ‘green jobs’, resource efficiency or sustainability of public finance. More details on preparation are provided below.
2. The second stage consists of two ca. 90 minute-long PSM sessions held over a 2-day workshop. The workshops aim for 30-35 participants representing all four target communities, however, during the first-round events the representation has been skewed towards beyond-growth researchers. The participants choose one of the three presented issues so each issue is addressed by drawing a CLD in a group of 10 to 12 participants. CLDs serve as boundary objects (Cash et al., 2003) enabling co-creation of knowledge and exploration of the given issue, and at the

same time exchange of knowledge and reflection on various positions and perspectives. A more detailed description of the PSM method is presented below.

3. In the PSM workshop sessions 'raw' CLDs are produced, tending to have inconsistencies, errors and under-developed system structures. Utilising both systems thinking and content expertise the experts in the consortium therefore 'clean up', process and digitalise the CLDs, reflecting to the highest degree possible the interests and concerns of the participants developing the map. In addition, processing of the CLDs and of the documentation of the workshop sessions provides a basis for identification and framing of the possible foci of the PSM exercises for future events in round 2.
4. Processed CLDs are placed in the RESPONDER online knowledge brokerage platform where original software and web design enable interactive engagement with CLDs, including functions such as: zooming; layered view; explanatory commentaries and references for selected variables, causal relationships and feedback loops; request of additional commentaries; discussion forums. Here CLDs serve to foster interaction and exchange but also individual insight and learning.

Organisation of participatory systems mapping sessions (stage 2)

Building on participatory modelling approaches and applications (see Richardson and Andersen, 1995, Vennix et al., 1992; van den Belt, 2004; Videira et al., 2009), over several months after the start of the project we developed a method we call 'participatory systems mapping' (PSM). Since then we have tested the method on about 30 occasions in group sizes of 8 to 18 participants excluding the facilitator. Application of PSM can best be described as the preparation and execution of a facilitated group process of development of causal loop diagrams to provide insight into a particular problematic issue and enable knowledge exchange.

The method requires a facilitator possessing simultaneously three kinds of expertise: i) systems dynamics/cybernetics expertise; ii) facilitation and moderation skills; iii) expertise related to the issue being mapped. In terms of material the method requires a large sheet of paper of about 1.5 x 2.5 m, larger sticky index cards in several colours and flipchart markers (for the variables which might need to be moved around), pencils and erasers (for recording and changing causal relationships, at the end they can be redrawn with flipchart markers), sticker dots (for voting on knowledge gaps or leverage points) and a flipchart (for documenting the process and recording comments which cannot be captured in the CLD). The viable length of a PSM session is between 90 and 120 minutes – with less time the chance of producing a useful result as well as 'spotlight time' per participant decreases and the risk of dissatisfaction grows. We have not experimented with longer sessions but we assume that due to the concentration demand they could lead to fatigue.

As indicated above, preparation also requires identification and formulation of the problem issues to be explored. Drawing on the systems thinking competence in the consortium, we make sure that the problem issues are viable for mapping, and desirably depict unexpected or counter-intuitive developments and lead to useful insights. This involves formulating the issues at an appropriate level of abstraction and complexity, and in a way which ideally supports not only linear causal thinking, but also systemic loop thinking. An issue is expressed through several means. First, two starting variables are formulated, the primary cause variable and the primary effect variable. They provide an implicit system boundary as well as a general causal direction and they guide attention;

before the session they are written on two index cards of a colour different from the one to be used for the rest of the variables and placed on the large sheet of paper (the cause near the left side, the effect near the right side). In the future we are planning to experiment with starting with a simple 2 to 3-variable feedback loop. Second, a question, which is a concise expression of the issue and which will guide the mapping, is formulated. The guiding question typically have the form of 'How can a hypothetical change in one or more variables related to sustainable consumption lead to an (unexpected) change in one or more variables related to economic growth?'. Management of the system boundary during the mapping process is made easy by asking whether a newly introduced element in the map helps to answer the guiding question. Third, a paragraph-long description of the problem is written and provided to all participants prior to the session. The description need to be rich and open enough so as to avoid the feeling that the participants are being 'tested', with their task being a more or less mechanical translation of written text into a CLD syntax.

The mapping itself is exploratory and, at least in the first round of events, diagnostic (i.e. striving for a description of the problem in its current institutional contexts such as current regulatory frameworks, actors, values and preferences, market structures etc.). The facilitator strives to create an open and creative atmosphere, focusing not only on the result (the quality of the produced CLD), but also on group interaction and knowledge exchange. A tight facilitation style seems to be the most productive, in particular towards the beginning of the exercise – meaning, the input by the participants is channelled into the map through the facilitator and the facilitator focuses the attention of all participants on the issue currently discussed.

Several steps are followed during the session. There are no strict boundaries between the steps, both in terms of timing or sequence; the facilitator should adapt to the flows and needs of the group in (repeatedly) switching between the steps.

1. Nevertheless, the first step should always be making sure that participants are familiar with the problem issue and CLD syntax.
2. As the next step, most productive seems to be to start mapping the effects of the primary cause. Typically, in the process the 'left side' of the map is fleshed out as intermediary variables between the primary cause and primary effect as well as secondary causes are introduced. Also making the primary cause endogenous by identifying its causes or closed loops which contain the primary cause can be helpful to explain the issue.
3. Over time (possibly repeatedly) switching to mapping the causes of the primary effect is desirable. Enrichment of the effect structure is a typical occurrence.
4. In a number of cases, connecting causal pathways from effects back to causes and forming of feedback loops will be beneficial as it can provide for more systemic explanations of the issue.
5. Acquiring feedback from an outside audience (participants of other groups) can be beneficial during the process. Besides receiving feedback, it also forces the group to formulate statements expressed by the map when presenting the map.
6. Analysis of the map using a range of possible 'lenses' to produce insight: assumptions behind and evidence for individual causal linkages, relative strength of causal pathways and loops, relationships between factors of influence (causes of a single variable), identification of leverage points, stock-and-flow thinking etc. We highlight several of these approaches and identify their potential benefits below.

7. The last step is voting on knowledge gaps, with the participants choosing variables, causal linkages or loops where they see demand for more evidence or desire more exploration by future mapping.

Achieving different types of insight with CLDs: a discussion

Causal loop diagrams are expressed in a formal language originating in systems dynamics (Forrester, 1968) and cybernetics (Wiener, 1948; Ashby, 1956; Bateson, 1972). They depict causal relations between selected variables, focusing on positive and negative feedback loops and development trends. We understand systems as purposive, transcending the subject/ object boundary by connecting relevant elements of individuals, social systems, and the natural environment through pathways and feedback loops (see also the 'theory of the mind' by Bateson, 1972); understandably, a systemic approach tends to place more focus on structure rather than agency. Even though structure can be understood as 'given' by material and institutional conditions, particularly in the context of participation and knowledge brokerage we respect Churchman's (1970) understanding of boundaries as 'social or personal constructs that define the limits of the knowledge that is to be taken as pertinent in an analysis', acknowledging that '[w]here exactly boundaries are constructed, and what the values are that guide the construction, will determine how issues are seen and what actions will be taken' (Midgley, 2000: 35–36). Regarding stability of system structure, we understand the CLDs as 'snapshots' of systems at certain points in time. Systems continually evolve and change their structures, and sometimes they collapse and are reorganised radically (see, e.g., the adaptive cycle; Holling, 2001). More abstract system representations tend to be more useful for depicting longer time frames than detailed CLDs representing concrete situations.

The most important elements of CLDs are variables, which are relevant for explaining the behaviour of the system, and their interdependencies represented by arrows. Relationships are causal and between two variables. They are either positive (drawn as arrows tagged with a plus sign) or negative (dashed arrows tagged with a minus sign).¹⁶ To depict longer time delays between changes in the cause variable and the effect variable (which typically have significant implications on the dynamic behaviour of the system), the arrow is marked with a double slash sign. Central to CLDs are feedback loops (circular causalities) which are either reinforcing (i.e. positive, leading to exponential growth or exponential decay) or balancing (negative, leading towards an equilibrium or goal value). Feedback loops are depicted as independent and smaller circular arrows placed in the free space within a chain of variables and labelled with a plus or minus sign, often named to foster the understanding of the system. Small clusters of reinforcing and balancing feedback loops in certain arrangements are often referred to as the 'engines of the system'. Colours and lines can be added to delineate boundaries between various organisational, geographical, disciplinary, paradigmatic or other areas of a CLD.

¹⁶ A positive causal relationship between two variables (cause X and effect Y) means that an increase in X will lead to an increase in Y above what it would otherwise have been (assuming all other variables remain constant) and, conversely, a decrease in X will lead to a decrease in Y below what it would otherwise have been. A negative causal relationship is inverse, i.e. an increase in X will lead to a decrease in Y below what it would otherwise have been and a decrease in X will lead to an increase in Y above what it would otherwise have been (for the discussion on the 'proper reading' of causal relationships see, e.g., Richardson, 1997; Sterman, 2000).

Even though most of this section addresses the content aspect of CLDs, we were also able to make some observations regarding the PSM process. It would seem that larger group sizes on one hand enable a higher plurality of perspectives and potentially provide more opportunity for knowledge exchange and learning. On the other hand they also limit the available time per participant and make consensus (which is in one form or another necessary for the production of a CLD), harder to achieve. An ideal balance seems to lie at about 10-12 group participants. The group can also be bigger if it is more homogeneous in respect to the communities and discourses its participants represent. Our experience also seems to indicate that higher homogeneity of the group correlates with a higher pace of the map's development as a lower number of controversial issues are tackled in the process so such a map may be richer in detail but poorer in terms of the diversity of underlying paradigms or disciplines contained.

In the following we will demonstrate some of the approaches towards thinking about CLDs ('analytical lenses') and highlight what types of insight and learning effects they support.

Closed-loop thinking: an example from mobility

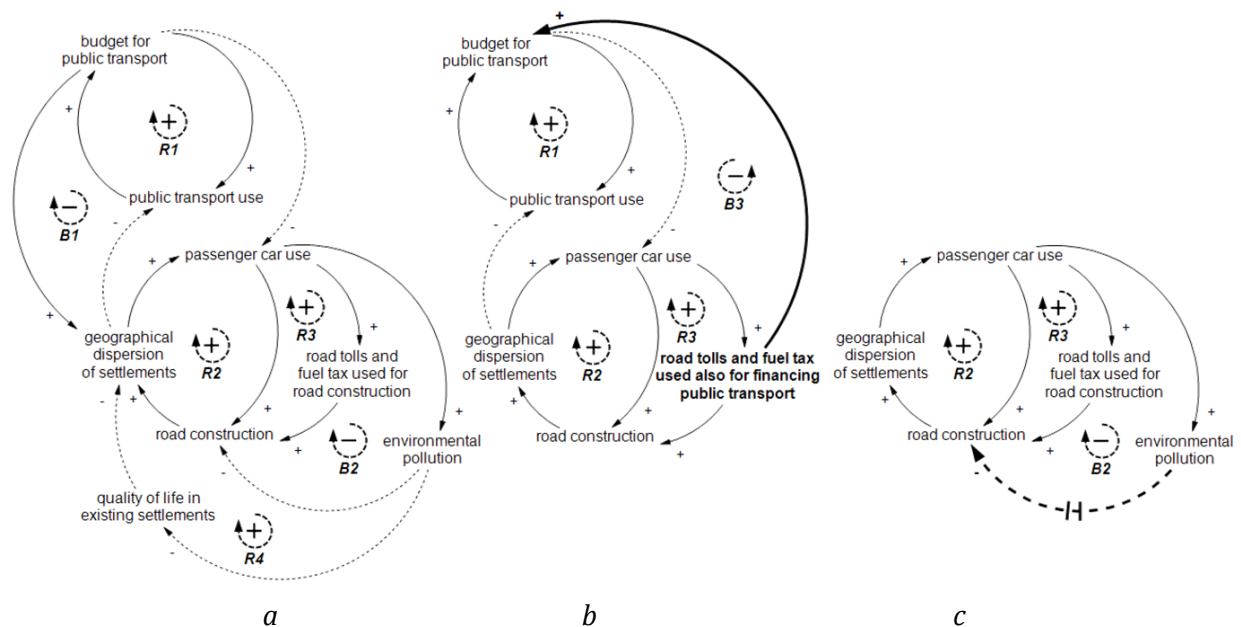


Figure 2. Public transport use vs. passenger car use map with two variants

By enabling to think about interrelationships between feedback loops, CLDs help to understand and infer behaviour of systems over time. Figure 2 shows a simplified excerpt from a system map from the mobility consumption area (map *a*) and its two variants (*b* and *c*). The issue mapped was “How does road construction influence transport volume and modal split?” and the maps above have already been processed (i.e. they are the result of stage 3). The excerpt highlights dynamic tensions between public transport use and passenger car use, i.e. modal split. The reinforcing loop R1 indicates that an increase in public transport use will (through an increase in net ticket revenue) be reflected in budgets for public transport being higher than they would otherwise have been. Proper spending of these budgets should result in the public transport becoming more available and attractive which further increases public transport use and decreases passenger car use. This loop, when unchecked, would cause that public transport use and budgets for

public transport grow exponentially. Nevertheless, geographical dispersion of settlements (the balancing loop B1) is pulling against this reinforcing tendency. Increasing availability of public transport would result in the settlements being more dispersed than they would otherwise have been and this would push public transport use down (with simultaneous growth of car use). For the sake of brevity a number of other limiting factors is not included in the map (e.g. factors inhibiting switching from car use to public transport relating both to individual and social aspects, population size or urbanisation structure) and many of the causal relationships are simplified (e.g. between budget and public transport use).

Another cluster of loops shows the feedback processes underpinning private passenger car use. The reinforcing loop R2 represents the political pressure to construct new roads or widen existing roads as a traditional (and short-sighted) way of fixing the problem. With increasing car use, the importance of automotive industry for domestic economy and the political weight of car users would be higher than otherwise, which would result in more road construction. This would, in turn, result in an increase of geographical dispersion of settlements and in a further increase in car use, thereby over time exponentially increasing the scale of the problem. The loop R3 adds a second powerful reinforcing effect, the economic dimension of financing road construction through road tolls and fuel taxes. The loop R4 shows how the negative impacts of increasing car use further contribute to the growth of car use: higher car use causes the quality of life in existing settlements be lower than it would otherwise have been, resulting in people moving out into 'quieter' or 'calmer' areas, and thereby contributing to a further growth of the geographical dispersion of settlements which, unfortunately, additionally contributes to an increase in car use. This set of three reinforcing loops, potentially further strengthened by the influence of availability of public transport on dispersion of settlements, is counterbalanced by only two forces: the attractiveness and availability of public transport as a factor causing switching from car to public transport use, and by the balancing loop B2. This loop represents public pressure and change in regulation and political priorities in response to environmental pollution caused by car use, which would result in road construction being less intensive than it would otherwise have been.

Of course, without simulation the behaviour of the system (i.e. the change in modal split over time) can be only roughly inferred. The map, however, invites discussion on the relative strength of feedback loops, time delays and possible solutions. It could be theorised that the loops R2, R3 and R4 are much more powerful than the balancing loop B2, and that the resulting moment of the 'engine' related to passenger car use is stronger than that of the cluster related to public transport (which has one moderately strong reinforcing loop and one moderately strong balancing loop). As a probable result, the geographical dispersion of settlements, which seems to be the most crucial variable in the map, would, unless meeting limits not depicted in the map, continually grow and cause a migration of public transport users to car use at an accelerating rate.

The second variant (map *b* in Figure 2) shows a potentially powerful leverage point. (The changes to map *a* are depicted in bold. The rest of *a* is untouched, even though it is not reproduced in its entirety in map *b*.) If a share of collected road tolls and fuel taxes would be channelled to public transport instead of road construction, relative strengths of the passenger car use 'engine' and the public transport 'engine' would change. In more detail, the economic reinforcing loop R3 would become 'weaker' and the loop R1 related to attractiveness and availability of public transport 'stronger'. This effect would be the more pronounced, the higher the share channelled to public transport would be. (Should 100% be channelled away from the car use cluster, the link between road tolls and road construction, and thereby the loop R3, would disappear.) Nevertheless, this solution has

its limits as well. The new loop B3 suggests that should public transport attract significantly more users, car use would also be significantly lower than otherwise. It is possible that other factors (peer pressure and position of a private car as a status symbol, growth in household incomes, availability of consumer credit or leasing etc.) would still cause growth of passenger car use in absolute numbers; but should this trend reverse, unless the fees per unit of passenger car use grow the income from road tolls and fuel taxes would decrease as well. In these conditions, the more successful public transport use vis-à-vis car use would become, the less effective this policy measure would also become. In addition, a stronger loop R1 would also more strongly contribute to the growth of geographical dispersion of settlements. A more robust solution could therefore be weakening the link between budgets for public transport and geographical dispersion of settlements, or between dispersion of settlements and passenger car use.

The third variant (map *c*) is a modification of map *a* only in the respect of placing a time delay on the arrow between environmental pollution and road construction. If public mobilisation and political change represented by this arrow become noticeably slower than the causal relationships in loops R2, R3 and R4, the current strength with which the balancing loop B2 counteracts road construction is at any time equivalent to the state of environmental pollution only some time ago. This would effectively weaken B2's balancing function of keeping car use at acceptable levels. Also, perhaps surprisingly, a policy solution towards decreasing the environmental impacts of car use (by, e.g., increasing fuel efficiency of cars or noise caused) would make the link between car use and environment pollution weaker and as a result inhibit the balancing function of the loop B2 as well. Such a measure would also weaken the reinforcing loop R4 (i.e. less people would move into new settlements), but the economic and political reinforcing loops of R2 and R3 would have less counterforce.

The goal of this relatively detailed analysis was to demonstrate the issue-specific insight that can be acquired through CLDs. The 'lens' of closed-loop thinking facilitates understanding of structural causes for observed behaviours in a specific problem, helps to uncover unintended consequences of actions and limitations to policy measures, and makes boundaries of thinking explicit.

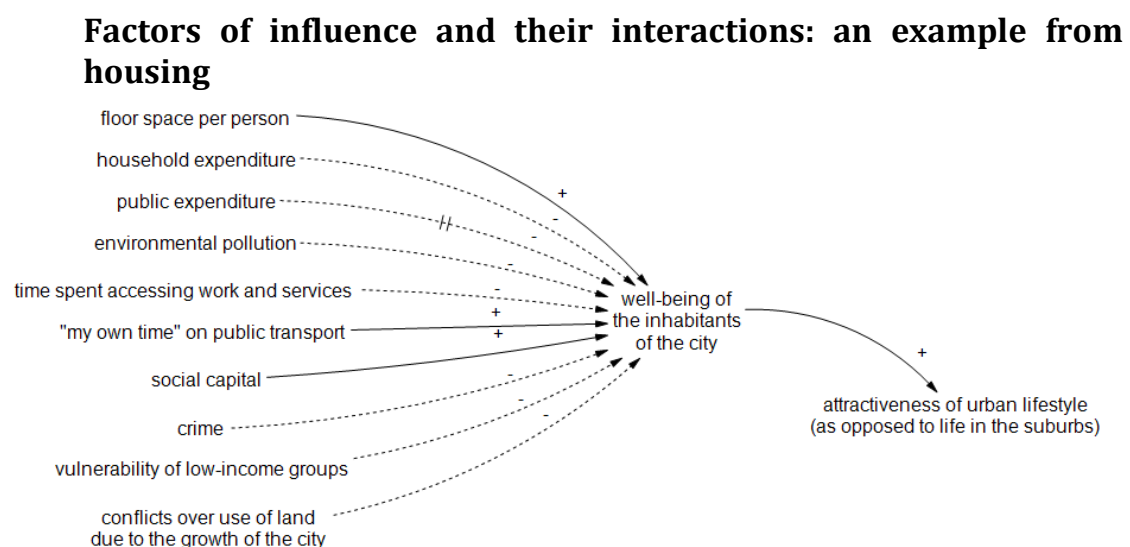


Figure 3. Factors influencing well-being of the inhabitants of the city

In this example we will show an approach that, complementary to closed-loop thinking, also fosters a detailed understanding of a particular problem. Figure 3 represents an excerpt from a map developed at a session focusing on sustainable housing, the issue mapped was “What effect does mono-functional urban planning have on the well-being of citizens?”. It depicts 10 factors influencing well-being of the inhabitants of the city, identified during the mapping process by the participants (i.e. the map is a result of stage 2); all factors were endogenous to the system. We suggest that it is possible to acquire a more detailed insight by focusing on the factors of influence of a particularly important variable, in this case well-being of the inhabitants of the city. An increase in floor space per person, of ‘my own time’ on public transport (meaning the ‘private’ time spent reading, relaxing or conversing while comfortably travelling), or of social capital would cause an increase in the average inhabitant’s well-being to a level higher than it would otherwise have been. An increase in costs (reflected in higher household or public expenditure), environmental pollution, time spent accessing work and services, crime, vulnerability of low-income groups, or conflicts over use of land would result in well-being being lower than it would otherwise have been (for public expenditure, this effect would occur with a time delay and to a large extent indirectly through deterioration of infrastructure, increase of taxes and fees, lower quality of public services etc.). This also demonstrates that a systemic approach makes it easy to cross the boundaries of policy areas or scientific disciplines: in the map above variables related to housing, transport, crime or social capital inter-relate.

Furthermore, a CLD facilitates a discussion about interrelationships between influencing factors: Are factors complementary (this could be formalised as a multiplicative relationship) or substitutive (an additive relationship)? What are the trade-offs between factors? Are some factors conditional or inhibitive to other factors’ effects? Is the effect of a factor dependent on some additional conditions? Does a factor cause a qualitative change and perhaps require splitting of the effect variable into several? Are the functions between individual factors and well-being linear? Furthermore, what scientific evidence exists for particular causal relationships? As an example related to Figure 3, what is the relationship between the influence of each of household expenditure, environmental pollution, time spent accessing work and services, social capital and crime on well-being? Or perhaps, in more detail, how is the enjoyment of ‘my own time’ dependent on the quality of public transport and time spent travelling? The map in Figure 3 facilitates bringing in existing debates around well-being into the process of map construction or later usage, fostering learning of participants.

It is easy to switch between this and the previous ‘lenses’ during map construction and analysis. Closed-loop thinking could, in this case, seek for linking changes in well-being (which has been the primary effect in this issue) back into the system through responses of various actors (including policy response). Changes in well-being of city’s inhabitants could, as an example, affect attractiveness of urban lifestyle as compared to life in the suburbs and thereby open up feedbacks to variables such as value of both urban and suburban properties, public expenditure, social stratification or mobility, directly or indirectly influencing well-being.

Using this lens turns attention to whether depicted factors are sufficient in explaining the observed phenomenon, to their implied relationships and necessary conditions, as well as to identification of knowledge gaps and need for evidence. This provides a complementary tool for obtaining more detailed insight about a particular problem issue.

Generalising lessons learned: an example from food

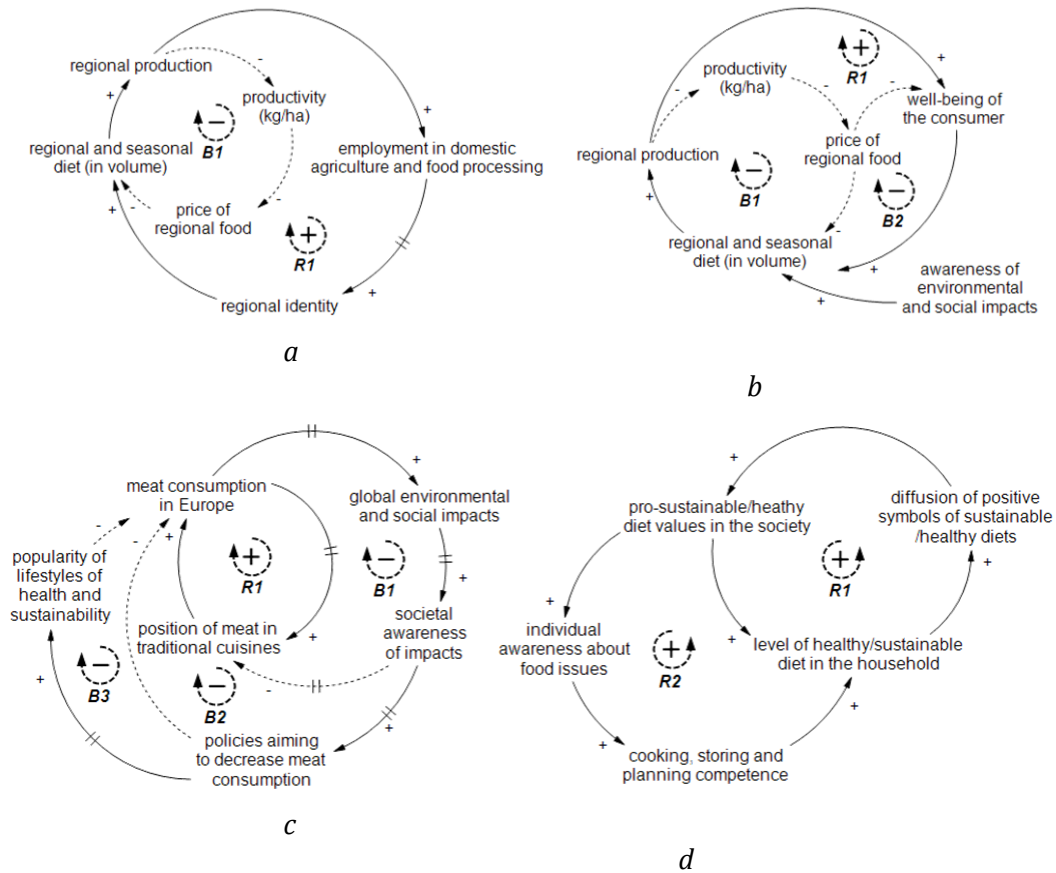


Figure 4. The role of the social in sustainable food consumption, four examples

Comparing some of the key feedback loops from maps representing several problem issues can also generate useful insights. We found striking that variables related to ‘the social’ play a much higher role for an increase in sustainability-related practices in the area of sustainable food consumption than in other consumption areas. Figure 4 shows partial ‘distilled’ maps from four mapping sessions (i.e. results of Stage 3). Maps *a* and *b* were developed around the issue ‘How does increasing consumption of regional produce affect the employment in domestic agriculture?’, map *c* around the issue ‘What factors influence the global environmental effects of a shift to a Mediterranean diet (less meat) in Europe?’, and map *d* around the issue ‘Could healthier and more sustainable diets lead to increased food waste in European households?’.

In map *a*, lower productivity and higher price of regional food resulting from an increase of regional production serve as limiting factors to increases of regional and seasonal diet. The balancing loop B1 would cause the volume of regional and seasonal diet to even out towards a certain level. (Again, the relationships recorded in the map are simplified – e.g., they do not reflect that initially an increase in regional production may cause an increase in productivity; also, this group has not identified awareness of environmental benefits of regional production as important.) Against this loop pulls the reinforcing loop R1, representing a delayed positive effect of an increase of employment in domestic agriculture and food processing on regional identity, which should in turn cause the volume of regional and seasonal diet to be higher than it would be otherwise. It would seem that the balancing loop B1 is relatively stronger than the loop R1 relying on regional

identity, which might be insufficient (note also the time delay) to overcome the material and economic limiting conditions of production. Ensuring lower productivity losses or higher employment effects of regional and seasonal production or removing the time delay between employment and regional identity would change the relative strengths of the loops. Nevertheless, the social dimension, expressed as regional identity, has a key function in this map.

Map *b* is an attempt to explain the same issue by a different group, focusing instead of regional identity on the variable of well-being of the consumer (i.e. the frame is 'individualistic'). Well-being of the consumer is negatively influenced by higher price of regional food (loop B1) and positively influenced by various benefits of regional production (loop R1) such as sense of fairness, producer-consumer proximity or diversity of local/regional production. One of the key assumptions in this map is that an increase in well-being from these benefits would (perhaps in combination with individual's awareness of positive environmental and social impacts not related to objective well-being) result in higher demand for regional and sustainable food and thereby in an increase of the volume of regional and seasonal diet. This assumption enables to close the loops R1 and B2. Achieving higher well-being gains from regional production or ensuring a lower price would change relative influences of B1+B2 and R1 and would translate into higher volume than it would be otherwise. Awareness of environmental and social benefits of regional production does not directly contribute to well-being, but it contributes to a higher volume of regional and seasonal food. Compared to the factor of relative strengths of B1+B2 and R1 it does not seem to be critical. As can be seen from the comparison of *a* and *b*, different framings of the same issue could result in identification of different intervention options. Although addressing the lower productivity problem or subsidising the price of regional food would work for both (as they address the same loop), in *a* reasonable policies could include increasing the number of jobs per unit of production as well as achieving a stronger association between employment in domestic agriculture and regional identity, whereas in *b* they could include improvement of direct benefits for consumers and providing consumers with information about positive environmental and social impacts.

Maps *c* and *d* express the social dimension of food consumption in more detail. Map *c* shows that relying on social processes alone can be risky because of the numerous time delays. Participants have placed a time delay on the translation of negative global environmental and social impacts into collective awareness, on the effect of changes in awareness on change in cultural traditions or (through collective pressure) on a change in policies, and on the effect of policy on change in lifestyles (which, in addition, might meet with policy resistance). Since the balancing effect of all three loops would counteract an initial increase in meat consumption too late (after three time delays, which is a time during which meat consumption can further grow), significant environmental or social damage could occur in between. Removing the time delay between meat consumption and occurrence of negative impacts might not be possible, but addressing the time delay between the impacts' occurrence and collective awareness is an important leverage point (to a smaller extent this is valid for all other time delays in the map). Furthermore, it invites discussion on the relationship between values and discourses, and practice (loop R1), since mobilising the reinforcing effect for a decrease of meat consumption could be crucial. Despite the difficulty of inferring behaviour due to time delays, this map supports a discussion about the possibilities of policy instruments to affect the speed (and direction) of change of societal values, discourses or practices.

By placing the individual perspective into a social context, map *d* more closely examines these issues. The social dimension is primary, since it is the source of reinforcing dynamics

(loop R1). The loop suggests that societal values are translated even without a premeditated decision of the individual into individual practice, which in turn has communicative effects. The loop R2 shows how actions and decisions of the individuals reinforce the social dynamics: societal values affect individual awareness, awareness translates into development of competence, and competence translates into practice (a sequence which roughly corresponds to the traditional ABC). The ABC approach is placed into the context of a more powerful social dynamics.

Maps *a* and *b* demonstrate how different framings of the same issue (i.e. the ‘individualistic’ vs. ‘social’ perspectives) could lead to different policy outcomes. Map *c* underscores the importance of time delays in relation to the social dimension, which make the system more problematic but are also potentially powerful leverage points. Map *d* shows in more detail one possible conceptualisation between the individual and social dimensions. All of them provide insights which can be generalised or transferred to other issues, perhaps not only in the area of food consumption. This is supported by the concise or ‘distilled’ representation of the maps.

Mental models and paradigms: different ways to decrease TMC

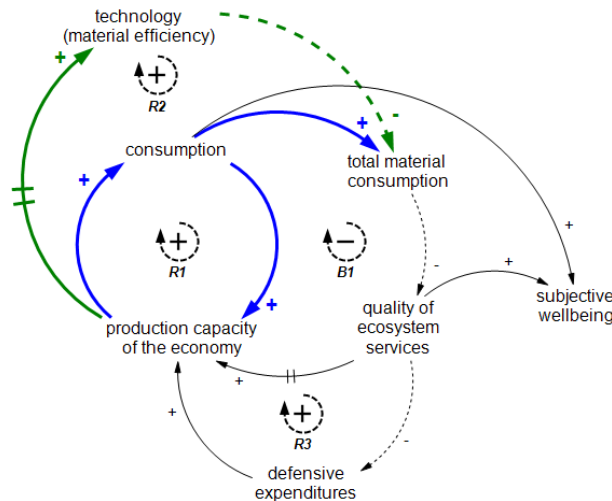


Figure 5. Decreasing total material consumption, two strategies

One of the ways to better understand a system is also through understanding the various mental models, perspectives and discourses which different individuals and social groups have in respect to the system. This strategy has been pursued in particular in ‘soft systems thinking’ and ‘critical systems thinking’ approaches. Since RESPONDER attempts to link different communities with different paradigms and discourses, the mapping sessions have served also as a means to explore these differences during the construction and interpretation of the maps. Nevertheless, we have not uncovered the full potential of this ‘analytical lens’ yet – primarily because, until now, representation of communities other than ‘beyond-growth’ scientists in the events was low.

The map in Figure 5 shows an abstract representation of economy–environment relations with the focus on consumption, prepared during background work on the project. The colours represent two different approaches, preferred by different communities, towards lowering total material consumption (TMC) and preserving the quality of ecosystem services. The green colour represents a strategy to increase material efficiency of

consumption while leaving the overall engine of economic growth (loop R1) intact to realise gains from consumption growth on subjective well-being. This is the 'weak sustainability' position. The structure of the map would suggest that increasing the quality of ecosystem services weakens one limit to the growth of production capacity of the economy (i.e. the delayed influence of the erosion of the ecological basis of the economy, loop B1) and weakens one contributing factor as well (lower defensive expenditures, i.e. loop R3, will contribute to the growth of production capacity to a smaller extent than they would otherwise). Nevertheless, growth caused by loop R1 would continuously increase the pressure on constant improvement of material efficiency, should TMC be kept in check over a longer term.

The blue colour shows a strategy of addressing TMC through lowering consumption. This can be associated with the 'strong sustainability' position. In addition to pushing down TMC, this strategy directly tackles economic growth by (perhaps with a time delay) decreasing production capacity of the economy (loop R1). The behaviour of reinforcing loops tends to either exponential growth or exponential decay (as can be witnessed in the times of economic crisis). Decreasing consumption could generate a spiralling effect of economic de-growth which, however, would be slowed down by the positive effects of healthy ecosystems on the economic base. (A more qualitative change in the structure of the system would also be probable in such a case.)

Even this rudimentary example shows the usefulness of attempting to 'translate' various paradigmatic perspectives into the shared language of CLDs as it provides a shared basis for their analysis and comparison, opens minds to different perspectives and provides a more complex picture of the issue. A potential challenge which needs to be explored is that due to different framing individual system pictures might not be easily integrated into a common whole.

Connections between problem issues: conflicts over use of land and popularity of LOHAS

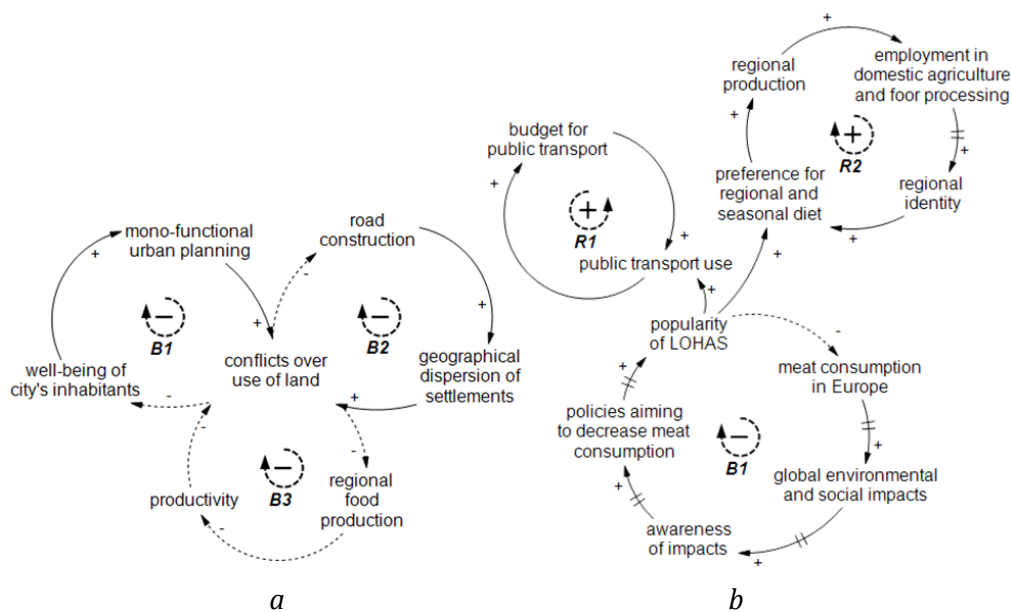


Figure 6. Two possible types of connection between problem issues

Our last 'lens' is looking at connections between problem issues. It has been suggested that 'distilled' depictions of the system structure underpinning particular issues can be linked in the manner of 'cascaded archetypes' (Wolstenholme, 2004: 350), illustrating how unintended consequences of one issue can become drivers in the next. Such a linking has remained a rarely-addressed 'major research challenge for system dynamics' (ibid.). We will briefly examine two possibilities for connections between problem issues.

In Figure 6, map *a* shows how individual problems can act as mutual limits, balancing each other out and mutually preventing growth in scale. Structures of three heavily simplified problem issues (mono-functional urban planning, road construction, and low productivity of regional food production) are connected through conflicts over use of land. Pressure on land use and resulting conflicts result from increases in geographical dispersion of settlements through road construction, surface size of the city through mono-functional urban planning and take up of land through a shift towards regional food production. Should, for example, the problem of low productivity of regional food production be solved, it would stop contributing to an increase in conflicts over use of land. As a result, there would be less counterforce to road construction and the scale of the problem of road construction and geographical dispersion of settlements could grow until it meets another 'layer of limits' (Meadows, 2008). When problems limit each other, solving one problem would remove a limit to the growth of another problem.

Map *b* connects problem issues into a cascade where change in one problem issue causes changes in other issues. Policies aiming to decrease meat consumption would, provided they overcome policy resistance, over time contribute to the popularity of lifestyles of health and sustainability (LOHAS), which encompass more dimensions than just meat consumption. Increasing popularity of LOHAS could therefore plausibly result in an increase of preference for regional and seasonal diet above what it would otherwise have been, thereby providing more counterforce to the loop R2 against the balancing loop related to falling productivity (loop B1 in map *a*, Figure 4). Similarly, increasing popularity of LOHAS could result in an increase of public transport use to a level higher than it would otherwise have been, thereby potentially contributing to an improvement in the problem of car use/road construction/ geographical dispersion of settlements. Analogously, a decrease in the popularity of LOHAS could affect these linked problems negatively. This example shows that addressing one problem may help solve other problems as well.

We suggest that thinking about how problem issues might be connected produces what we call 'inter-issue' insights. The architecture of interlocking of the individual sustainable consumption issues is critical for understanding possible side effects of policy solutions – side effects which happen outside of what we would intuitively consider as system boundary. In effect this 'lens' expands the system boundary and casts light on a higher level of system organisation, providing a better understanding of policy resistance, the system's resilience or path-dependencies.

Conclusions

In this paper we followed two objectives: i) to explain our usage of the method of participatory systems mapping (PSM) in the context of knowledge brokerage; and ii) to demonstrate the various types of insight facilitated by causal loop diagrams (CLDs) that support a systemic, complex and multi-perspectival understanding of issues related to sustainable consumption. In line with Sterman (2000) we suggest that 'improving' the mental models upon which policy solutions are based can to a large extent prevent unforeseen and delayed side effects which are the main threat to sustainability (see Figure 7).

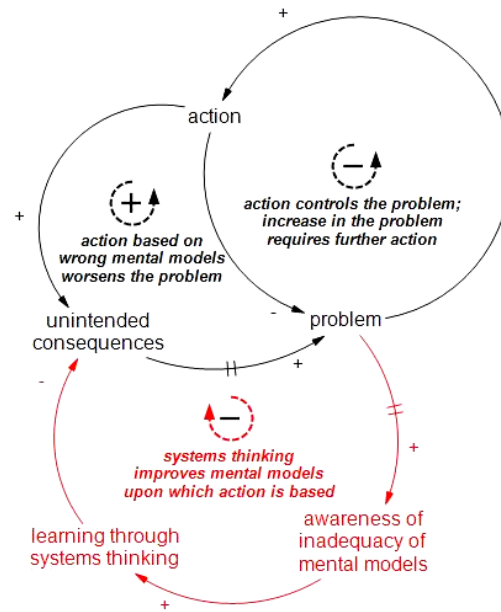


Figure 7. Systems thinking as a way to improve mental models

Types of insight which we identified include a detailed, issue-specific insight (supported by the 'analytical lenses' of closed-loop thinking and looking at factors of influence and their interactions), an insight enabling generalisation and transfer of understanding between various problem issues, an insight into different mindsets and perspectives represented in a CLD, and an 'inter-issue' insight into the interlocking of individual problem issues and higher level of system organisation. We have highlighted the discussion-supporting function of CLDs, which is particularly relevant for knowledge brokerage processes involving representatives of various communities. Furthermore, we tried to demonstrate that diagnostically used CLDs possess significant policy-relevant potential by enabling identification of leverage points which serve to conceptualise policy interventions and by supporting thinking about effectiveness, policy resistance and potential side effects of policy interventions. In relation to sustainable consumption and the orientation of the RESPONDER project we believe that CLDs can stimulate exchange and learning about the sustainability of governmental solutions pursued under the recent green economy initiatives as a remedy to the recent economic crisis (such as the car scrapping premium). Structuring the problem issues using the language of CLDs also allows identification of missing evidence and knowledge needs of the policy makers (research-related potential).

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Sustainable Consumption in Central and Eastern Europe – a Survey

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Introduction

Countries of Central and Eastern Europe have been in the lime-light with regard to their political, social and economic transformation process during the past 20 years. Massive legislative work and a gross restructuring of the economies of the region, however, followed the patterns of developed Western countries closely with only very faint criticism along the way. The lack of democratic traditions and the general situation of the economies of these countries mean that the transition process is a long one and CEE countries could hardly catch up with the rest of Europe.

The process of their accession to the European Union is continuous, resulting in similar challenges, requirements and problems for them by now and in the future. As CEE countries want to belong to the affluent Western societies, they strive for growth and wealth, while they have been hardly hit by the economic crises of recent times. The possible ways out of the resulting poor economic situation are often discussed. Most importantly, traditional values and the aspects of genuine social welfare have often been neglected or sacrificed for material well-being.

On the political level, CEE countries also try to address sustainability issues, but obviously they are doing it in quite different ways and with different success. This is also true for addressing sustainable consumption, so – as part of Europe – the experience of CEE countries also provides valuable insights and relevant input for the debate on the future of sustainable consumption.

In our paper we aim to survey the most important aspects of social and economic development in the CEE region from the point of view of (sustainable) consumption. To this end we will:

1. Uncover economic and social trends characterising the CEE region, focusing on recent times.
2. Analyse consumption patterns such as the consumption of different goods and services, their tendencies over time and their distribution across the different groups within society.
3. Reveal general attitudes of the population towards sustainability and Sustainable Consumption specifically, based on existing studies describing the region.

Such an overview of the situation will enable us 1) to assess the situation in the region from the point of view of Sustainable Consumption 2) draw up future scenarios regarding consumption patterns within the region and 3) propose policy options specifically suitable for the CEE region and possibly to other transformation countries across the world and thus contribute to the overall debate over Sustainable Consumption.

Economic and social trends in the CEE region

Economic trends are usually illustrated GDP levels. The following chart demonstrates the trends of GDP during the last ten years in selected CEE countries and their more developed counterparts on the continent. The chart does show the GDP/capita values in absolute terms, thus the gap between CEE and Western Europe is well demonstrated: the GDP/capita of the most developed countries is more than twice as much as of some lesser developed CEE countries.

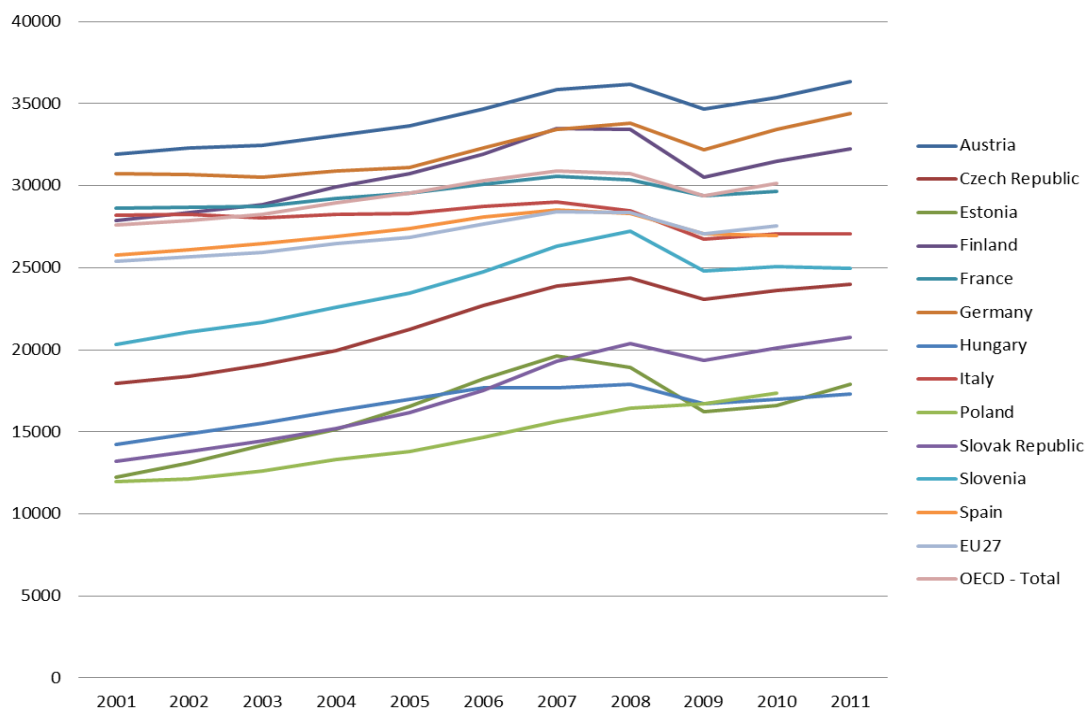


Figure 1: Gross domestic product per capita (expenditure approach)

Source: OECD Factbook 2011-2012

The following two charts show the growth rate of GDP in the two groups of countries separately. It is obvious that all countries have been hit by the recession in year 2009, and – apart from the one and only Poland – produced a negative growth. A few other implications:

1. Some countries of CEE experienced a growth rate of 5-10% before the crisis, which is significantly higher than that of more developed EU countries (1-5%);
2. These exceptionally high growth rates have not returned to the region yet (with the exception of Estonia, which experienced the worst decline just two years before);
3. The variation in growth rates between the two country groups is different: while growth rates of developed countries tend to move together and are close in value, there are bigger differences between the growth rates of CEE countries;
4. While in developed Europe GDP growth in 2007 tended to be rather high, some CEE countries experienced difficulties already early in the crises;
5. The rather high variation of growth rates between CEE countries seems to be continuing after the crisis as well – although this is hard to judge because of the lack of data after 2009.

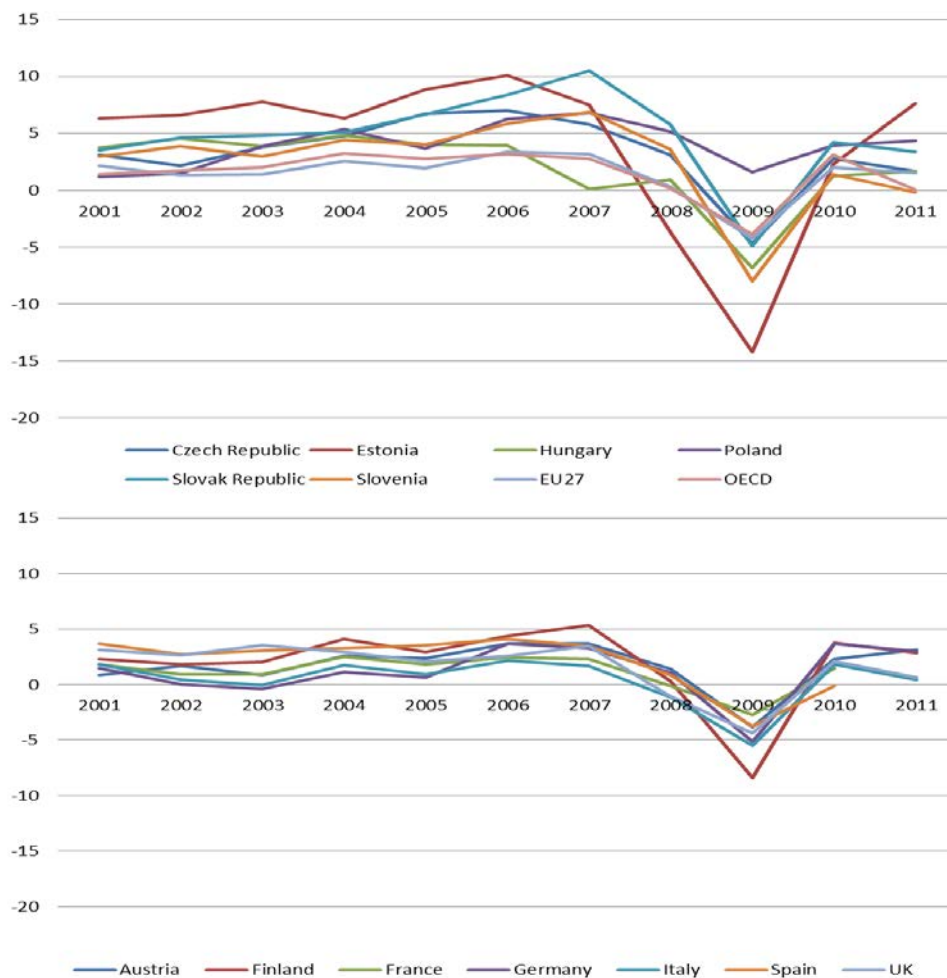


Figure 2: Gross domestic product (expenditure approach) – annual growth rate
Source: OECD Factbook 2011-2012

Taking these developments into account, even if CEE countries return to their higher growth patterns compared to more developed EU member states, it will definitely take several decades before GDP/capita figures come close to the Western half of Europe (somewhat faster for Slovenia and the Czech Republic, although Slovenia faces problems with emerging from the crisis as flat GDP figures show).

Employment rates also show interesting patterns in the CEE countries. For most countries numbers peaked in year 2008 and have decreased in the two years after. Overall, when compared to the selected countries of more developed Europe, it can be concluded that employment rates are somewhat lower in the CEE countries. As for Hungary, demonstrating the lowest number since the middle of 2000's, recently some policy measures have been implemented to increase the number employed in the different sectors of the economy. However, results will be seen only in a couple of years.

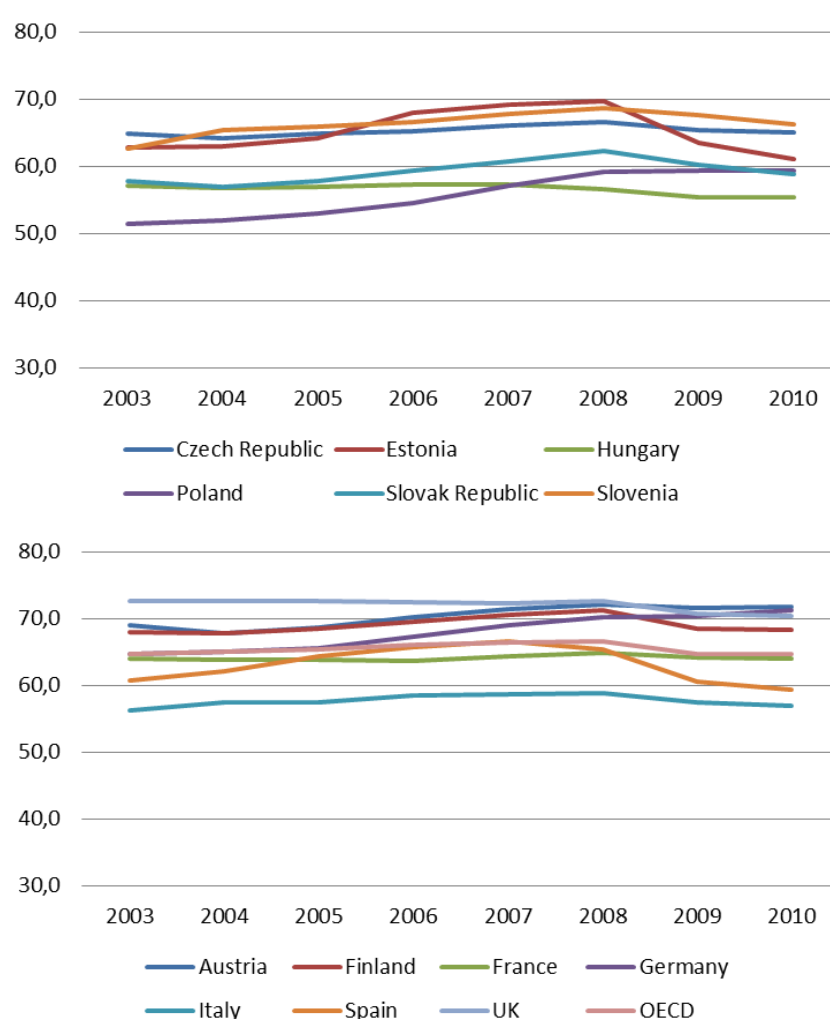


Figure 3: Employment rates - % of working age population
Source: OECD Factbook 2011-2012

An important indicator for a region with a historical lack of capital is the amount of inflow of foreign direct investment as shown in the following figure. A marked decrease can also be seen regarding this indicator right in 2009. Only the Czech Republic seems to have recovered well from the crises in this regard, while all other countries have lower numbers than during most of the decade. Poland, the favourite during the 2005-08 period has also suffered.

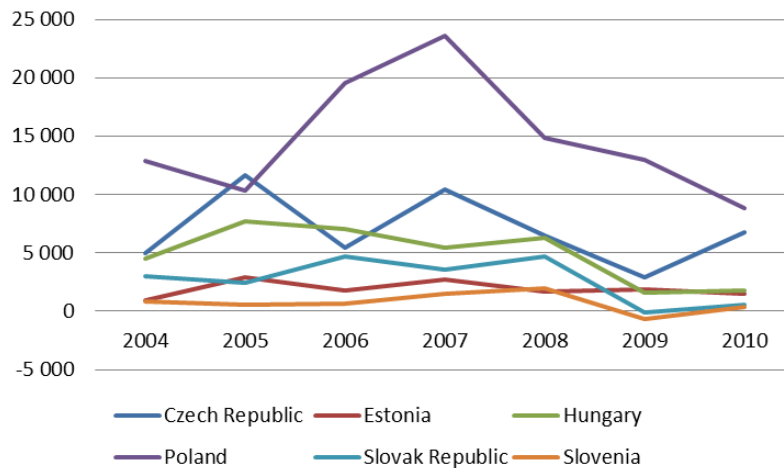


Figure 4: Inflow of foreign direct investment in selected CEE countries
Source: OECD Factbook 2011

Apart from economic objectives, social development is also important in the CEE region. One important indicator along the way is the inequality of income distribution of individuals within society. A lower inequality is usually deemed favourable as a result of less stress between social groups. The following table shows a number of different inequality indicators and their change over the last two decades for selected CEE and Western European countries.

	Levels in late 2000s					Percentage point change									
	Gini coefficient	Interquintile share ratio (S80/S20)	Interdecile ratio (P90/P10)	Squared coefficient of variation (SCV)	Mean log deviation (MLD)	Gini		S80/S20		P90/P10		SCV		MLD	
						Mid-1980s to mid-1990s	Mid-1990s to late 2000s	Mid-1980s to mid-1990s	Mid-1990s to late 2000s	Mid-1980s to mid-1990s	Mid-1990s to late 2000s	Mid-1980s to mid-1990s	Mid-1990s to late 2000s	Mid-1980s to mid-1990s	Mid-1990s to late 2000s
Austria	0,261	3,8	3,2	0,281	0,114	0,2	..	0,1	..	0,1	..	1,4	..	-0,2	..
Czech Republic	0,256	3,6	2,9	0,360	0,111	2,6	-0,1	0,4	0,0	0,3	0,0	5,3	0,1	1,9	0,1
Denmark	0,248	3,5	2,8	0,671	0,122	-0,6	3,3	-0,1	0,5	-0,2	0,2	3,0	39,0	-0,7	3,9
Estonia	0,315	5,1	4,3	0,384	0,171	..	..	..	..	..	..	..	..	..	..
Finland	0,259	3,8	3,2	0,318	0,114	2,1	3,2	0,0	0,8	0,1	0,4	7,8	7,5	1,2	2,4
France	0,293	4,3	3,4	0,525	0,148	-2,3	1,6	-0,4	0,3	0,0	0,0	-77,7	20,2	-3,0	1,8
Germany	0,295	4,5	3,5	0,634	0,149	1,5	3,0	0,4	0,6	0,3	0,3	4,1	29,8	1,6	2,9
Hungary	0,272	3,9	3,1	0,398	0,128	2,1	-2,1	0,4	-0,4	0,3	-0,4	12,1	-6,6	1,7	-1,6
Italy	0,337	5,6	4,3	0,595	0,221	3,9	-1,1	1,4	-0,7	0,8	-0,5	20,0	-5,3	6,8	-1,8
Slovak Republic	0,257	3,7	3,1	0,255	0,113	..	..	..	..	..	..	..	..	..	..
Slovenia	0,236	3,4	3,0	0,204	0,095	..	..	..	..	..	..	..	..	..	..
Spain	0,317	5,7	4,6	0,340	0,188	-2,8	..	-1,3	..	-0,9	..	-65,6	..	-6,0	..
United Kingdom	0,345	5,8	4,6	0,861	0,252	2,7	0,9	0,8	0,2	0,5	0,2	18,7	-6,8	3,9	3,2
OECD-34	0,284	4,4	3,5	0,448	0,148	..	..	..	..	..	..	..	..	..	..

Table 1: Trends in different income inequality measures
Source: OECD (2011): Divided We Stand – Why Inequality Keeps Rising

Looking at the Gini coefficient, it is hard to make out any obvious trends in the selected countries. The value of the coefficient for CEE countries is often lower compared to those of more developed countries (e.g. Italy and the U.K.) although some of the best values also belong to developed countries (Denmark and Finland). Also, changes over the last two decades show high variation. The Czech Republic and Hungary with available data show that there was an increase in income inequality in the first decade around the transition followed by a decrease during the decade after. This seems to be a more favourable tendency compared to that of the more developed countries most of which show an increase in inequality between the middle of the 1990's and the late 2000's.

The following two figures also indicate that societies of the CEE countries still face serious issues regarding the poverty of their populations.

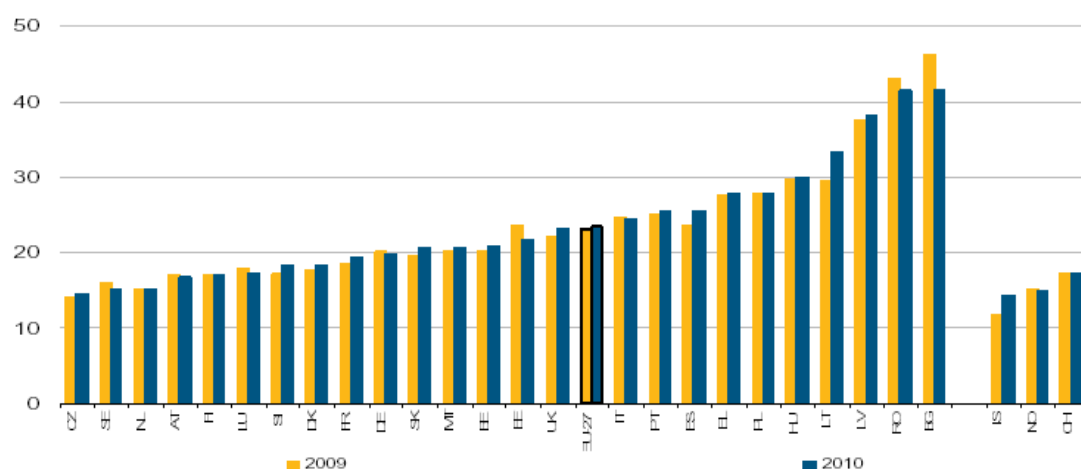


Figure 5: People at risk of poverty or social exclusion
Source: Antuofermo and Di Meglio (2012)

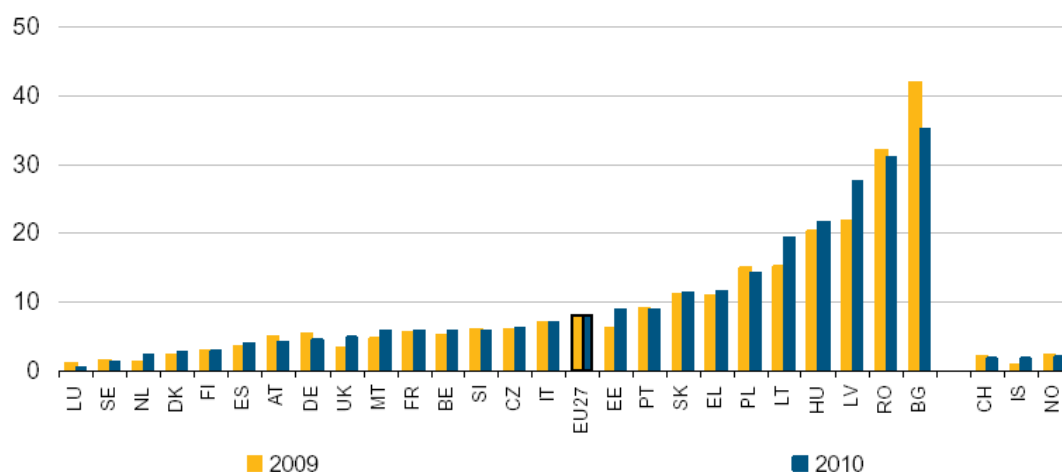


Figure 6: Severe material deprivation rate
Source: Antuofermo and Di Meglio (2012), p.5

Member States with the highest rates of people being at risk of poverty or social exclusion (AROPA rates) in 2010 were Bulgaria (42%), Romania (41%), Latvia (38%), Lithuania (33%) and Hungary (30%), while countries with the lowest rates were Sweden (15%), the Netherlands (15%) and the Czech Republic (14%).

The rates of people who are severely deprived materially in Europe show a similar picture to the AROPA rates. These rates have increased as a result of the economic crisis in the most hit countries.

One of the most important indicators of the environmental component of Sustainable Development, the emission of Greenhouse Gases (GHGs) is shown in the next figure in absolute terms (thousand tonnes of CO₂ equivalent).

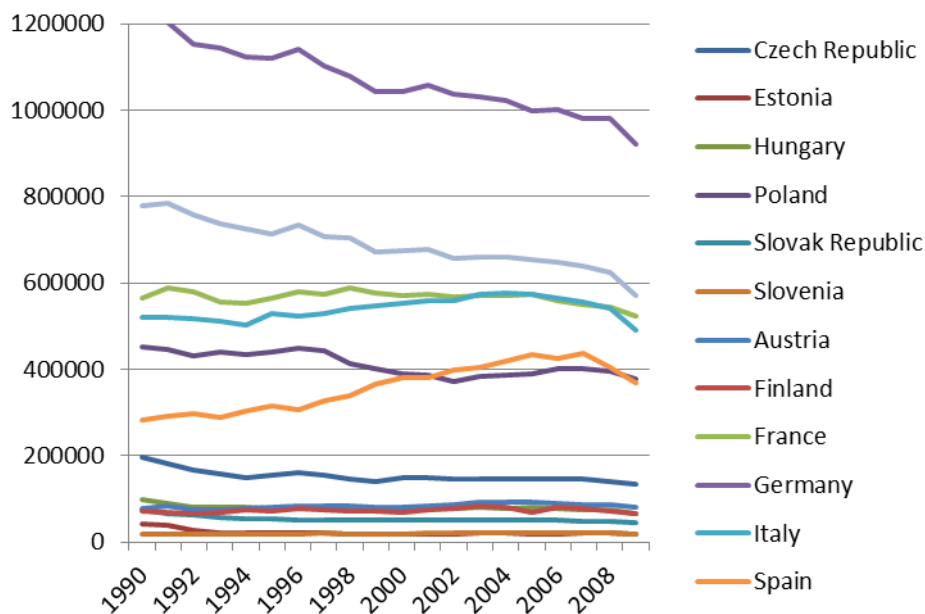


Figure 7: Greenhouse gas emissions (thousand tonnes CO₂ equivalent)
Source: OECD statistics

Obviously, more industrialized, bigger countries produce higher amounts of GHGs (Germany and the U.K. topping the list followed by Italy and France) while smaller CEE countries have much lower emissions (here Poland being the major emitter). However, tendencies are also interesting and show that large polluters like Germany and the U.K. take the issue most seriously and have reduced their emission noticeably over the last ten years. Other countries like France, Italy and Spain have only acted in the first half of the last decade and all countries show a marked decrease as a result of the crises. CEE country emissions seem to be rather constant with only a decline as a result of the recession of 2008-09.

Consumption patterns in CEE countries

Consumption patterns within the CEE region also show marked differences compared to other, more developed countries of the European Union.

Real household income has grown continuously during the last two decades in most European countries, just as in the CEE region.

	Average annual change mid-1980s to mid-1990s					Average annual change mid-1990s to mid-2000s				
	Bottom quintile	Middle three quintiles	Top quintile	Median	Mean	Bottom quintile	Middle three quintiles	Top quintile	Median	Mean
Austria ¹	2,5	2,7	2,8	2,8	2,7	-2,1	-0,5	-0,4	-0,6	-0,6
Czech Republic	..	..	..	..	..	0,4	0,6	0,7	0,5	0,6
Finland	0,9	0,9	1,0	0,8	1,2	1,6	2,5	4,6	2,5	2,9
France	1,0	0,5	-0,1	0,5	0,3	0,9	0,7	1,0	0,8	0,8
Germany	0,4	1,4	1,6	1,2	1,4	-0,3	0,5	1,3	0,6	0,7
Hungary	..	..	..	..	..	0,9	1,2	1,0	1,1	1,1
Italy	-1,3	0,5	1,5	0,6	0,8	2,2	1,0	1,6	1,0	1,3
Spain ¹	4,4	3,2	2,4	3,2	3,0	5,2	5,1	5,0	5,5	5,1
Sweden	0,5	0,9	1,2	0,9	0,9	1,4	2,2	2,8	2,2	2,3
United Kingdom	0,7	2,0	4,3	1,9	2,8	2,4	2,1	1,5	2,1	1,9

Table 2: Trends in real household income by quintiles

Source: OECD (2008): Growing Unequal? Income Distribution and Poverty in OECD Countries¹⁷

However, the two countries illustrated in the above table show a more moderate increase (0,6 and 1,1 respectively regarding mean annual change between the mid 1990s and mid 2000s) than most of the developed member states. In fact, highest rates are produced by Spain, Finland and Sweden.

¹⁷ Changes over the period mid-1990s to around 2000 for Austria, the Czech Republic and Spain (where 2005 data, based on EU-SILC, are not deemed to be comparable with those for earlier years)

Resulting household demand has grown slower since the crisis than before as shown in the following figure. Most of the CEE countries returned to the 0-5% range, while demand in more developed countries grows at a more moderate 0-3%. This shows some catching-up of CEE countries to Western consumption habits at least as far as consumption of goods and services is concerned.

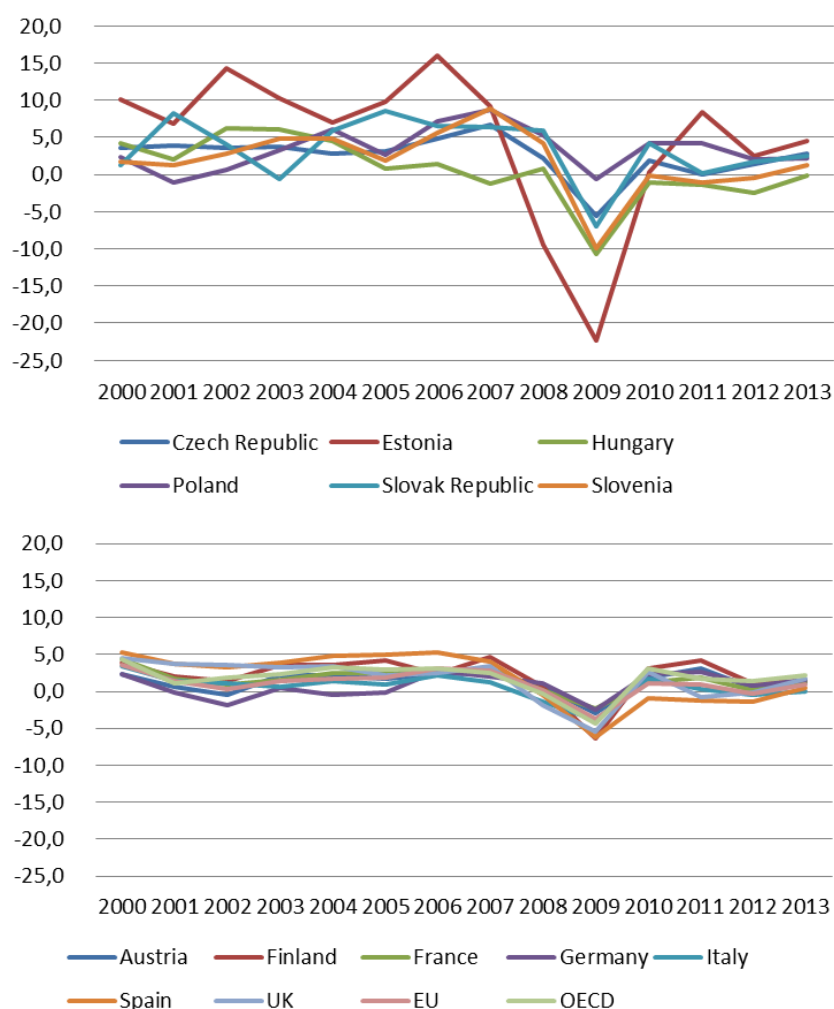


Figure 8: Real total domestic demand – percentage change from previous year
Source: OECD (2011): OECD Economic Outlook

Again, it is evident that from many aspects CEE countries show bigger heterogeneity compared to the older members of the European Union. Another example of this phenomenon is shown below illustrating the final consumption expenditure in selected countries.

All countries (but Poland) have seen a negative growth in final consumption in the year 2009, but while all more developed countries have stayed within the 0-5% range before and after this year, final consumption has often increased with more than 5% in CEE countries. Also, Estonia and Hungary have experienced decreases of more than 5% in year 2009.

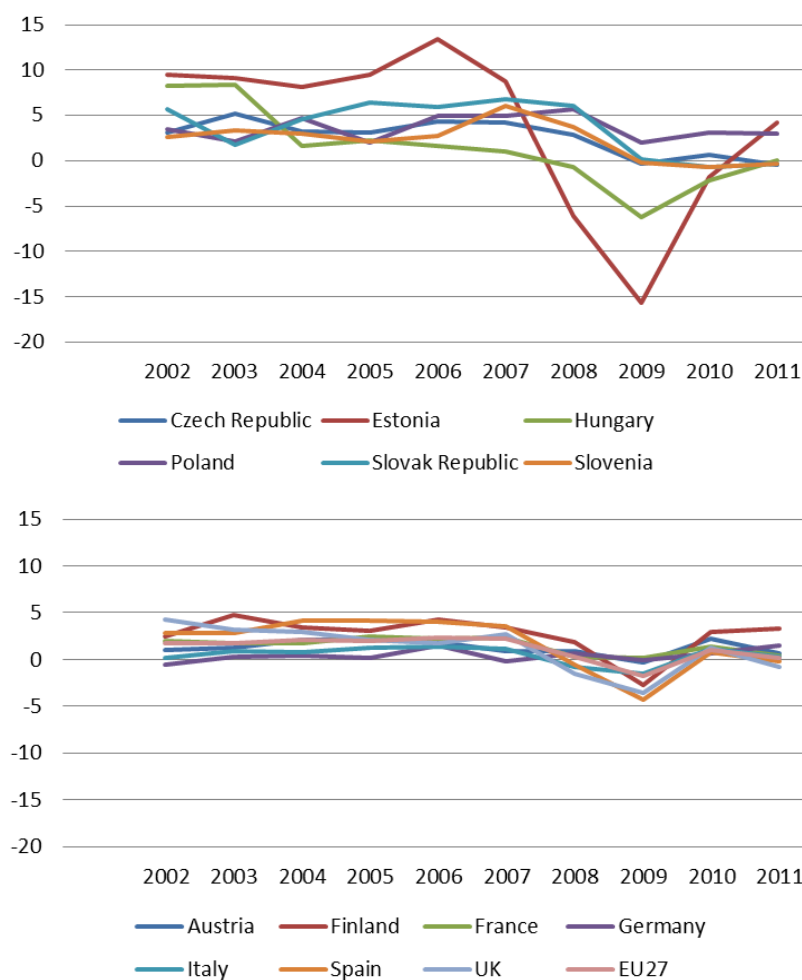


Figure 9: Change in private final consumption expenditure at constant prices
Source: OECD Factbook 2011

The actual volume of final consumption is shown in the following chart demonstrating the low share of CEE countries compared to other EU member states.

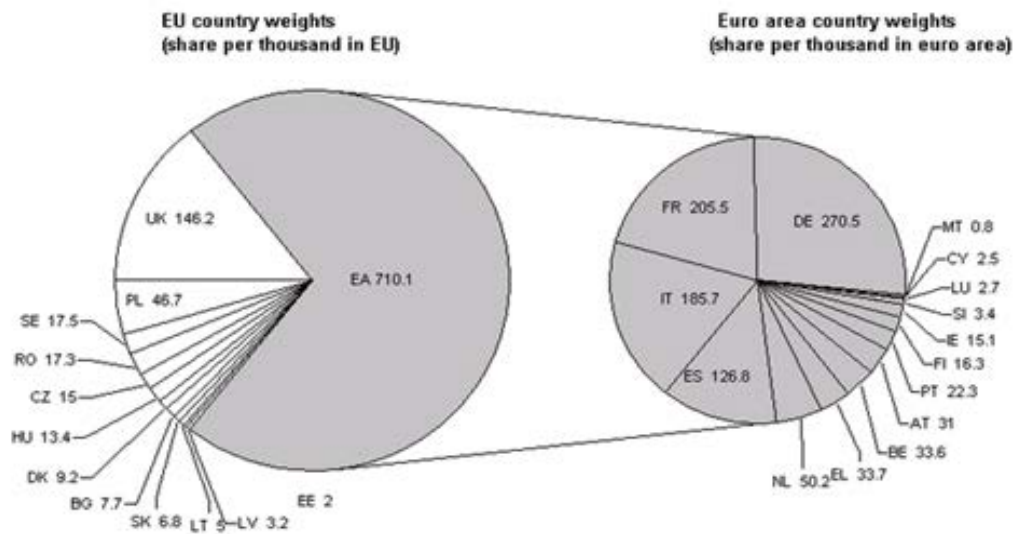


Figure 10: Consumption levels in the European Union, EU and euro area - country weights, Source: HICP – Household Consumption Patterns (2008)

These high levels of consumption, however, are not sustainable, as shown by the consumption-to-GDP ratios of selected European countries in the following figure. The chart does not only demonstrate the unsustainable lifestyle of European citizens from a long term, environmental point of view, but also the recent developments of European economic development.

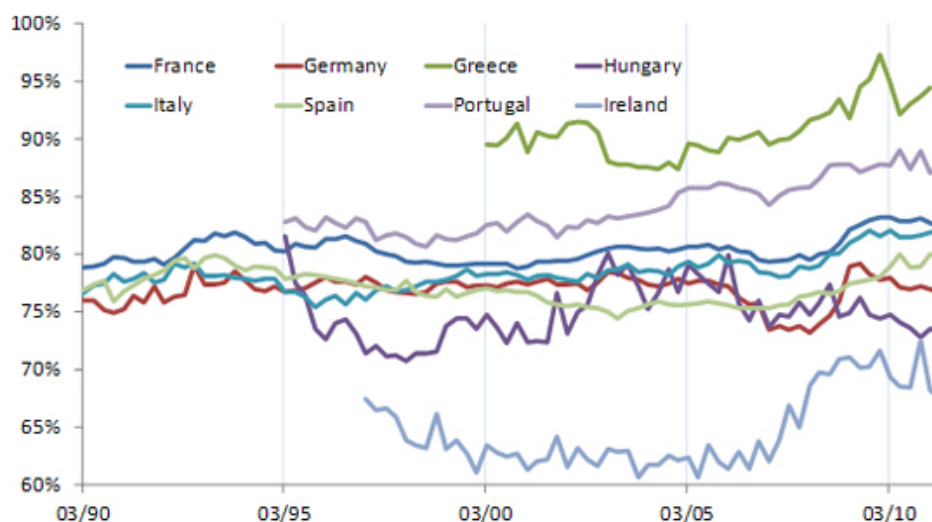


Figure 11: Consumption-to-GDP Ratio for Selected EU Countries Source: CEIC Data, cited by: Ernst (2011)

Based on the Sustainable Consumption and Production Indicators of Eurostat (Eurostat, 2012), the monitoring process in 2011 resulted in an evaluation regarding the changes since 2000 for the European Union. The evaluation highlights that there is “only a relative decoupling of resource use from economic growth, consumption of materials continues to rise, more and more cars are on the roads, more but smaller households are relevant with increasing expenditures” (Eurostat, 2012). On the other hand, “final energy consumption decreased in 2009, waste management is improving, although there is more hazardous waste, there is a decrease in atmospheric emissions, an increase in eco-label licenses and organisations certified with an environmental management system, and there are signs of agricultural de-intensification” (Eurostat, 2012).

Differences between CEE countries and other EU member states can also be seen regarding the structure of consumption. Before the economic crisis in 2008-09, the highest weights were attached to food, transport and housing, each being responsible for around 15% of consumption expenditure, both in the EU and the euro area. Around 10% was devoted to recreation and culture, and a bit lower weight to restaurants and hotels.

However, as the next figure and additional statistics of Eurostat show, the consumption basket is fairly different for the various Member States (Eurostat, 2011).

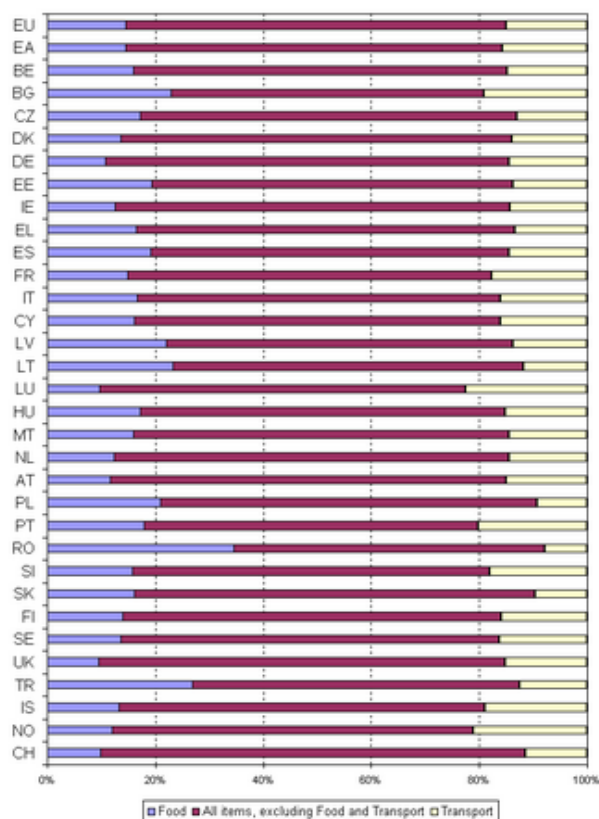


Figure 12: Consumption structure in the EU member states, 2008
Source: Eurostat (2011): HICP – Household Consumption Patterns

In 2008, the weighting for food varied between 11 and 12% for the United Kingdom, Luxembourg, and Germany, but was very high for Romania: 37%. “The share for transport in household final monetary consumption expenditure ranged from 8-10% for Romania, Poland, and Slovakia, to 19-23% in Bulgaria, Portugal and Luxembourg. Consumption

expenditure on recreation and culture ranged from 5% in Bulgaria, Portugal, Romania, and Greece to 15% in the United Kingdom. The weight for housing¹⁸ ranged from 8-9% in Malta, Cyprus, Greece and Luxembourg, to 22-23% in Slovakia and Germany.” (Eurostat, 2011)

Expenditures on health services also demonstrate the large difference between the various countries of the EU.

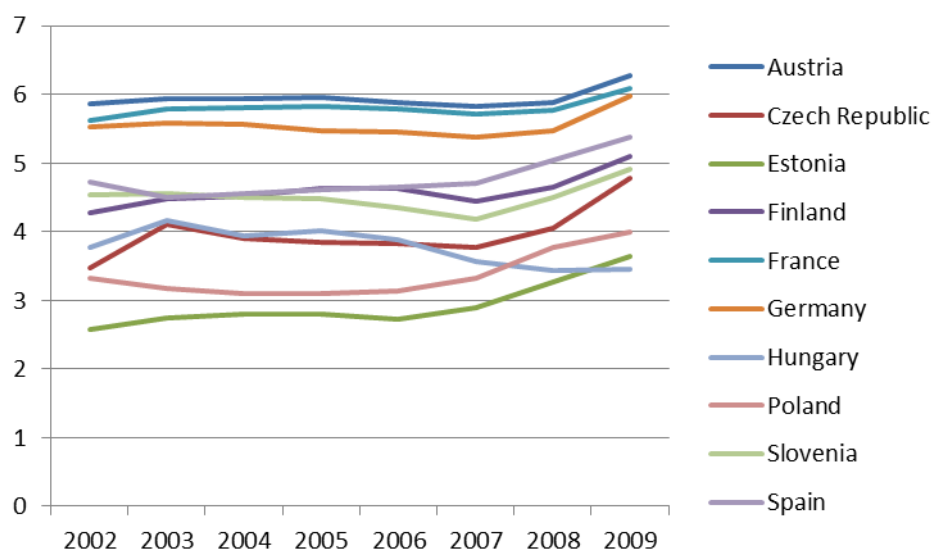


Figure 13: Total health expenditure - Services of curative & rehabilitative care (% of GDP)
Source: OECD statistics

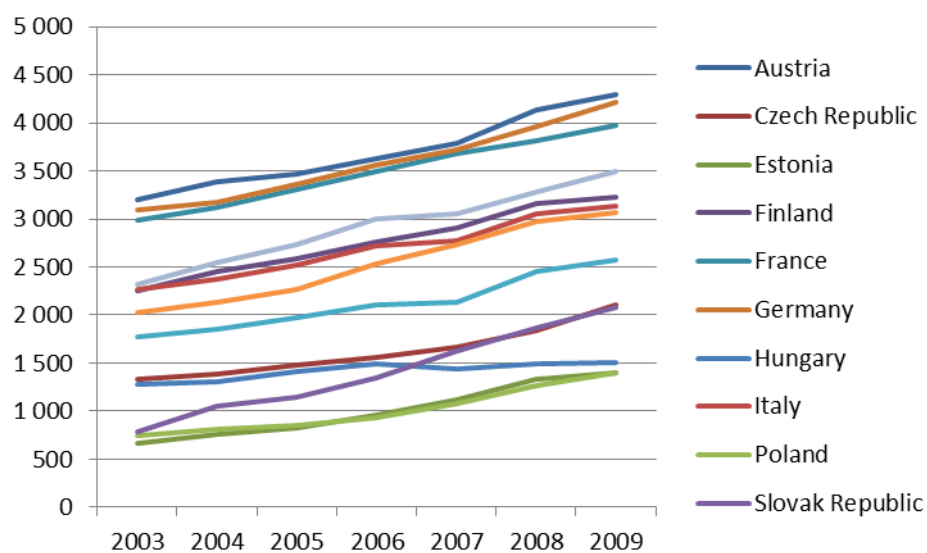


Figure 14: Total expenditure on health per capita - at current prices and PPP (U.S. dollars)
Source: Key tables from OECD, OECD 2011

¹⁸ As the housing category does not include services provided by owner-occupied dwellings, countries with a larger proportion of the population living in rented dwellings tend to have a larger weight for housing.

Both the share of health expenditures within the countries' GDP and their total value show significant discrepancy between the countries with developed countries spending more both compared to their GDP (a two time difference between the extremes) and in absolute terms (a three time difference) as well. It is interesting to note that health expenditures have not decreased as a result of the crises, but rather increased similarly to the previous years.

Another interesting indicator of consumption, the purchasing and registration of private cars is shown in the next figure. Here, the recession had split both CEE and other, more developed countries: Hungary, Estonia and Slovenia (CEE) as well as Spain, Finland and the U.K. (developed) showing a marked decrease in registration, while other countries (e.g. Czech Republic, Slovak Republic, Austria and France) being able to grow in this respect.

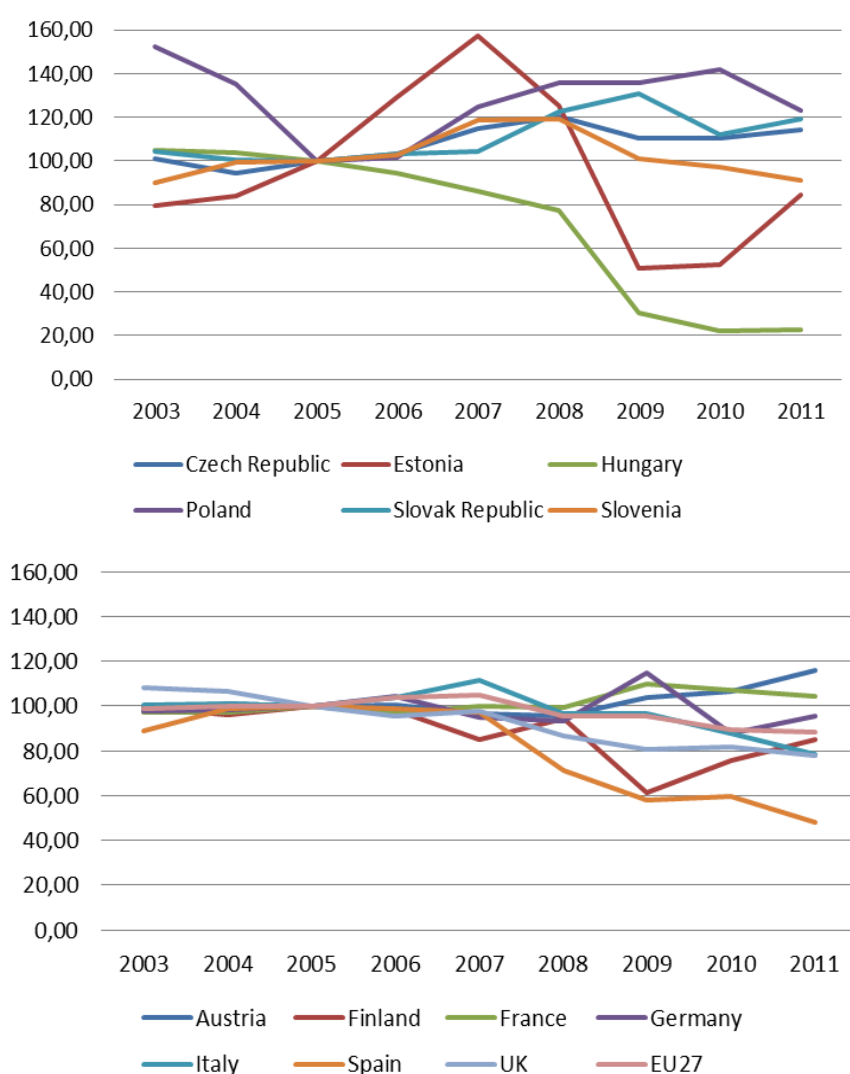


Figure 15: Passenger car registrations, 2005=100%
Source: OECD statistics

A more detailed picture of consumption patterns can be gained by looking at countries individually. The consumption patterns of households of different income levels can be illustrated by the relative importance (weight) of household monetary expenditure attached to different categories of goods and services. The situation after the economic crisis is reflected in the following figure for the case of Hungary.

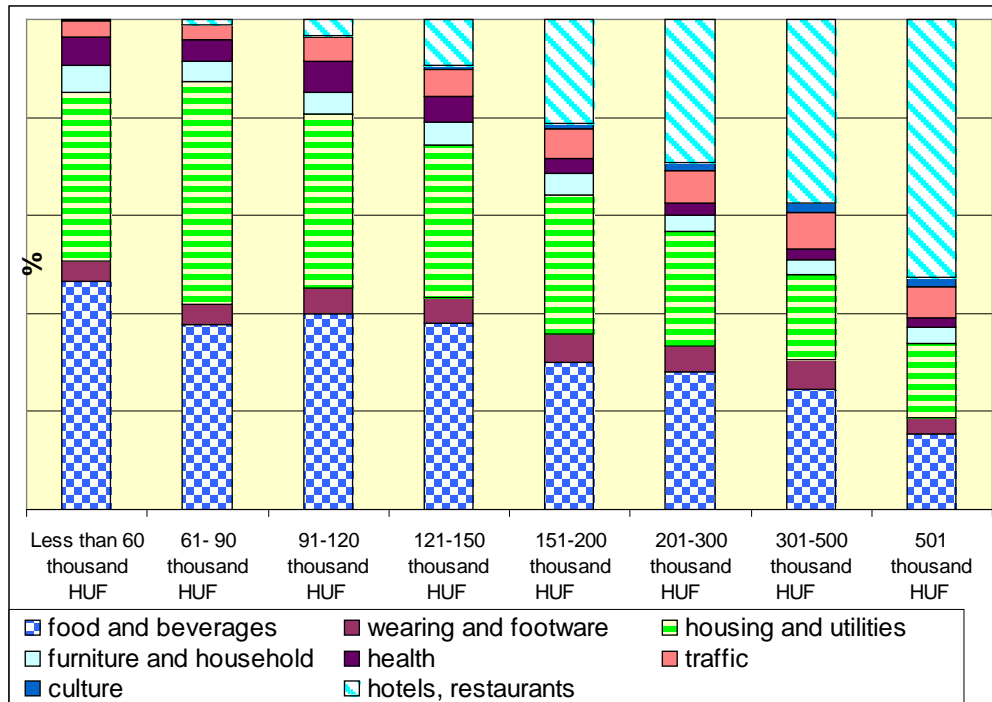


Figure 16: The structure of expenditure in Hungary,
Source: Vetőné Móznér (2012): Measuring the Ecological Footprint of food consumption

While in higher income households the relative weight of food and housing is definitely lower in the expenditure structure, leisure-related spending is proportionately higher. This picture alone would definitely lead to false conclusions about the sustainable feature of consumption in different income categories, so it should be supplemented by an indicator of the environmental impact caused by consumption.

The environmental burden caused by consumption is often measured by the ecological footprint. As seen from the next figure, 40% of the society consume within the ecological boundaries calculated for the country while consumers in higher income deciles are over the per capita bio-capacity level. This result shows that the seemingly favourable consumption structure of higher income families – where service-related elements dominate – are over-compensated by the generally high level of consumption in those households.

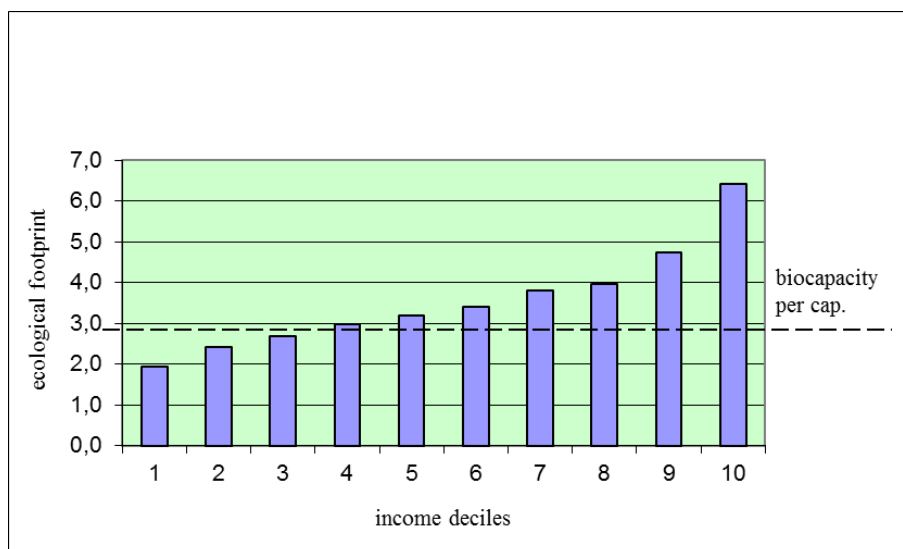


Figure 17: Ecological footprint per capita by income deciles in Hungary
Source: Csutora et al. (2009)

Attitudes towards sustainability and sustainable consumption

Globally, a recent study states that consumers became more conscious about sustainability issues worldwide (WBCSD, 2008). Consumer awareness is reflected in both consumption related choices and lifestyle patterns as well as reported future behaviour. However, despite of a significant increase in *reported* behaviour change, the shift towards *real* lifestyle change is much less obvious (see also Partidario et al. 2010 and Young et al. 2009).

On the European level, two Eurobarometer surveys can serve as background for analysing the attitudes of citizens to the environment (European Commission, 2008) and sustainable consumption (European Commission, 2009) in a comparative way. In line with the above quoted global survey (WBCSD, 2008), the awareness of environmental and sustainability issues was found to be generally high. Citizens of new member states appear to be significantly more worried about environmental problems than in 2004.

However, the importance attached to different environmental problems clearly shows that the relevance of directly behaviour-related issues – like consumption habits, impact of current modes of transport and urban problems – is well underestimated among European citizens (European Commission, 2008, p.8). Individual responsibility and role versus the responsibility of the big polluters are perceived quite differently in member states indicating a tendency that the citizens of Western countries consider their individual role in environment protection to a significantly higher extent than their Central and Eastern European counterparts (op.cit., p.17). Regarding actions taken for environmental reasons, country-specific features are much less region-specific than responsibility considerations. Not surprisingly, most popular actions like waste separation as well as reducing energy and water consumption were at the top of the list (op.cit., p.20).

The gap between attitudes and action can be well observed in the reported willingness to buy environmentally friendly products (even if more expensive) as opposed to the actual purchase (75% versus 17%, op.cit., p.27). Another gap in attitudes and behaviour can be noticed in the difference between reported importance of environmental impact in product purchasing decisions (compared to the importance of the product's brand) and

the ranking of environmental impact, quality and price considerations when it comes to purchasing a specific product (European Commission, 2009, p.5).

For Hungary specifically, the contemporary and future attitudes of the Hungarian society towards sustainability and sustainable consumption can also be evaluated based on a representative survey of 1013 respondents, implemented in 2010 (Csutora ed., 2010). The reported present elements of an eco-friendly lifestyle are illustrated in the following figure. There are more popular lifestyle patterns like separating waste, using environmentally friendly modes of transport or reducing energy and water consumption (see European Commission 2008 for comparison), while product-related activities are much less frequent. This means that the awareness of the environmental impacts caused by consumer goods is still low in the Hungarian society. 21,5% of the respondents even did not indicate one single activity.

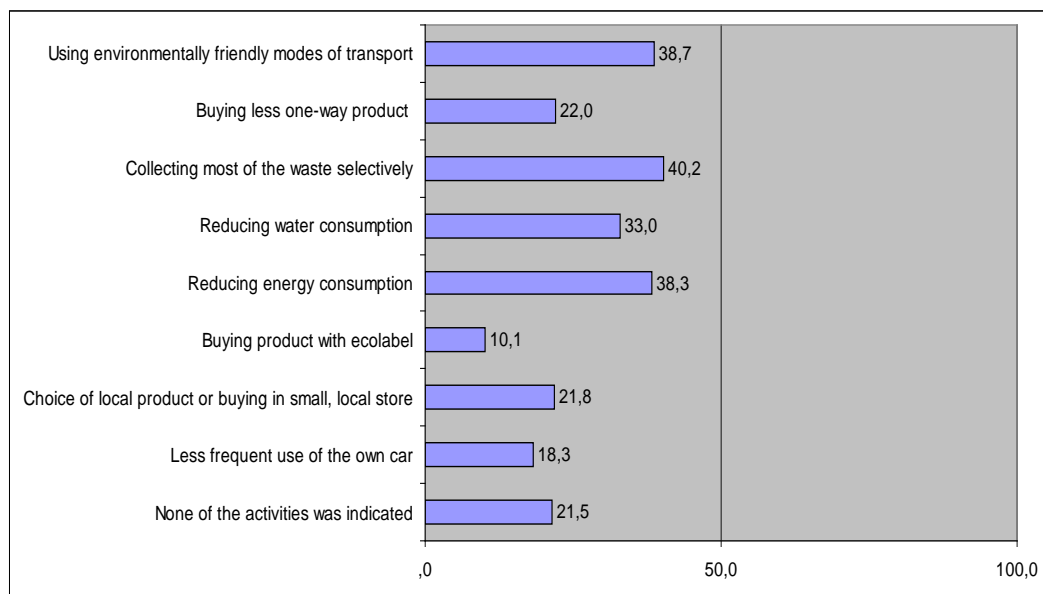


Figure 18: Pro-environmental activities at the time of asking (more answers possible)
Source: Zsóka 2011, p. 54

Generally low frequencies show that the unutilised potential in changing consumer behaviour and lifestyle of the Hungarian society is quite high. The question is whether society is open for such behavioural change or not. The following two figures indicate future attitudes of the Hungarian adult citizens, regarding sustainable activities. Figure 19 shows a detailed view of the answers, while Figure 20 contains the average values comprehensively.

Obviously, the Hungarian society is not willing to change meat consumption habits at the time, even if this would be a crucial factor in improving our ecological footprint. The same is true for energy use, as the majority of respondents rejected to use solar energy or other renewable resources at home – mainly for financial reasons. On the other hand, domestic or local products become more and more popular as well as buying energy-efficient devices, better insulating walls and changing heating habits.

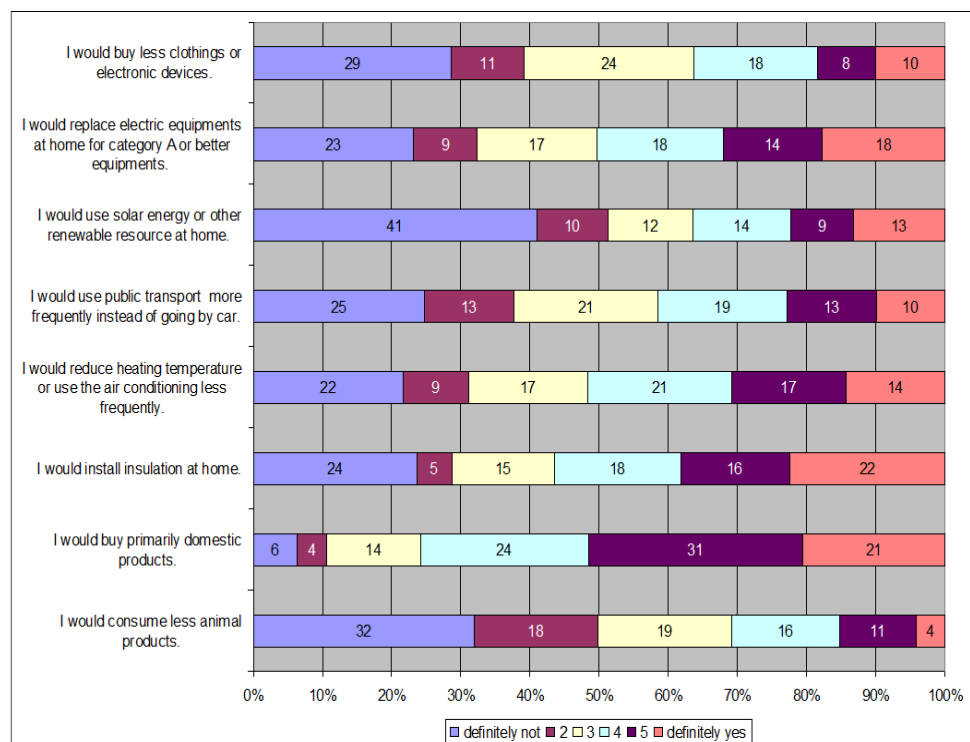


Figure 19: Willingness to act pro-environmentally in the future
Source: Zsóka 2011, p. 56

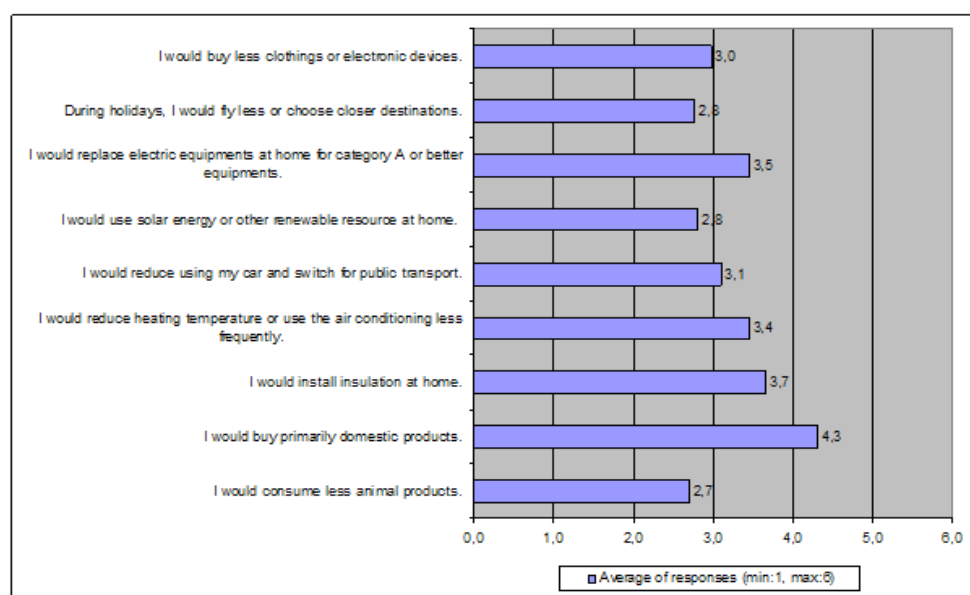


Figure 20: Average values for willingness to act pro-environmentally in the future
Source: Zsóka 2011, p. 57

As a result of the comparison between contemporary and intended future behaviour, the tendency is clear in Hungary: those who are generally more active in sustainable activities are significantly more willing to further change their behaviour towards sustainable lifestyles.

Conclusions

We have provided a snapshot of the economic and social trends prevailing in the countries of the Central and Eastern European region, putting a special emphasis on consumption patterns and their potential influence on the realisation of a more sustainable future. We have also attempted to shed some light on how the recent financial and economic crisis influences such a pathway.

Taking into account the short time span since the crisis hit Europe in 2008, it is hard to come to definite conclusions. However, data show that most of the major indicators explored have returned to their pre-crisis levels or are at least approaching these. While the European Union faces serious economic problems at the moment, it is hard to see any major structural changes which could redirect the continent onto a more sustainable path. This may seem contrary to some tendencies identified earlier (e.g. the volume of GHG emissions has been decreasing in some countries for several years now), but consumption patterns did not change significantly over the last two decades and without such a development we cannot expect major positive changes.

CEE countries have tried hard to catch up with their more developed counterparts in Western Europe since around 1990, but most will need another few decades to achieve their ultimate goal. This is shown most unambiguously by looking at the volume and structure of household spending (see e.g. the large variances in health expenditures). When finally implemented, however, such a development path would lead to unsustainable social and economic structures. Meanwhile, some CEE countries are hardly hit by unfavourable social changes shown by the rate of people at risk of poverty or social exclusion as well as the rate of severe material deprivation, causing social tension in the society and a more severe perceived level of the crisis. Those tendencies do not make it easier for the citizens to notice the positive potential in reducing consumption from a sustainability point of view. The “gift impact” of the crisis causing lower consumption levels is considered to be a burden for people, which makes attitude shaping more difficult.

Are countries of the CEE region learning from the mistakes of developed countries? Are they pursuing a different, sustainable pathway? Unfortunately, we could not find any data pointing in this direction and thus we have to assume that if there will be no serious intervention (e.g. by governments, more active civil society or the European Union which itself is looking for new ways of development), CEE countries can only add to the problem and not to its solution. However, there are some weak but promising features in contemporary pro-environmental activities and future attitudes of people as those who show higher environmental awareness in their everyday life at the moment, do not seem to have changed their mind as a result of the crisis, regarding their willingness to follow a more sustainable lifestyle in the future as well (see Hungarian results as example). The less or not at all committed part of the society should definitely be addressed by different consumer policy tools, as in their minds sustainable consumption is not associated with positive attributes.

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Discussant contribution: Growth vs. Degrowth

Felix Rauschmayer

I organise my discussion of the three papers as follows: first I say what I understood as the essential points in each of the papers, then I say something on each paper from my point of view, and finally – having presented the three papers – I present overarching questions.

Christoph Gran, in his paper “Diversity in Economics as a Necessary Condition for Post-Growth”, discusses from a theoretical point of view why a new macroeconomic approach is needed in order to unhook society from growth. He argues that mainstream economics is based on mechanics, relies on growth and technical progress, and “is delivering the theoretical base for the societal belief in continued growth combined with an unquestioned faith in market and technical solutions”. Furthermore he criticises mainstream economics for not giving appropriate responses to current problems linked to growth: i.e. in how far contributes growth really to well-being? Is it possible to respect environmental limits in growth economies? The positive effects on a more equal distribution through growth are far from evident. And finally: empirically, the highly industrialised countries experience an end of growth.

Therefore, Gran argues that new approaches should start from the “full-world” paradigm as specified by Herman Daly, meaning that they should model the economy within the environmental limits rather than without. New approaches should also rather be technologically pessimist instead of hoping on merely positive effects of technical progress. Finally new macroeconomics should rather focus on matter and energy than on monetary flows.

The main assumption of this paper is well explained by a quote from Keynes in the paper itself: “The ideas of economists [...] are more powerful than is commonly understood. Indeed the world is ruled by little else.” To my eyes it is not clear whether economic theory is hooking society on growth (p.1) or whether the theory is an expression of an underlying societal belief in growth and technical progress? Perhaps we encounter here a chicken and egg problem. Furthermore, it remains unclear to me how the new theory is to be developed, what it should contain, etc. – the approach taken by the next paper might give us some ideas.

The paper by Sedlacko et al. is based on the currently on-going RESPONDER EU project. At first, it analyses competing discourses of sustainable consumption and places itself in a discourse focusing on the social/systemic (and not individual) dimensions and ‘strong’ (not ‘weak’) sustainability. It presents the RESPONDER method based on participatory systems mapping and discusses first results in fields of transport, housing, food, total material consumption, and LOHAS popularity. The project has the aim of knowledge brokerage across the double divide of pro- and beyond-growth politicians and scientists.

The ‘RESPONDER method’ combines participatory modelling approaches and soft systems thinking and could be used for different inter- and transdisciplinary endeavours (such as building a new macroeconomic theory). The results presented in the paper go into too much detail for being included in this summary, but give an impression how the method can be used. Using the method seems to give surprising results.

Overall, there is too much (interesting!) material in one paper and the authors should consider whether it would not be better to split up the paper in two or three. The aspect of knowledge brokerage, the main aim of the project, has not become clear to me. Considering the political system as rational (without specifying what is meant by rational) and combining this with a systemic perspective does not seem to be coherent. This unclarity also relates to the second positioning of the project within the strong sustainability tradition.

In my eyes, the confrontation of individualistic and systemic approaches to sustainable consumption opens up a new field of research, as to how to link those approaches? This confrontation could become relevant when arguing for 'strong' sustainability policies, as it remains unclear how a protest-effect induced by too much paternalism and normativity can be avoided. It is my impression, though, that focusing on systems only falls as short as focusing on individuals only.

The paper by Zsóka and Zilahy promises "a survey of the most important aspects of social and economic development in the CEE region from the point of view of (sustainable) consumption". It delivers a vast array of data on social and economic trends, consumption patterns in the EU (source OECD etc.) and, more specifically, on Hungarian attitudes on pro-environment behaviour. It confronts the reader with the question whether the wish of many Hungarians to catch up with Western European standards of consumption is legitimate or not. It also shows an apparent divide amongst Hungarian consumers: those already engaged in pro-environmental behaviour intended to intensify their endeavours, whereas the others (the majority) has no intention to do so.

In the paper, I have not found (as promised) separate assessments of the region from the point of view of sustainable consumption. Neither did I find consumption scenarios nor explicit policy options toward sustainable consumption. As the paper does not contain a conceptual model in order to understand the selection of data or their interrelations, I was not able to link this paper to the other two.

General ideas for discussion

It seems to me that we need new processes of model-building and new variables to build beyond-growth models (instead of pro-growth models). Which processes and variables are most appropriate?

Is a mere systemic understanding of 'beyond growth' sufficient? If not, how to link it to individual models?

Is there place in our political systems for paternalistic policies for 'strong' sustainable consumption?

Discussion Report: Growth vs. Degrowth

Tullia Jack

Emerging general topics

A third way

The discussion is started with the argument that we are locked into a binary debate between the prevailing growth paradigm versus the emergence of de-growth. To overcome this it is suggested that fruitful and more constructive discussions could arise from conceptualizing a third way or 'middle way' of thinking. Such an approach it is argued could help to change the prevalent economic logic and might be more constructive than the growth vs de-growth dichotomy. This suggestion is challenged with the argument that there have already been various attempts to establish a 'third way'. As governments are promoting growth as solution to all problems, it is necessary to explicitly contest the primacy of growth in current discourses.

For practice, however, it is demanded that reality needs to focus on pre-figuring small groups to model their own "new ways". Especially grass roots movements can be more responsive, possibly holding the key to change into the future, thus there are locally relevant and diverse answers to multiple problems. Especially the challenge of the alternative ways of being arising through dealing with the health and welfare systems that existing populations are dependent on.

Degrowth and RIO +20

In context of the RIO+20 conference¹⁹ it is pointed out, that the main discussion are around green growth for developing countries, but that there is very little discussion about de-growth for developed countries as no government wants de-growth. In addition concerns are raised that developing countries are not being pro-active in this discussion because it is difficult to experiment with new things when countries are developing quickly. Nevertheless it is argued that focusing on green growth is 'stop-gap' rather than an effective long-term solution.

In the debate de-growth is described as a 'wicked' problem linked to the fundamental human desire to go upwards. The main human challenge here arises from designing for 'peaking', inherently including 'descent'. While on one hand the need for a new science or philosophy of wellbeing is demanded others raise the concern that the political and academic discussions are already disparate.

Main discussion points on the paper by Gran

Gran's gets compliments for the summary of the background of economics and physics. A model that incorporates equilibrium patterns with participatory processes would be

¹⁹ By now it is the Rio 20+ discussion, for which, however, the arguments still fit.

beneficial, for example, to address some of the limits of current economic models. Economic models should be chronologically reviewed for their relevance, for example Sweden embraced rapid growth between 1946 and 1950 but no longer considers economic growth as progress, it was suitable for that time but is long worn out (30 years). As progress and policy is not rational, interests, power, policy structure and media need to be included as variables, to ensure any real usefulness in economic models.

Various participants agree with questioning the blind faith in producing scientific knowledge especially in the field of economics. Instead of methods finicky academia should start to tackle the real ecological problems, citing closed loops and systems thinking as elements of a diverse range of economic approaches to relieve environmental problems. What is needed is a variety of tools and theories to resolve the myriad of problems. Some hope is expressed that the current economic crisis will enable alternative economic models. A range of more 'radical' tools already emerge from alternative universities in response to problems, which enables them to develop radical ideas, aside from commercial interests. For example such changing the science of economics and the evolution of risk analysis can be fertilised from physics, keeping in mind, however, that physics is not rational and objective as well but all science is socially constructed.

Part of the systemic need to transition politics, culture and theory, science needs to be changed from within and from outside the system. The challenges of heterodox economics (changing from within) gives rise to parallel external pressure; changing the system from outside by capitalizing on active communities and raising public pressure, e.g. writing letters, public awareness. Such concerted action could lead to changing curricula and establishing more alternative professorships.

Main discussion points on the paper by Sedlacko et al.

Some skepticism is expressed around the concept of knowledge brokerage. It is explained that knowledge brokerage is predominately a dialogue process. Its analytical lenses don't create new knowledge, only shed new light on existing knowledge. This however, leads into questioning the rationality of policy making. In 'knowledge brokering' it is argued one of the assumptions is that policy makers are rational, which they are not, and so creates a weakness in the participatory elements of sustainability science.

The RESPONDR project is aware of these weaknesses and seeks to be part of a stream that changes powerful policy individuals, within the un-rational human centered realm of policy.

Main discussion points on the paper by Zsóka and Zilahy

Some discussions arise about the level and efficiency of consumption in different income classes. It is explained that low incomes consume less, but that they are not as efficient in consumption patterns as they do not have economies of scale, but that this is overridden by their overall lower rates of consumption.

The paradox of the rebound effect is stressed in this context, where increasing efficiency of car use leads to increasing car use.

Various contributions are made, explaining as well as questioning the 'catching up' model. Some coherence appears that to create sustainable societies 'catching up' not a useful concept and that local background and welfare needs are core considerations in imagining alternative future scenarios. Different arguments are presented as to what pushes this

model. One participant recognises a prevalence of “catch up” mentality within the developing nations, asking why they emulate unsustainable systems and wouldn’t they have the possibility of leap frogging unsustainable consumption paradigms and go from frugal by necessity to beautiful simplicity? A counter argument is given that the model was exported to Central Europe after the collapse of communism. The IMF requests are based on implementing models that go against good local practices, with detrimental effects. Spain is given as another example in this context, where there is pressure to implement changes in a health system that is already efficient and sustainable. She suggests that the EU union pressure to implement co-payment and other finance schemes contravenes sustainability.

Beyond Growth : exploring the alternatives

Healthy, wealthy and wise?

The future of health and social policies after economic growth

Christine Ax and Friedrich Hinterberger

aha Berlin (www.aha-berlin.com) and SERI Wien (www.seri.at/FH), respectively

The Problem

In times of weak economic growth, there are few things which worry citizens and governments more (maybe besides decreasing job opportunities) than the security of the pension and health system. The risks that are currently being discussed regarding these systems are closely linked to future and state of employment as well as growth and distribution of income. If nothing happens, countries like Germany or Austria will be threatened by a "demographic trap". In Germany today, many experts believe that entire cohorts will be in a state of poverty after retirement. If the economy does not continue to grow, stagnates, or even begins shrinking, not only the income of social security funds decreases but also the fiscal possibilities to deal with this development by increasing subsidies from general tax revenue.

The increasing number of older people who want to live a longer and longer period of their pensions as well as the growing portion of the elderly and patients with severe health problems such as dementia simultaneously drives up the costs for the health system and pensions funds to non-fundable amounts. At the same time, the funded pension system with its need to earn the necessary returns on capital, contributes to the problems of today's financial markets.

This paper will show that the crisis of pension and health care systems are two sides of the same medal and need to be solved in an integrated manner.

Challenges

When GDP does not grow, increasing pensions and funding of health care must decrease other parts of aggregate demand/supply. But at the same time, if GDP would remain constant at a high level and also the number of people remains the same, the average income could remain the same – or redistribution occurs in one or the other directions, from rich to poor, from younger to older people or the other way round.

The following strategies are currently being discussed to solve this problem:

- Immigration - to allow growth (of GDP and tax revenues) through higher labour supply
- Extension of working life - Pensions only starting at age 70 to age 75 – to allow expenditures to shrink

- Lowering the level of pensions and health insurance expenditures.

The attempt to compensate the deliberate and planned cuts in benefit levels through a "second pillar of retirement provision" by saving up for an individual and personal pension is currently failing for many people, and quite possibly also as a system in general due to the effects of the financial crisis.

Therefore, in Germany once again the minimum pensions are being discussed. It is however only slightly above the level of what is considered a minimum income ("Grundsicherung") and thus ultimately leads to poverty as well. For this, in turn, the Government is responsible, which due to the reasons mentioned above cannot be ensured at this level: A level only achieved when constant economic growth automatically brought increasing revenue and "distribution margins" to the state treasury. All this leads once again back to the growth dilemma explained earlier.

On the other hand it is also true that early retirement and long phases of exclusion from social life contributes to health problems, including dementia. For a long time - at least since the work of Ivan Illich - there is a fundamental critique of modern medicine and the consequences which the continuously faster-growing complex of the medical industry has for the society and all of us. There are legitimate doubts about the efficiency and financial viability of this system. The very fact that the focus of today's medical research is always disease and very rarely the question what health and well-being actually means and how it could be strengthened is a clear signal for this development.

Health research shows, however, that by investing in education, a healthier work environment and thus in general living quality we achieve more than through further bloating the current health system. There are merely any sectors where the win-win opportunities coming with a declining sector are closer connected than here.

Educational deficits, loneliness and isolation, poor nutrition, lack of exercise, poor working and living conditions which are the opposite of those children and adolescents should have all have proven to be important causes of disease. Conversely, useful, intrinsically motivated and lifelong activity/work has proven to be a key to lifelong health.

In short: It is exactly this "sick" healthcare and pension system which serves as a perfect example for the type of growth that by continuously becoming more expensive to maintain exacerbates a problem it is supposed to solve.

The question arising in this context is: With which measures and strategies could Western Europe escape this dilemma? How could a strategy look like that gives answers in terms of "better quality of life" or "flourishing"?

Opportunities and Solutions

In relation to this issue, there are two fields that are relevant and very closely related:

- A better quality of life and an environment in which the populations chance to be healthy and active.
- Rethinking and a change of course in relation to the meaning and distribution of work as well as – like previously mentioned – a "healthy" work environment.
- A paradigm shift regarding the general topic "health".

What we should look for is a life-long system of work-life balance that accepts changing abilities to contribute to society in a much more flexible way than today's pension system

that is mainly based on an either-or thinking: either contributing to or profit from the pension system which means nothing less than either contributing to or being subsidized from actual GDP.

Downsizing or expanding?

In Germany, the labour unions and social democrats are campaigning against raising the retirement age of 67. Working until the age of 75? Such a call is currently facing strong criticism from society. In the USA people would rather sympathize with the idea that everybody can work as long as they want.

Experts assume that children born today will live to be 100 years old. Already the generation of the "baby boomers", i.e. our generation, has an estimated lifespan of more than 80, maybe even 90 years. This forecast is not trivial, and every additional month we - the pensioners of tomorrow - live has far-reaching impacts on the financial feasibility of the pay-as-you-go pension systems.

In order to assess the consequences of demographic change on pension systems it is important to know how many healthy years a retiree can expect after the 65th birthday. Every single healthy year after the age of 65 is a cost factor for the pension fund, while every year of disease is covered by the pension fund and the health fund.

Currently, experts assume that Central Europeans do not only live longer, but also have the possibility to remain healthy for a longer time. This can be blessing or curse for us depending on how we distribute the burdens and the fruits of this development among the generations.

The current distribution is not sustainable. This is especially true for the generation of "baby-boomers", since age groups with a high birth rate form a demographic overhang. After the overhang, there will be an easing of tension, but this does not solve the basic problem (the ratio old/young and economically active/non-working).

Getting out of this impasse is difficult, so it is not surprising that politicians keep calling for economic growth in order to solve the dilemma without really harming their voters. However, this is doomed to failure because these high growth rates, which are needed in order to maintain the status quo, will not exist in the future.

Therefore we have to ask ourselves: How can we distribute the burdens caused by mistakes in the past equally among all generations and the society as a whole? Neither the elder nor the young can solve this dilemma alone. This can only succeed through joint and solidary action.

The Bermuda triangle

Pensions

The social security systems (health funds, pension scheme, long-term care insurance) are built on sand. Their funding is linked to labour, hence they eventually make labour more expensive (excluding civil servants and the self-employed in Germany). Due to the debt limit, stabilizing the social security systems through state aids is no longer possible. Factoring in financial risks caused by the euro crisis, the situation becomes totally unclear. In contrast, a financial crash could also be a chance to make the whole system sustainable.

The pension forecast for Germany is pessimistic. Old-age poverty is becoming more common, especially for women. It is already predicted that the tax payers will have to cover the additional costs through basic security or the new German flexible pension ("Kombi-Rente").

The casualisation (employment shifting from permanent and full-time to more casual positions) of a quarter of the German employees causes additional debt to be accumulated by the current generation, which is then passed on to the following generations: Rising casualization usually means less contributions to the social security system and – at the same time – a rising number of people in need for social benefits.

When the above-mentioned casual workers apply for basic security or are in need for nurturing care, our current social system will become expensive.

More and more Germans – again, primarily women – receive such a small pension that they cannot afford care. At the same time, the number of single households and pensioners without children is rising. If the number of dementia patients increases as well, the burden for the working section of society will be too high – especially regarding the fact that the percentage of economically active people is constantly declining.

Pension forecast

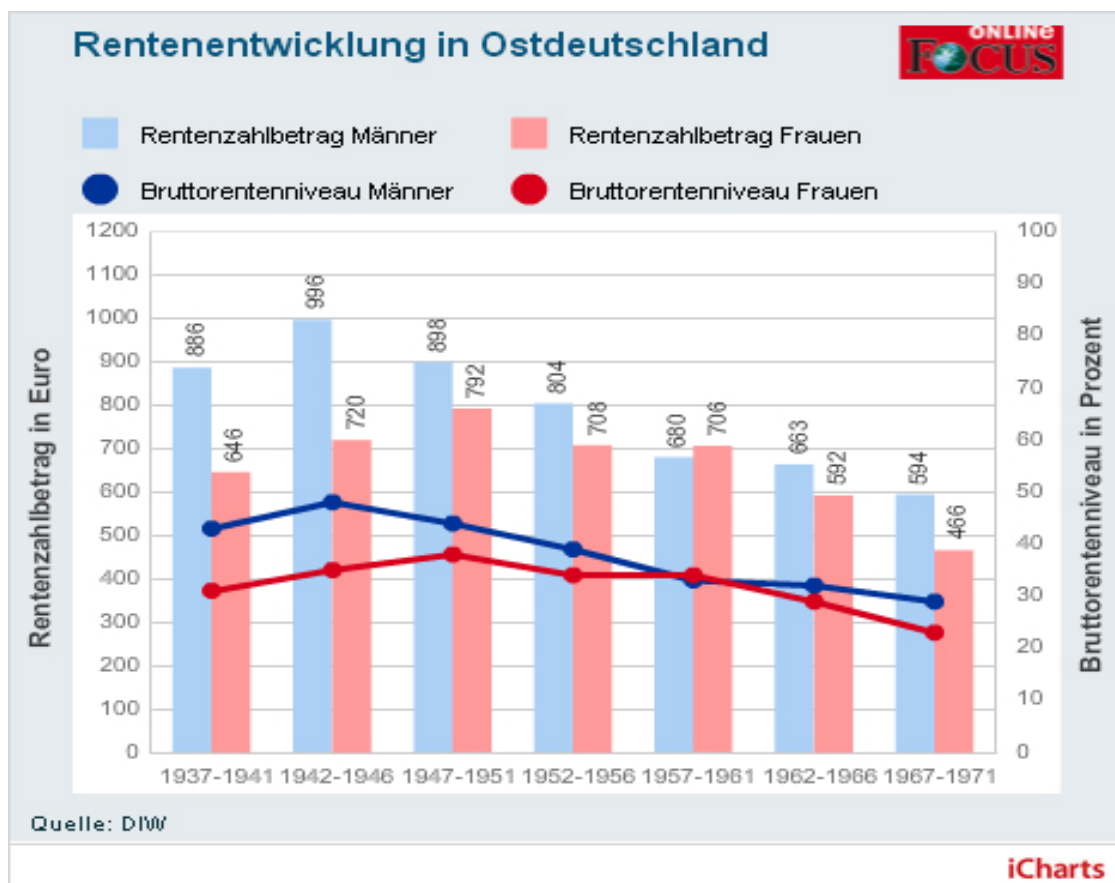


Figure 1: Development of pensions in Eastern Germany

-] Amounts actually paid for the pension system (percentage of the wage used for the pension system - men
- Amounts actually paid for the pension system - women

] Gross pension level - men

□ Gross pension level - women

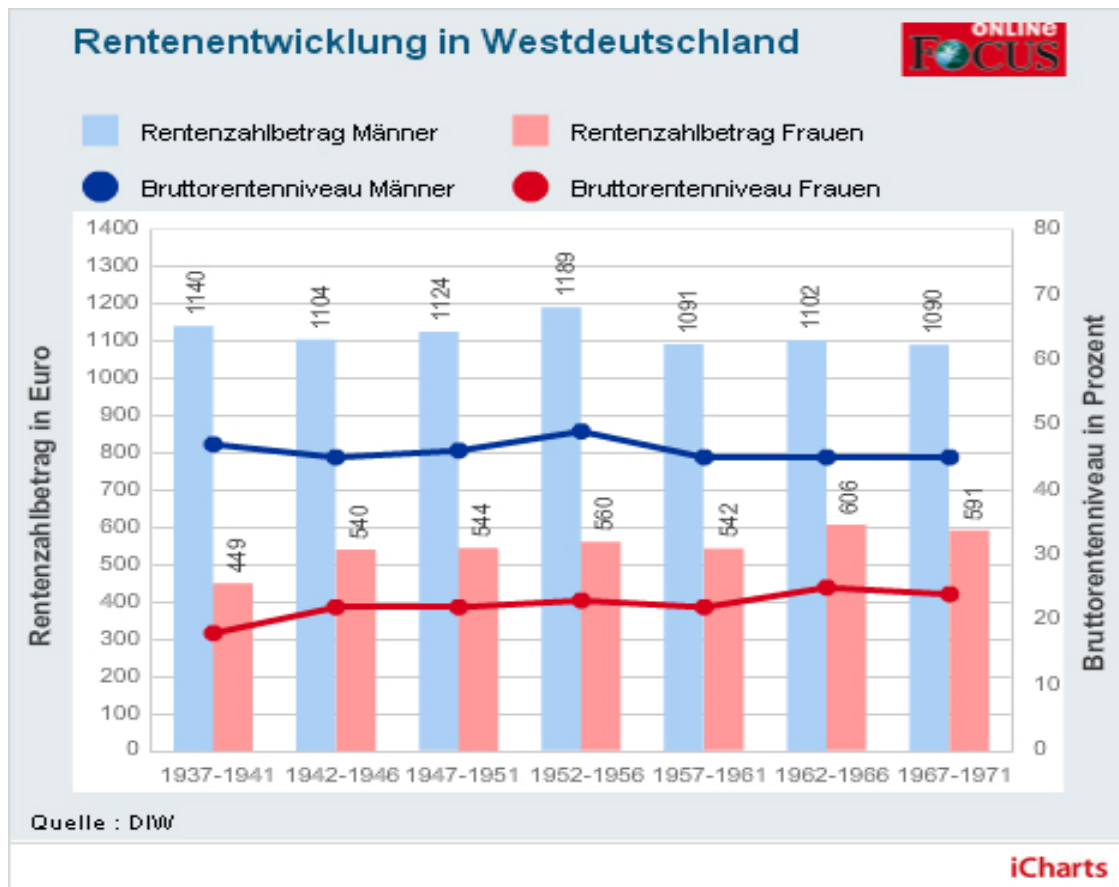


Figure 2: Development of pensions in Western Germany

With that said, following facts might be interesting: A place in a nursing home currently costs between 2,800 and 4,000 Euro – depending on level of care and the nursing home. The maximum amount pensioners in care have to pay is approximately 2,000 Euro. The rest is covered by the long-term care insurance/funds. For most of the people living in nursing homes, this retained amount is paid by the social welfare office though.

Health care

According to Statistisches Bundesamt, the health care expenditures totalled 245 billion Euro in 2006. This corresponds with 10.6 per cent of the GDP (1996: 10.4 per cent) respectively 2,976 Euro per capita (1996: 2,376 Euro).

Between 1996 and 2006, the health care expenditures rose by 25.7 per cent in total. In the years 2005-2006 alone the expenditures increased by 5.7 billion Euro respectively 2.4 per cent.

According to forecasts, health care tax (employees' contribution to the health care system) will increase from 16 % (today) to at least 20 % of the income. This is not traced back to the demographic factor, but to medical-technical progress.

With increasing age, the health care costs per capita rise disproportionately: In 2006, people below the age of 15 (1,260 Euro) and those between 15 and 29 (1,190 Euro) had the least costs per capita. Until the age of 44, the costs per capita were still below the average of the total population (2,870 Euro). Among the 65-84 year-olds, the costs were already twice as high (6,090 Euro), among those older than 84 even five times as high (14,370 Euro per capita).

All in all, 47 per cent of the total health care costs were caused by people above the age of 65.

Drivers of these cost increases will be the rising expenditures for care, above all the care for dementia patients. According to forecasts, the total expenditures for dementia patients will rise to 85-143 billion Euros by 2050. Today's system of care insurance is not sustainable according to experts and politicians; moreover it is unclear how we can deal with these cost increases.²⁰

Do we need growth in order to make our health system's development possible?

In their study "Health care expenditures in Germany: A macroeconomic analysis of their long-term financial feasibility", Michael Schlander, Oliver Schwarz and Christian Tielscher address the issue of the health care system's financial feasibility in relation to economic growth. According to the authors, limits of the health care system's growth have been reached when the whole annual growth of GDP is used to compensate the rising costs of the health care system.

Tab. 3 Szenarioanalyse: unterschiedliche Annahmen zum Wirtschaftswachstum: Auswirkungen des optimistischen (1,7–1,8% reales BIP-Wachstum pro Kopf und Jahr) und des pessimistischen Szenarios (0,4–0,9%) sowie des Szenarios „Fortsschreibung“ (1,2%) auf die Wachstumsrate der nicht gesundheitsbezogenen Ausgaben und den von den Gesundheitsausgaben absorbierten Wachstumsanteil. BIP = Bruttoinlandsprodukt; NGA = nicht gesundheitsbezogene Ausgaben; GA = Gesundheitsausgaben; alle Angaben in Preisen von 1995 und pro Einwohner

Jahr	optimistisches Szenario		pessimistisches Szenario		Szenario „Fortsschreibung“	
	Wachstumsrate NGA	Anstieg GA/Anstieg BIP	Wachstumsrate NGA	Anstieg GA/Anstieg BIP	Wachstumsrate NGA	Anstieg GA/Anstieg BIP
2002	1,51 %	22,63%	0,61%	34,53%	0,91%	28,58%
2010	1,45 %	26,44%	0,55%	40,41%	0,85%	33,42%
2020	1,36 %	32,11%	0,46%	49,17%	0,76%	40,65%
2030	1,14 %	40,23%	0,09%	75,73%	0,64%	49,44%
2040	0,98 %	48,88%	–0,08%	92,20%	0,48%	60,12%
2050	0,75 %	59,38%	–0,56%	165,27%	0,25%	73,12%
2060	0,42 %	72,15%	–0,90%	201,31%	–0,09%	88,92%
2070	–0,10 %	87,66%	–1,45%	245,21%	–0,62%	108,15%

Source: Schlander, M. Schwarz, O. Finanzierbarkeit steigender Gesundheitsausgaben, Geund ökon Qual manag 2005; 10: 178-178

As shown by the table above, our current health care system's financial feasibility is highly dependent on growth. If the real growth rate lies below 1 %, our health care system cannot grow the way providers of health care services imagine.

²⁰ G. Doblhammer, A. Schulz, J. Steinberg, U. Ziegler, Demografie der Demenz, Verlag Hand Huber 2012

When studying these data, it is extremely important to keep in mind that the current demographic development does not cause the increase in health care expenditures. The predicted costs are a function of the predicted medical-technical progress which influences what kinds of income contribute to the pension fund.

In the study quoted above, neither distribution issues of revenues and expenditures are taken into account.

Labour market and demographic transition

The growth needed in order to enable us – as a society – to pay the health care expenditures mentioned above is mainly dependent on following factors:

- Labour productivity
- Number of working hours
- Qualification/employability

The current demographic development has a substantial influence on the quantity as well as the quality of labour supply. The proportion between the working section of the population and those living from the GDP is developing negatively. More and more people have (and want?) to live at the expense of the people who work and pay social security contributions.

Currently, there are already five non-workers per four workers. In 2035, two working people will have to be productive enough to finance three other – non-working – persons' life.

In 2005, Germany's citizens worked 16.5 hours per week on average. The number of weekly hours will decrease by 8 % by 2025 due to demographic transition. This development is also happening in other European countries: Italy's, France's and the Netherlands' economies will shrink by 10 % due to demographic factors. Therefore there is no doubt that the number of working hours as well as the quality of labour supply will be two of the main factors limiting economic growth.

At this point, though, it is impossible to say whether this is a blessing or a curse, as the working world itself actually creates most of its own constraints.

Before moving on, a closer look to labour supply would be interesting. The current life expectancy is 77 years for men and 83 for women. By 2050, these figures are expected to have increased to 88 (men) respectively 89.9 (women) years. Demographers like J. W. Vaupel, PhD, from Max-Planck-Institut für demographische Forschung (Max Planck Institute for Demographic Research) and his team are assuming that working lifetime grows linearly and will soon increase up to 94+/- 2 years for women.

The number of healthy years after the 65th birthday is 17 on European average; however, in Germany it is significantly lower: around 13 years. Already today we have five additional healthy years and if we do it right, our children and children's children will be able to live and work in good health even longer.

This is another important reason for reconsidering the whole topic "pensions/health" as well as examining and evaluating it from the "beyond growth" point of view.

Working world: Chicken and/or egg?

As already implied above, the organisation of the working world itself causes these problems in a large part, even in several respects:

- More and more often, gainful work makes unhealthy and unhappy

There is a growing number of surveys proving that working world itself – lacking access to employment, work intensification for those who are employed, lacking financial as well as social recognition and security – makes people ill and forces many of them to premature pension. Beside the factors “social status” and “education”, the world of gainful work is one of the most important causes why people cannot live and work in good health up until old age.

- Businesses discriminate women and elderly employees

Until now, it has not been possible to raise the percentage of working elderly people. Businesses still react reservedly to elderly people’s job applications and do not “invest” in further education of their elderly employees. Women still earn almost a third less than their male colleagues and are threatened by old-age poverty if they temporarily stay at home or work part-time because of children. Children remain the main poverty risk factor for single parents and families with more than three children.

- Economy obstructs family foundation and family well-being

The way working world is organised, it obstructs family formation in several respects: Long periods of education and the general casualization of labour (“internship generation”, fixed-term employment contracts, temporary work) do not represent good preconditions for family foundation. As mentioned previously, children represent the main career barrier and poverty risk factor for women. Working hours and work intensification have a family-unfriendly impact.

- Economy and society are failing regarding the maintenance and promotion of work ability

It starts with the educational system and is visible throughout all sectors and workplaces: In too many economic sectors, social inequalities are sustained and those who have already been disadvantaged at school are also discriminated, exploited and exposed to higher health risks later. The best precaution against poverty, disease and early death is a high level of education – and this is relatively unlikely for those whose parents do not have a high educational qualification. The higher the educational or the professional qualification, the more is invested in maintaining work ability and further education. This issue is being intensified by the casualisation of the working world and the growing percentage of temporary work.

What do we need in order to be healthy?

Our “health care system” is, structurally, a “nursing system”. Not health maintenance is being financed, but medical treatment. This applies particularly to the enormous financial resources spent on research and development. Important indications on the causes of disease and the conditions needed to maintain or restore our health are provided by

sociological surveys, social psychology and even philosophy. In his book "Was es bedeutet gesund zu sein" (What it means to be healthy), Klaus Michael Meyer-Abich levels interesting criticism at our understanding of health and disease. Moreover, he supports his thesis about health having become a mostly non-medical task with numerous sociomedical surveys.

According to him, a too large part of our economic resources is used for medical care (which is only reactive). He promotes making the opportunity cost of medical services the basis of health policy decisions. Furthermore, he underlines that educational or social policy measures for re-integrating our fragmented society make a larger contribution to health than further investments in the medical-technical sector. Meyer-Abich also identifies unhealthy lifestyles as well as bad working conditions and social inequalities as the main sources of disease. He speaks for "Health through satisfied needs" (Gesundheit durch erfüllte Bedürfnisse). "If health means wholeness – which implies that there has to be a shortage when we are ill – diseases are more strongly related to our lives than most of the people think and want to hear. Not identifying oneself with our body, but only entrusting our body to a physician every now and then in order to have it maintained or to have him remedy malfunctions, is an apparently comfortable attitude to life²¹." (p. 443). Meyer-Abich moreover identifies the basic needs as existence, relatedness and self-realization:

- Existence: the need for food and warmth (mind and matter), and beyond that, the need for income and social security
- Relatedness: Every human being is only viable in (friendly or hostile) relations to others – i.e. members of the own family, partners as well as friends and enemies.
- Self-realization (growth): the need for changing one's environment creatively by applying or developing one's own skills.

Meyer-Abich regards the fact that a growing number of people does not have the possibility to meet these basic needs as the major cause for many diseases. Conversely, societal reforms would be the most effective medicine if we want to improve the health preconditions for everybody. Education, a good job with good working conditions as well as "work-life balance" and less social inequality would be more important than the enormous investments in the medical-technical sector.

Conclusions

The demographic development is questioning the existing pension system, as neither increasing pension claims nor higher health expenditures can be financed with the current working hours. At the same time, demographic transition causes the working hours to continuously shrink and obstructs the economic growth theoretically needed.

²¹ "Wenn Gesundheit eigentlich Ganzheit ist, so dass es immer an Ganzheit fehlt, wenn einem in einer Krankheit etwas fehlt, haben Krankheiten mehr mit dem eigenen Leben zu tun, als die meisten Menschen meinen und hören mögen. Denn es ist eine scheinbar bequeme Lebenseinstellung, sich nicht mit dem eigenen Leibsein zu identifizieren, sondern nur den Körper von Zeit zu Zeit einem Mediziner anzuvertrauen, um ihn warten oder Betriebsstörungen beheben zu lassen."

Moreover, the issues pensions/health/work ability and the financing of these systems are the main reason why politics and labour unions hold on to economic growth as “there is no alternative”. If economy did not have to grow, inconvenient decisions would have to be made: cuts in pensions, rationalisation in the health system, tax increases, involving civil servants and self-employed people in financing the social security systems etc.

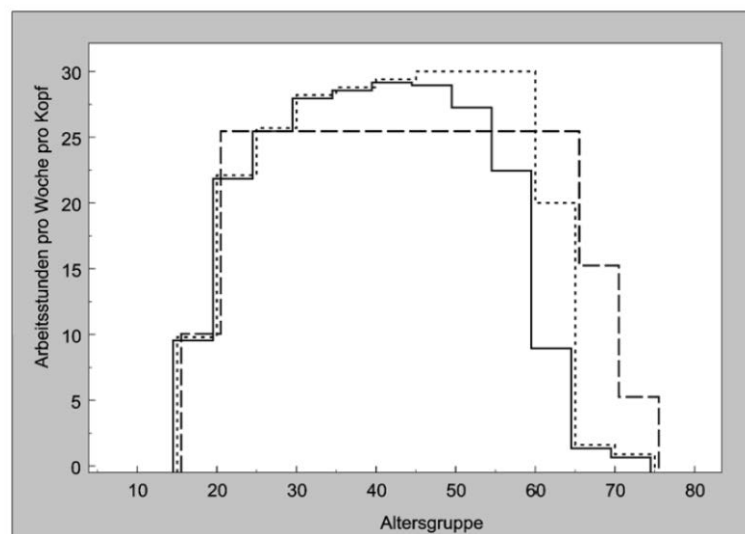
On the other hand – due to the reasons mentioned above – we have only ourselves to blame for this crisis. It is not true at all that growth is the only way out of this dilemma. Furthermore, we also need alternative scenarios because it is very likely that economy does not – or only minimally – continue growing, as the main drivers of economic growth are weakening. Resources are getting scarce, the labour force in early industrialized economies is shrinking, human and social capital is diminishing due reduced investments both in public and private arenas. At the same time demand factors are accompanying these supply factors: households are consuming less, governments are spending less, companies reduce their investments and many countries to which Germany/Austria is exporting are facing similar challenges so that also their demand is shrinking.

What do we have to do?

Labour has to be distributed equitably throughout all generations as soon as possible

This is a requirement of intergenerational justice and a substantial precondition for a young society (instead of an aging one) – independently from working hours (which on their part influence the GDP). Considering a linearly increasing life expectancy, this is not only no problem but also a chance for all generations. This is also J. W. Vaupel’s desire which he describes in the paper “Redistributing work in aging Europe”. He speaks for distributing the necessary societal work throughout the entire lifetime in a more equitable manner – where we define justice, in accordance with the sustainability definition, as intergenerational justice.

The following figure shows how the labour currently accomplished on average (16 hours per week) could remain constant if we distributed it among the aging population in a more equitable manner.



Source: J. W. Vaupel, Loichinger, 2006

The advantages of such a just distribution of labour throughout all generations are obvious. Not only the financial feasibility of the pension system would be secured, but also the social security contributions could presumably decrease – which would give new scope for allocation.

- Such an allocation would be family-friendly and would be an important incentive for the number of new-born children to rise again.
- Through a new work-life balance, the chance to age healthily increases – which raises the number of healthy years at old age (lower expenses for health care and nursing)
- Current surveys prove that those who retire at an early age also die younger. On the contrary, the longer human beings are active and challenge themselves, the longer they remain mentally capable and the later they develop dementia – if at all.
- A redistribution of labour throughout the entire lifetime also creates the preconditions for life-long learning as well as changes in the working world which make it less “pathogenic”.

In the course of this, one of Vaupel’s main arguments is that it is not understandable why the highest work intensity as well as the highest stress occur precisely in those years when men and women have to decide for or against family and those years, when those who decide to have children need time to be parents for their children. According to Vaupel, the only way out of the demographic crisis is reforming and redesigning the working world: “The 20th century was the one of redistributing wealth. The 21st will be the one of redistributing labour.”²²

This transition has to be linked to considerable reforms of the distribution of income:

Family period, further education sabbaticals as well as caring for relatives should be recorded and secured regarding income and social insurance. Models currently being discussed:

- Lifetime accounts
- Unconditional basic income / solidary citizen’s income / care economy

Moreover, we need an age-appropriate world of work:

This means that it should be appropriate for our aging society. It should allow us to remain healthy and to maintain our skills respectively to develop them in an age-appropriate way. If this cannot be provided by businesses, we need labour-policy measures or other solutions from civil society.

²² „Das 20. Jahrhundert war das der Umverteilung von Wohlstand. Das 21. Wird das der Umverteilung von Arbeit“.

Last but not least, education and less social inequalities are a key to the success of such a change:

Both factors are strongly interdependent. Education has – beyond the aspect of social status – a large influence on lifestyles and increases the chance of health in old age.

Beyond Growth

The growth issue deserves a second glance. As shown above, we assume that a return to high growth rates is currently not expectable. If we are right with this estimation, the predicted increases in health care expenditures – which are mostly caused by medical-technical progress – are not financially feasible. Furthermore, we do not regard this medical-technical progress important since we are convinced that we need a completely different kind of medicine in order to have a good future: A just redistribution of labour and income throughout all generations. A new intergenerational contract which takes into account the desires of the young as well as the desires of the old. The solution lies in redistributing/sharing labour, income, education and social status.

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Craft Economies in Japan: The Re-Emergence of Alternative Economies in a No-Growth Context

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Introduction

The convergence of concerns about climate change and resource degradation with the financial crisis of 2008 has revealed fundamental instabilities in the tightly coupled global human-environment system. In particular, the notion of incessant growth has come into question (Daly, 1996). Yet, economic policies at the national and state/provincial levels remain oriented around the pursuit of aggregate economic growth, particularly as measured by GDP. That this sentiment underlies economic policies and dominates economic discourses is unsurprising, as the most powerful political and economic institutions are structurally dependent on the growth economy (Magdoff and Bellamy Foster 2009). Nevertheless, the widespread dissatisfaction with the direction of political economic developments in the aftermath of the financial crisis, most notably captured by the Occupy movement, suggests that there is widespread interest in charting an economic future that is more environmental and socially sustainable (Graeber, 2011).

The shift from material and energy intensive lifestyles toward more socially and ecologically sustainable forms implies a broad-based shift in social and economic institutions and practices, including cultural norms associated with consumption, prestige, success, and well-being. Numerous movements have sought to model, or pre-figure (Litfin, 2011), these new economic systems. Transition towns, the solidarity economy movement, and alternative currencies all provide conceptions of alternative economic systems and offer models of how industrial societies might accomplish a broad scale to transition more sustainable forms of consumption.

In the quest for models of sustainable consumption systems, Japan provides a compelling example. Lauded as a 'miracle economy' for its growth in the 1970s and 1980s (Johnson, 1982), and still the world's third largest national economy, the country has experienced protracted economic stagnation over the last two decades. Cohen (2011) raises the question of whether Japan, by default, is leading the shift from consumer-led economic growth to a system that reduces pressure on natural systems, enhances social stability and augments well-being. The question rests on more than the country's economic stagnation; beneath the materialism and mass consumerism of the late 20th century has remained strong cultural preferences for simplicity and thrift, localism and craftsmanship, and an ambivalence toward mass-consumerism. Could social innovations in the unique Japanese context pre-figure more sustainable forms of consumption for Japan and beyond?

This paper explores this possibility through an examination of one particular economic network in Japan. Across the country, a diverse network of producers and consumers has established a burgeoning craft economy – an economic system based on the trade of locally produced goods and services that emphasizes quality handmade production, natural materials, and independence from globally-oriented economic institutions. The system relies on local actors engaged in everyday economic practices who in aggregate comprise a distinct, alternative economic configuration. The system reflects the legacy of a long-standing anti-consumerist impulse in Japanese culture and it finds intellectual support in the slow life movement that has spread through the country in the last decade. Furthermore, the movement has found heightened interest in the aftermath of the Fukushima nuclear disaster that followed the Tohoku Earthquake of March, 2011.

Research for the paper was conducted in the city of Kyoto, the historic center of craft arts in Japan, between April and December, 2011. Based on interviews with people from a number of sectors, including the corporate sector, civil service, and the craft sector, and participant observation in a number of craft economy activities, the research explored the extent to which a craft economy has emerged as an alternative economy. The first section of the paper presents background on the concept of alternative economies to demonstrate how distinct economies can exist in parallel with the global economy. The next section presents background information on consumerism in Japan through the 20th century, describing the trajectory of the national economy, the rise of consumerism, and the persistent ambivalence toward consumerism. Section four presents the empirical details of the case in Kyoto, and Section five discusses important themes raised by the observations. The final section concludes by returning to the question of whether the craft economy is a model for a no-growth economy.

Alternative Economies

The alternative economies approach is an action research paradigm that seeks to promote community economies based on economic units other than large corporations. It does this through understanding and demonstrating the viability of already existing economic practices that can be leveraged to build innovative developmental pathways (Gibson-Graham, 2008). Economic development conventionally relies on an export based theory of development, which describes how exports generate economic growth by bringing in money from outside the region, creating multiplier and spillover effects that lift the region. The alternative economies framework challenges this theory of development, promoting the reconfiguration of local economies around sustainable community interactions.

At the heart of the alternative economies approach is a discursive project that aims to reclaim what the economy is and how it is framed. Prevailing economic discourses represent the global economy as a remote and powerful sphere that seems to dictate the developmental options of locations and the lives of people (Healy and Graham, 2008). The alternative economies approach seeks to create a discursive space in which the possibility of economic self-determination is recognized and everyday economic practices are valued. It aims to create a sense that the economy can be familiar and intimate, thus empowering communities to create healthy economies and communities. The key to this discursive project is to ‘rupture the presumed unity of capitalism’ (Gibson-Graham and Roelvink, 2009) by emphasizing the diversity of already existing economic activities and organizations. Non-capitalist market and non-market activities, which constitute more than 50% of all economic activity, are seen as starting points for imagining innovative developmental paths (Gibson-Graham, 2006). Instead of emphasizing scarcity,

dissatisfaction and trade-offs, proponents of alternative economies emphasize the assets and capacities embodied in already existing economic activities within communities.

Unlike conventional economic discourses, the alternative economies framework embraces an ethical dimension of economic organization. It sees a responsibility in bringing unmet and often undescribed needs, such as community, belonging, safety and security, pleasure and peace, into view (Gibson-Graham, 2006). Alternative economy projects seek to empower marginalized actors within core community activities such as education systems, labor markets, political institutions and sociocultural life. It emphasizes community-controlled businesses, worker owned cooperatives, volunteering, gift-giving, bartering, non-market-oriented production. However, the ethical imperative is to prioritize not any particular form of organization or activities, but rather the open space of conversation that allows alternative economic conceptions to flourish (Gibson-Graham and Roelvink, 2009).

Consumerism in Japan

Twentieth Century Economic History

Japan's emergence as a global economic power in the later half of the twentieth century reflected both internal developments and increased engagement in the global economy. Rapid economic expansion began with the Meiji government's (1868 – 1912) push to modernize the Japanese economy and society upon opening the country. The Meiji government emphasized industrialization and integration of foreign technologies, and by the first World War, foreign companies had entered Japan, largely on the retail side, while mass production in key industries – iron, steel, and coal – characterized domestic production. Much of this production was organized by zaibatsu's, family-owned holding companies that spanned multiple industries. The massive shift toward urbanization and industrialization began in the interwar years.

The post World War II era saw significant structural reforms and rapid economic resurgence. Land reforms significantly changed the rural sector, as cultivation of farmland by tenant farmers decreased from almost 50% in 1946 to 10% in 1950 (Iyoda 2010). Many of the zaibatsu's were dissolved and their shares were sold to the public. Initially stringent reform measures imposed by the occupying US administration to cripple the Japanese economy were relaxed as Cold War policy shifted from weakening the Japanese economy to building a strong ally. The country's period of dramatic economic growth occurred between 1955 and 1975. Incomes increased by a factor of four during these years (Johnson, 1982).

The Japanese economy continued to expand through the 1970s and 1980s but its structural foundation began to shift from manufacturing to more speculative forms of investment, and a bubble economy emerged. Real estate and stock prices began to increase rapidly in 1983. Average share prices rose 490% from 1982 to 1989, while average commercial and residential land prices increased by 500% and 290%, respectively, over the same period (Iyoda 2010). The bubble continued to swell as tremendous amounts of money flowed into the economy. In 1991, with massive amount of bad debt in real estate and other investments, the bubble burst. Export industries, which had been the foundation of real economic growth in the country, were hit hard as the yen appreciated significantly. Many companies transferred factories abroad, further hollowing-out the Japanese industrial sector. Public money was deployed to rescue banks and financial institutions, leading to a massive amount of outstanding government bonds.

From 1991 to 2000, Japan had the biggest national budget in the world, and its current level of debt remains at almost 200% of GDP (Tabuchi, 2011).

The protracted stagnation has perplexed economic analysts. Some point to the fact that businesses, financial corporations and households had to adjust their assets following the bubble burst, causing a long-term deceleration in demand growth. Itoh (2000) argues that in addition to this adjustment, Japanese economic and social structures had difficulty adjusting to late 20th century globalization and became more inward oriented after the burst. The stagnation has left the national economy contracted, affecting households and consumers in addition to corporations and the public sector. The labor force participation rate for males decreased from 86.4% in 1953 to 72.8% in 2008, while the female rate declined from 56.7% to 45.7% over the same period (Iyoda, 2010). Significant reforms have been made in the labor management system. In an effort to reduce wages, the seniority wage system has been scaled back in favor of a results-oriented pay system. There has been a move toward low-cost nonregular workers, such as part-time workers and contract employees, which such positions increasing from 19.8% of the workforce in 1991 to 34.1% in 2008 (Iyoda, 2010).

Consumerism

Consumerism in Japan, which closely tracked the country's economic expansion over the 20th century, had both structural and cultural dimensions. Consumerism was structurally induced by the economic changes and associated landscape changes that took place in the interwar years. The expansion of intra-urban trams in the 1920s allowed suburban rail stops, such as Tokyo's Shinjuku and Shibuya, to emerge as central commercial and entertainment hubs (Sand, 2006). Suburbs began to expand as inter-city electric railroads proliferated and allowed consumers to travel into industrial belt cities like Yokohama, Nagoya and Kobe to work during the day and return to bedroom communities at night, bringing urban consumerism into quasi-rural Japan. Increasingly, high-rise danchi apartments were built through the industrial belt from the Tokyo/Yokohama conurbation in the east (now the world's largest urban conurbation) through Nagoya and Toyota City and to Osaka/Kyoto in the west. This high-rise landscape provided the basis for the consumer revolution, especially in household durables and electrical appliances.

The interwar period gave rise to the institutions that would come to define Japanese consumerism for decades: the department store, commercial complexes around transportation hubs, and the middle-class home (Partner, 1999). Consumer products, first durable goods like washers, refrigerators and black and white televisions in the 1960s, then automobiles, air conditioning and color televisions in the 1970s, became status symbols. Numerous scholars have described the important role of housewives in the rise of Japanese consumerism (Francks, 2009; Skov and Moeran, 1995). Women were framed as household managers who make major purchasing decisions, and thus they were the primary targets of marketing discourses. Skov and Moeran (1995) argue that consumption came to constitute an important element of female agency in Japan as women began to construct statements of self identities and social positioning through consumption, though this agency was at the same time constrained by fantasies of an ideal household life propagated through media.

As the economy shifted toward a speculation, mass consumerism took on a new dimension. Tokyo Disneyland opened in 1983, and soon after the Disneyfication Thesis emerged as a central analysis of Japanese consumer culture. As Sand (2006:89) describes, 'sophisticated new retail giants were transforming the space of the city into a colossal enclosed amusement park with no outside and no possibility for critical subjectivity.'

Yoshimi (1989 in Sand, 2006) describes how Shibuya had become ‘a single, encompassing advertisement, and a fantasy land.’ This marketing was directed primarily toward the country’s youth, who had been raised in prosperity and who asserted a liberation from the workaholic, passive consumerist nature of their parents. Clammers (2011) describes how severely the demands for conformity and performance perfection around consumerism are experienced by teens in Japan, while Creighton (1994:94) describes how consumerism in Japan is ‘less a way of “finding oneself” and more a way of linking selves with others.’

Ambivalence toward Consumerism

Even as mass consumerism seemed to increasingly engulf Japanese society through the 20th century, alternative conceptions of the good life recurrently emerged at different periods and in response to different phases of consumerism. As mass industrialization took root prior to World War I and during the interwar years, a nostalgia for the products of Tokogawa Era emerged (Francks, 2009). This nostalgia was expressed first in the folk-craft (*mingei*) movement of the 1920s. The movement, led by a group of public intellectuals and artists, emphasized the moral-aesthetic value of anonymous, indigenous, pre-industrial material cultures and artifacts and stressed these traditions as an alternative to the increasingly Westernized material culture. They extolled the beauty of humble objects of daily use such as clothing, implements and architecture, emphasizing their functionality, simplicity, naturalness, tradition, local specificity, durability, and inexpensive cost (Brandt, 2009). They argued that these objects, and the traditional, indigenous modes of commodity production that produced them, were central to the future of Japan and Japanese national identity. Brandt (2009) describes how this originally provocative concept of folk-crafts has now become ‘a seamless part of the common sense of Japanese cultural identity.’

The theme of recovering tradition again became a pervasive phenomenon in the 1970s, and there was a resurgence of the *mingei* movement. By the late 1980s, as consumer culture matured and took on new postmodern forms, there was a simultaneous cultural buzz around the ‘pursuit of authenticity’ (*honmono shikō*), ‘moving from material to non-material things’ (*mono kara koto e*), and ‘no-brand goods’ (Sand, 2006:97). The growing ambivalence toward consumerism at this time also included a concern that global consumer culture stripped Japanese cities, and Tokyo in particular, of their unique Japanese-ness and Asian-ness.

Contemporary Craft Economies

The craft economy explored in this research is defined as a contemporary economic network based on the production and consumption of craft items and services oriented around quality design and local sourcing of materials. The research was based on 24 in-depth, exploratory interviews with individuals involved a range of economic sectors, including the corporate sector, civil service, and the craft economy. Interviewees were all between the ages of 24 and 40. The focus on this age group was meant to explore preferences, values and lifestyle ambitions among an age cohort that grew up in the era of stagnation and that is now establishing economic livelihood patterns. Half of the interviewees held office jobs in either the corporate or government sectors. The other half of the interviewees were engaged at least part-time in the craft sector.

The concept of craft economies in Japan emerged inductively through this research. Early interviews revealed a bifurcated economic structure in which some actors were embedded

in an economy oriented toward global economic institutions, whereas others were engaged primarily a local, independent craft economy. Economies are subjective and shifting networks, and economic actors participate simultaneously in multiple economies, yet the interviewees gravitated toward distinct economic networks and practices. The research subsequently focused on understanding this craft economy as an alternative economy. In addition to the interviews, the author participated in numerous events, including craft fairs, art exhibitions and social events. This section first describes the outlook of young Japanese who are embedded in conventional economic structures, and the remainder describes the craft economy both in terms of its structure and more normative aspects expressed by participants.

General Economic Outlook

The structural changes in the Japanese economy since the late 1990s have had very real impacts on the lives of young professionals. While the seniority wage system is still in place, the notion of lifetime employment has almost completely evaporated from the outlook of the young. Contract work and other non-regular work is extremely common. Civil servants were universally in contract positions that they would have to leave within a limited number of years (usually three). Some expected transfers to other government agencies; others did not. These workers were all junior positions; presumably workers at higher level positions are afforded more stability. Others worked in government agencies but were hired through temporary employment firms. Private sector employees were not subject to contract limits, but most were also hired through temporary agencies. Work hours are long, and overtime pay is not expected. Of the people interviewed, only two, both in the corporate sector, expressed confidence that they were in a job with long-term stability. One, who worked for Panasonic, described being part of a corporate institution that promotes employees through a strongly hierarchical system that breeds company loyalty and labor stability.

Young Japanese professionals are aware of having grown up in the era of stagnation, yet they did not express gloom about their own prospects. Rather, they expressed a sense of obligation and inevitability about their positionality within the contracted economy. Common phrases among young professionals regarding their employment situations were 'I have to,' and 'I don't have any choice.' As consumers, they remain active participants in consumer culture – the shopping districts around major transportation hubs have remained key nodes in the urban social space – yet major lifestyle purchases like houses and cars were not considered by any of the respondents under 34. About half of the interviewees working in the government and corporate sectors lived with their parents.

The Craft Economy

The craft economy explored in this research comprises a network of economic actors based largely in Kyoto who are engaged in the production and consumption of craft items and services oriented around quality design and local sourcing of materials. Objects include bags and purses, shoes, jewelry, clothing, furniture, bicycles, and pottery. Services include garden design, interior design, hair styling, café proprietorship, photography/graphic design, and organic farming. There are no membership rules or formal certification in this network, though organic and fair trade labels are common. Nevertheless, the network coheres as a distinct and cohesive alternative economy.

The craft economy operates through a network that includes production systems, a range of retail opportunities, and social gatherings and public events. Production systems originate with independent designers and craft artists. Some have inherited their occupation after several generations of practice within their family. Others were trained in art and design schools, while others are largely self-trained. Retail opportunities link these producers with each other and with consumers. These opportunities include monthly craft markets and antique fairs held regularly at several of the city's temples; independent store front shops; art galleries, cafes and bookstores; periodic gatherings such as art festivals, rallies for social causes, and concert events; and to some extent wholesaling to chain stores. The ubiquitous coop system also provides a well-established institution for connecting producers and consumers, mostly around agriculture goods and services but extending to other craft objects and services as well. The craft economy in Kyoto coheres as a predominately urban network, though with rural linkages.

The network is built on a system of mutual support, interdependence, and friendship. Many actors engaged in the craft economy knew each other. Social gatherings play an important role in strengthening and expanding the network and providing opportunities. For example, six interviewees who manage galleries, independent stores or cafes all described linking with local producers to offer locally products. Each of these establishments was designed by local designers and built by local carpenters, and in each case the proprietor described the person who did that work as a friend. It is common for most or all of the objects in a shop to be produced by friends of the proprietor. Bartering and gift-giving is common, though there is a sense of mutual support through the purchase of goods and services. Most of the craft economy actors interviewed expressed a willingness to pay high prices for quality objects and services, even when their disposable income was low. Several expressed a delight in acquiring these items and services and talked at length about their favorite objects.

Local production is highly valued, though the value placed on local production was generally not described in economic terms but in personal or aesthetic terms. While the core of the network comprised Kyoto residents, producers often came from other parts of Japan at the invitation of friends or to participate in events in the city. The preference for locally made products and local services was thus relative. Numerous interviewees spoke with pride of objects that are made in Japan. Antique objects and foreign objects are also valued if they demonstrate a unique quality or history. A key aspect in the cohesion of the craft economy is the narratives that accompany economic activities. Producers are introduced among friends with a high sense of esteem for the artist. The storyline of the producer is invited and shared. Conversations explore how things are made, where materials are sourced, and the lineage of the producer.

While few interviewees referenced it explicitly, the craft economy seems to have an intellectual foundation in the slow life trend that has burgeoned through the country in the last several years devoted to slow living, self-sufficiency, the natural life, and country living. Numerous magazines, such as *Ku:Nel*, *Sokoto*, *At Home*, and *Slow Life*, promote the values of local design and craftsmanship. In addition to 'slow food,' the movement promotes 'slow wear,' which values traditional costumes and woven and dyed fabrics, 'slow house,' the construction of durable homes from wood, bamboo and paper, 'slow industry,' which promotes urban agriculture and green tourism, and 'slow education,' which de-emphasizes academic achievement in favor of communication, the arts and hobbies (JFS, 2003). Musician Ryuichi Sakamoto, a widely recognized champion of the slow life movement, describes its economic implications, saying "The current economic system has required people to be busy trying to achieve growth – it's as though they're continually riding a bicycle. People have to do things fast to meet the demand for excessive

efficiency...I think it would be better if Japan became a beautiful third-rate country. It would be nice if Japan was a place of delicious food, beautiful scenery and abundant nature. If that were the case, I think it wouldn't matter if one had little money" (Lennard, 1985).

Discussion

The craft economy network operates as an alternative economy, and it embodies the potentiality expressed in the alternative economies literature. While interviewees expressed a general rejection of mass consumer society, they more often emphasized the positive attributes of products, services and relationships they obtain through the network. In celebrating these assets of the community, the actors are recognizing the possibility of, and creating, an alternative developmental path. They are valorizing economic activities which many of them would be doing anyway (e.g., running cafes, farming, making furniture), yet the density of the network has created an economic structure and a culture that supports these producers, grows a consumer base and allows other producers to enter the network. Institutions which remain largely invisible in conventional economic discourses, including the centuries-old markets, are allowing what would be marginal activities to be central activities in this alternative economy.

Key institutions explicitly embody the craft economy ideals: cooperatives, craft fairs, and independent shops carrying items made by friends and local craftspeople. All of the actors who were interviewed did utilize chain stores at some points, however, showing that, in practice, the boundaries of this alternative economy are porous. The craft economy coheres as a relational network through emphasis on ethical values, which are promoted through conversations and dialogue. Conversations about lifestyle values and quality of life occur frequently within the craft economy network, and these conversations create the ethical space that Gibson-Graham and Roelvink (2009) assert as being at the center of alternative economies.

To what extent does the emergence of this craft economy represent an adaption to the economic stagnation that has plagued Japan for the last two decades, and to what extent can it therefore be viewed as a economic model for a transition to broader no-growth economy? This research suggests that the craft economy is rooted in several intertwined social currents. The craft economy in Kyoto and the broader slow life movement in Japan are partly expressions of the long-standing ambivalence toward consumerism in Japan, reflected in the mingei movement and subsequent anti-consumer movements. The cultural and aesthetic values promoted by the mingei movement of the early 20th century, notably the preference for handmade products, simple designs and natural materials, are at work in the contemporary craft economy in Kyoto. Unlike the mingei movement, however, the contemporary craft economy allows for expensive prices, if only to provide living wages to its producers. In addition, contemporary producers did not exhibit a sense of anonymity and self-denial, but rather pride in their craft and appreciation for the opportunity to survive on their work. The legacy of the Kyoto's history as the center of traditional Japanese arts, such as basketry, calligraphy and ceramics, is an important influence on the current craft economy. The most compelling evidence that the contemporary craft economy represents a new adaption to the no-growth context of the contemporary macroeconomy is the buzz around the positive lifestyle attributes expressed by participants in the network relative to the powerlessness expressed by those in other sectors.

Conclusion

The craft economy in Kyoto is a robust urban-based economic network, with linkages to rural areas and other cities in Japan, that represents an alternative economic system. Among the most compelling findings from the research is the extensiveness of the network, which allows participations to provide for most of their needs within the network, almost completely avoiding participation in more globally-connected economic institutions such as chain retail stores and corporately owned grocery stores. Economic activities within the network are also supported by social networking and by a cultural movement that values a slower, simpler life, community and health.

The example of Japan is important and compelling for a number of reasons. The country's economy is one of the largest in the world and the material standard of living is very high, though the economic stagnation suggests that the era of continual economic growth may be over. On the other hand, social innovations toward more sustainable consumption forms may be emerging in Japan, drawing on historic cultural patterns. Importantly, these questions have garnered increased attention in the aftermath of the Tohoku earthquake and ensuing nuclear disaster that unfolded in March, 2011. Conversations about possible energy futures have intensified and included discussions of alternative lifestyle ambitions and livelihood patterns.

If this movement does represent a viable alternative economic system, an important question is whether it is a transferable model and if so how it can be supported by policy. There are elements of craft economy networks across the mature economies. The craft economies of Italy were an early impetus for academic focus on the development of creative economies, though that example was used as a model of economic growth rather than a model for a no-growth society (Storper, 1997). Artisan products are increasingly valued among the localist and sustainable consumption movements in the US and Europe (Heying, 2010), suggesting that the craft economy may be burgeoning elsewhere. This research suggests that artisan or craft economies can be viewed as potential alternative and more sustainable economies, especially when they can both draw on and generate a cultural movement that valorizes their work as a developmental pathway.

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Socio-technical configurations for green growth

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Introduction

Discourses about efficiency and sufficiency as strategies for sustainable development reveal a split between a technology-centred and a behaviour-centred view (Brand, 2005). Technology is the core ‘agent’ in increasing the efficiency of production processes (cleaner production) or reducing the resource consumption of products (e.g. energy-efficient appliances). Critique of “technological fixes” often points to this belief in efficiency solutions as a panacea for sustainable development. Sufficiency on the other hand, i.e. the quest about what level of output or services is enough, is mainly portrayed as a social question. It addresses the “quality of life” as a guiding principle and involves some personal understanding of the externalities of consumption practices, reflexion about one’s own ‘true’ needs to live a good life, and a sense of responsibility of the individual for the effects of his/her own actions (Muller, 2009, 1083). Approaches such as practice theory succinctly criticise the individualistic focus of such understandings (see e.g. Røpke, 2009) and point out how practises of consumption are embedded in institutional and infrastructural contexts and are closely linked up with other practices and broader social changes, such as notions of cleanliness and normality (Shove, 2003). In this context, we are particularly interested in the mediating role of technology not only for efficiency improvements, but also for sufficiency-based strategies of sustainable consumption and sustainable development, in general. The often derisive talk about ‘technical fixes’ should not lead us to discard technology as an important element of sustainable development strategies. It is rather the false opposition between social and technical solutions which should be overcome.

Strategies for green growth are aiming beyond an exclusive focus on GDP and quantitative growth orientation and rather emphasise aims such as sufficiency, or quality of life as well as sustainable lifestyles and consumption patterns. From our point of view, such strategies should not only focus on institutional and cultural conditions framing our economies, but should also focus on the roles of artefacts and material infrastructures in generating more sustainable practices of consumption and product use. The core question we want to pose in this paper is whether it is possible to identify and devise socio-technical configurations of production and consumption which inherently link energy and resource efficiency with a greater inclination towards sufficiency oriented (social) practices. Simply put: Is it possible to build social and political qualities such as a voluntary limitation of consumption (sufficiency) into socio-technical systems of provision? And to which extent does the choice, type and design of technology have an impact on social practices generated within these systems?

To give an example: A combination of large-scale wind power development with policies and institutional provisions for sustainable consumption (information campaigns, price incentives, etc.) follows separate technical and social agendas and probably does not inherently give rise to sufficiency practices. Micro-generation, one might argue in contrast, facilitates changed usage patterns of electricity and heat and could be seen as an example of a socio-technical configuration which more closely integrates sustainable practices of production and consumption. This may not only be an issue of scale: a closer socio-technical integration of production and consumption can also be achieved e.g. by energy cooperatives and joint ownership of renewable energy production. Other examples would be neighbourhood energy management systems combining and balancing different modes of consumption and production in spatial vicinity or, in the field of sustainable food systems, urban gardening in various organizational forms.

We do not propose that such forms of socio-technical integration of efficiency and sufficiency are a substitute for large-scale renewable energy generation or sustainable food production, but they may serve as important models and orientation marks for green growth strategies, understood as qualitative sustainability improvements without growing resource consumption. Such integrated approaches may also make sustainable production and consumption more independent from changes in socio-economic contexts, such as times of financial crises and times of greater affluence. In this chapter we want to explore this idea further and build on our own empirical research in the field of energy and the built environment, but also take examples from fields such as sustainable food production and consumption.

We will start out in the next section with a short review of how science and technology studies have been dealing with the interdependencies of product/technology design and use from different perspectives. We will ask to which extent these ideas can also be applied to production-consumption systems in which technologies and sustainable consumption and use practices are intrinsically interwoven. In section 3 we will then discuss some cases of production-consumption systems, mainly in the field of energy and buildings, and ask in which way these socio-technical configurations shape our use and consumption of goods, particularly with respect to the issue of sufficiency.

The interdependency of design and use / supply and demand from a science and technology studies perspective

The interrelations of technology design on the one hand and social structures and practices on the other have been at the core of social studies of technology (STS) since its beginnings. Technologies and social structures are co-produced and mutually constitute each other. Social practices of using and consuming technologies and products are an essential part of this interrelationship. An important insight of STS thus is the inseparability of behaviour and social practice on the one side and technologies and material structures on the other. In real-world situations we are always dealing with socio-technical assemblages or systems. More radical changes in behaviour, consumption patterns or practices of use require the transformation of such socio-technical relationships. Before this backdrop, we are particularly interested in the extent to which characteristics of technology and product design have the potential to shape (un)sustainable consumption behaviour and how such insights can be used to establish socio-technical configurations which induce or are better compatible with sustainable lifestyles and behaviour.

Technological affordances

In this respect it seems interesting to re-visit an older debate within science and technology studies about the possibility of 'inherent' political or social qualities of technology. At a broader level, the history, philosophy and sociology of technology has addressed the impact of different types of technology on social structure and social practice since long time. An outstanding representative of such studies is historian Lewis Mumford, who already in the 1930s has written a universal history of technology and machine-like social structures and sees a certain idea of order culminating in the mega-machines of Egyptian pyramids and modern spaceships (Mumford, 1934, 1967) – or large-scale, hierarchical fossil-fuel based energy systems, we might add. While there were historic periods dominated by mega-machine technology and human organisation, Mumford also elaborates on alternative historic periods creating 'democratic' technologies, beginning with Neolithic techniques of cultivation to the 'polytechnic tradition' of medieval times with the water mill as its prototype. The 'idea' of the machine thus is deeply entrenched in the history and development of civilisation, in its organisation but also its ethics and aesthetics, and different types of machines are interdependent with different forms of (authoritarian or democratic) social organisation.

The embodiment of social structure and policy in technology has prominently been put forward also in Langdon Winner's – often disputed – article "Do artifacts have politics?" (Winner, 1980). One of his famous examples for the embodiment of power and authority in technology are the low-hanging highway bridges built in New York during the twenties under the supervision of master builder Robert Moses. The construction of these bridges kept off public transport (buses were too high to pass under) – and consequently poorer people – from wealthy recreational areas such as Jones Beach. As Winner concludes, this social and racial bias has been deliberately constructed into these bridges. "Many of his monumental structures of concrete and steel embody a systematic social inequality, a way of engineering relationships among people that, after a time, becomes just another part of the landscape" (ibid., 124). Winner speaks of a type of "'inherently political technologies,' man-made systems that appear to require or to be strongly compatible with particular kinds of political relationships." (ibid., 123) An example for such compatibilities would be decentral solar energy technologies as better compatible with egalitarian social relationships versus centralised nuclear or fossil fuel power plants.

Such 'essentialist' accounts of technology which attribute certain political or social qualities to technology have been strongly disputed by social constructionists who rather emphasise the enactment of social structures in machines. "The politics and values of technology result from the gaze of the human; they do not lie in the gaze of the machine. This does not mean that the machine is neutral. (...) Technological practices and descriptions of technology, by which we come to know it, necessarily embody social and political values, but these do not lie within the hard creases or soft folds of the machine. (Grint and Woolgar, 1995, 305) Seeing technologies as 'affordances' may be a way of reconciling constructivist positions stressing the 'interpretive textual' properties of technology and realist positions focusing on 'essentially technical' properties. As Hutchby puts it, "affordances are functional and relational aspects which frame, while not determining, the possibilities for agentic action in relation to an object" (Hutchby, 2001, 444). In this way technologies are conceptualised as both shaping the practices of humans and being shaped by it.

These disputes about specific social qualities of particular types of technology have not yet been put to rest. A recent book (Dolata and Werle, 2007) requests to "bring technology back in" and asks whether certain characteristics of technical artefacts or types of technologies open up particular corridors of organisational and institutional

(re)structuring. Along these lines one can argue that institutional changes such as the deregulation of electricity markets have only become possible by technological changes such as smaller-scale gas turbines (CCGT) or the extensive use of information technologies, although closer scrutiny reveals how despite these techno-institutional compatibilities the concrete implementation of electricity markets has been re-shaped by strategic action, power relations and historic contingencies (Rohrer, 2007).

What does this mean for our quest for sustainable production-consumption systems? Although there is wide agreement that there is no deterministic relationship between technologies and social structures or practices, certain technologies appear to be better compatible with sustainable social practices than others. Climate impact is just one way of assessing the impact of nuclear power plants, they are also inherently related to a much more centralised organisation of the electricity grid, they induce institutional provisions in terms of security, policing, etc. Infrastructure systems including such technologies “orchestrate demand” (Chappells and Shove, 2004) in a way which necessarily puts more emphasis on the requirements of the supply side of the energy system. However, we have to ask similar questions in regard to other technological projects such as large scale solar electricity production, e.g. in the Desertec project. What are the affordances of such configurations of renewable energy technologies for the use of electricity and e.g. the internationally asymmetric roles and relations of users to the grid? How much leeway is there for institutional provisions and particular forms of implementation and embedding of such systems to overcome some of these affordances and create sufficient flexibility for sustainable practices of electricity use?

Agency as a quality of hybrid networks

A different tradition within STS research, actor-network theory, provides a more sophisticated but also more abstract view on the role of artefacts and technology with respect to social practice. The core point is that agency (and thus also the possibility of more sustainable practices) becomes a quality of socio-technical assemblages as a total and can neither be attributed to human intentionality nor technological affordances. Networks as hybrid actants consist of humans and non-humans and are ordered and held in place by processes of translation. Micro-generation at household level, say a PV panel with grid-integration, constitutes such a hybrid network of generation technologies, meters, grid connection as well as household members as users, grid operators, green electricity companies, etc. and attains particular forms of agency within the electricity system. Latour proposes four different meanings of technological mediations that are at work in such hybrid assemblages (Latour, 1999, 216ff). The first one is a programme of action, a sequence of aims, steps and intentions that can be described from the perspective of both agents, the human and the non-human artefact. In our micro-generation assemblage the user becomes an electricity producer interested in using as much as possible of this energy in his/her own household or selling green electricity at a premium price, while incumbent utilities may try to make it as difficult as possible for the micro-generation owners to get permits and sell electricity at a good price. The micro-generation plant, the grid and ICT control structures are inherent part of these aims and programmes of action such as the user as power producer or load manager of his/her household electricity system. These technologies ‘translate’ the user by orienting and configuring his or her interests and action strategies.

This leads to the second meaning of technical mediation: agency is a quality of associations. Even if one of the actors is granted the role of a prime mover, this should not make us forget the necessity to explain action by the composition of various forces. Acting,

and this is one of the core points of ANT, is not the ability of humans alone, but the ability of an association of actants such as the ones described above. The third meaning of technical mediation is folding up time and space. Through a procedure of black-boxing the joint production of actor and artefact, the networks that lie behind, is covered up and disappears from sight. Only as long as new technologies, products or services are in the making, are mal-functioning or become problematic for other reasons, such networks and programmes of action have to be negotiated, disputed etc. Over time they become 'normal' such as the current configuration of our electricity system which are taken for granted although they embody a history of conflicts, changing social relations, institutionalisation and technological development (see e.g. Hughes, 1983, on the making of our electricity system and the different cultural contexts – e.g. the earlier role and autonomy of communities over grids and power generation – which defined what a 'normal' electricity system would look like).

The fourth and final meaning of technical mediation is crossing the boundaries between signs and things. Thresholds on roads in residential areas, to take a different example, translate the aim of drivers from "Drive slowly in order to be no danger for children crossing the road" into "Drive slowly to take care of your shock absorbers" (Latour, 1999). This delegation of morality to things is not a translation of meanings but the translation of an action (slow down cars) into a different kind of expression. In our case we might argue that 'morality' such as efficient use of energy is translated into an interest to adapt energy use behaviour in order to use as much as possible of the self-produced electricity and not sell it cheaply to the grid operator.

Conceiving sustainable production-consumption systems in the relational perspective of actor-networks also means that the inside-outside distinction of systems breaks down. Garud and Gehman (2012 in press) nicely show how such a shift in analytical perspective also may change our understanding of sustainability. While in an evolutionary perspective sustainability is portrayed as a more or less definable aim for system transformation, in a relational perspective it rather becomes an emergent property of the actor-network which is much more fluid and part of the sense making processes between the actors involved. Emerging networks around electric vehicles are also a 'battleground' for new understandings of sustainability in transport and where such socio-technical systems could go.

The mutual shaping of design and use

The delegation of 'programmes of action' to technologies (Latour, 1992) which we have discussed above is closely related to the notion of scripts as coined by Madeleine Akrich. What is 'inside' and 'outside' of an object, i.e. what programmes of action (such as sustainable use practices) are delegated to an artefact and what is left to the competencies of other actants is negotiated in an interactive process. On the one hand innovators 'inscribe' their visions of the future 'world' of this object (e.g. the aspirations and competencies of users, but also assumptions about politics or morality) in the technical content of the new object. The end product of this work is a kind of script or scenario, an "attempt to predetermine the settings that users are asked to imagine for a particular piece of technology and the pre-scriptions (notices, contracts, advice, etc.) that accompany it" (Akrich, 1992, 208). This is what Woolgar succinctly calls 'configuring the user' – "defining the identity of putative users, and setting constraints about their likely future actions" (Woolgar, 1991, 59). Users may come forward to play the roles envisaged by the designers, but they also may define roles of their own. As Akrich's (1992) case study on the introduction of a central electricity system in Ivory Coast shows, these technologies

indeed define to some extent the space in which actors move and interact and they prescribe new relationships between the user and the state (which is rather obvious in the case of electricity systems). As the examples show, efforts have to be taken to implement the technical scripts according to its original intentions (e.g. by combining the agreement of villages to install an electricity network with other advantages and projects) and still the outcome may be different, as users find ways around certain prescriptions. While technologies open up certain corridors of preferred practices of use, they do not determine it. In an analysis of the privatisation of the electricity system in Nicaragua, Julie Cupples (2011) shows how the introduction of electricity meters as a core “programme of action” in a neo-liberal electricity system organisation were turned against the privatised electricity distributor who was accused of illegal and unfair billing practices by electricity consumers.

These examples of shaping electricity systems vividly demonstrate how the establishment of (sustainable) socio-technical configurations is mutually shaped (sometimes in contentious ways) by different logics of design and use. Both ‘logics’ restrain and focus the way technologies co-evolve with their social and institutional environments while at the same time they are important drivers for new developments (see Rohrer, 2006a). A ‘logic of design’ points to the narrowing down of options along the design process, through ‘technological affordances’ and the embodiment of scripts in artefacts, or the expectations, cognitive focus and path-dependence of technical development they create. In a ‘logic of use’, product use is also influenced by being part of a broader system of social and cultural practices which are not determined by the material qualities of a product. Uses of technologies and products are part of wider systems of meaning—meanings that often have not been anticipated by designers, meanings which may change over the life time of a product or which may be different for different social groups. Artefacts are important for mediating social relations and may help to constitute and maintain social structures and power relations. They are part of wider social categories and social practices, such as the (re)production of gender differences or forms of unsustainable behaviour, and thus intrinsic part of the ordering and classifying of culture and society.

Production-consumption systems and systems of provision

These insights of science and technology studies about the interrelations of design and use have been taken up in various system concepts of socio-technical relations organized around different focal issues. The multi-level perspective of innovation has introduced the notion of socio-technical regimes (and their possible transition to more sustainable configurations). Such regimes can be understood as socio-technical systems fulfilling particular societal functions, such as transport, housing or energy. This conceptualization brings with it a strong focus on use and functionality (Geels, 2004). The explicit consideration of demand and consumption and thus of users has been an issue in the transition literature since its beginning, and it has also acquired great prominence in the debates about innovation systems and associated policies in recent years (see e.g. Edler and Georghiu, 2007). Instead of a sectoral delimitation (Malerba, 2002), such systems of production and consumption rely on the concept of production-consumption chains, ranging from the resource base to the final products and services, i.e. cutting across several sectors.

While the regime concept in the multi-level perspective has a strong focus on institutions and structures, the related literature on systems of provision puts more emphasis on consumption and social practices of use. These approaches draw attention to the interaction of supply and demand structures and to “the variety of institutional,

organizational and technical regimes that may potentially influence the way demand is constructed and managed” (Chappells, 2008, 263). Such a perspective also means “moving research, policy and practice away from a focus on end-users to consider more fully the range of social and technical actors involved in managing demand” (ibid., 273). Habits of showering for example are better explained by the “routinization of practice and its interrelation with broader socio-cultural changes that together reconfigure the way people go about cleaning bodies” (Southerton et al, 2004, 33), than by reference to technological change or individual lifestyles and behaviour. This ‘practice turn’ opens up new perspectives on sustainable consumption while at the same time acknowledging the role of technology and technical infrastructures in shaping practices of consumption and use (see e.g. Chappells and Shove, 2004; McMeekin and Southerton, 2012). Nevertheless, empirical analyses and examples of such systems of provision put their main emphasis not on the qualities and influence of these material infrastructures, but on socio-cultural contexts, the stability of routines and the interdependency of different social practices. As our previous discussion of the agentic role of technology in shaping (but not determining) practices of use has shown, closer attention to the material basis of social practice could deepen our understanding of sustainable consumption and production.

In our following empirical examples we will put special emphasis on the material dimension of (un)sustainable systems of provision and try to understand how particular affordances and qualities of technology may enable or restrain sustainable consumption and use practices within these systems.

Socio-technical configurations for sufficiency and green growth

In this section we scrutinize some examples of technology–social practice configurations; not so much as original empirical investigations, but rather by drawing on some cases from literature and our own research. These cases shall help us frame some questions regarding the role of technologies in sustainable production-consumption systems and open routes for further investigation.

A case we have alluded to earlier are **micro-generation** technologies at household level. In particular we have investigated the development of solar thermal collectors in Austria (Ornetzeder, 2001; Ornetzeder and Rohrer, 2006), as well as roof-top photovoltaic installations and combined heat and power generation (CHP) with a pellet heating system and attached Stirling motor (Rohrer, 2006b). Solar collectors for water heating underwent a remarkable growth in Austria since the early 80s resulting in one of the highest collector areas per capita worldwide and the development of a collector industry which supplies around a third of the whole European market. What is particularly intriguing about this case is its roots in a civil society movement for the self-building of collectors which kick-started the market (originally in opposition to professionals) and led to a series of technological improvements such as the integration of collectors in roofs as well as the use of solar collectors for (partial) room heating. While broader contexts and discourses such as the oil crises in the 1980s and environmental motivations did play a crucial role for driving this development, many users and self-builders were also motivated by a range of other issues such as cost savings, tinkering with technical installations, or the joy of working collectively in a group of like-minded people. Eventually and as installers acquired the necessary competences, the self-building projects were substituted by commercial installations. As it turned out, solar-collector users (and even more so, self-builders) changed their hot-water-use-behaviour in reaction to these technologies – they often eagerly metered and controlled the heat generation from their collectors and developed an intense awareness of how and where they used and actually

needed hot water and how they could maximize the share of regenerative heat in their overall warm water usage by e.g. adapting their showering behaviour. With respect to our overall topic one can state that the technology used for water heating shaped the social practice of using hot water in households. In many cases it made this practice more sustainable, but it always contributed to rethinking and problematizing existing practices which had to be adapted to the new situation. However, it is important to notice that these reconfigurations of water using practice not only were driven by the characteristics of the technology, but also of broader discourses about the need to replace fossil fuels, environmental concerns and the role solar collectors might play in this context. Interactions at a local and regional level were at least as much important: the organization of self-building groups and ensuing identification with this technology, the pride about international and national recognition and environmental awards for these activities, and the visibility of these technologies and interaction with neighbours and other locals about the advantages and disadvantages of using such technologies. As emphasized by STS theories, the practices of use of such technologies as well as the collective agency of adopting and integrating such technologies can only be taken into account if we recognize the interrelation of artefacts (collectors, technical integration in heating system), competencies (of professionals and users), broader discourses (oil crisis, environment), intermediary organizations facilitating self-building (the Association for Renewable Energy as an outcome of the self-building movement), a tradition of collaboration in the region etc. Only this hybrid network generates sustainable changes in energy consumption practices we are looking for.

Similar observations can be made with electricity production from roof-top PV panels and micro-CHP. In this case we studied the attitudes and behavioural changes of a sample of 'solar partners', who were supplying PV electricity to a green electricity company (oekostrom AG, Austria), as well as a sample of households with wood-pellet heating about the prospect of additional electricity generation with a Stirling engine attached to their pellets burner. Similar to the solar collector owners, PV users had a high emotional attachment to this technology; they installed programs to visualize electricity generation from their own plant and tried to adapt their behaviour to make as much use as possible from their 'own' electricity. Some PV owners e.g. reported that they would rather use their washing machine during the day when the sun was shining, and one user even pointed out that she tried to refuel her electric car particularly during sunny spells. In all cases, interviewees pointed to the linkages between electricity production and environmental loads and showed a high awareness of their own electricity consumption. Similarly, pellets stove owners were most intrigued by the idea of electricity self-production in combination with their heating system and by the resulting independence and autarky - also in case of an electricity black-out (which in fact would render their heating system obsolete). Again, we found connections between electricity generation technology and sustainable social practices of electricity use. In addition to the solar collector example, self-production of green electricity can be configured into different product-service models: a configuration predominantly serving one's own household demand (with connotations of autarky and savings for buying electricity), as part of a utility controlled virtual utility (with the supplier being able to virtually control electricity production in the household according to their demand) or by producing green electricity compensated with regulated feed-in tariffs (implying that the whole production has to be sold to the grid operator). These models are also distinct at the technical level in the way they are integrated and managed within the wider grid system. They are linked to different configurations of demand (autonomous producer; user as 'utility partner', or user as seller of green electricity to the state). Users with an interest in self-supply showed the highest propensity to change use practices, while feed-in tariffs rather seem to be driven by a mix of public good orientation

(‘contributing to an increased green electricity share’) and economic interest (pay-back times). The ‘virtual utility configuration’ was seen most critical by users – they were not sure how much to trust the utility or whether they should grant them access to (and control over) their micro-power plant. The main motivation for this third case was a purely commercial one. Again we find that sustainable use practices are strongly shaped by the different institutional and organizational relations (regulations; user-utility interaction), values (self-supply; environment) and complementary technical systems PV technologies are embedded in. It appears to be a quality of micro-generation technologies to open up corridors for such kinds of energy efficient, autarky, and sufficiency oriented social practices, notwithstanding the influence of different social and institutional framings.

If we compare micro-generation in households with large-scale renewable electricity supply as in off-shore wind or Desertec-style solar electricity power plants as mentioned earlier in this paper, it seems obvious that demand and resulting social practices of use are configured differently in such systems. The more direct involvement of users in micro-generation systems and the increased flexibility in developing ‘customized’ demand configurations (in interaction with the local utility or as self-supply) can be more directly connected to sustainable practices of use than large scale systems which rather lean themselves to other kinds of social and political relations such as potentially neo-colonial international relations (Desertec) or hierarchically controlled and managed super-grids. Still, even in these cases there are various possibilities of bringing users (at least virtually) closer to the source of electricity generation, e.g. through green electricity labels or joint ownership of renewable electricity plants. It is also important to see that household micro-generation and more centralized renewable electricity generation do not exclude each other but rather represent opposite ends of a transnationally integrated electricity supply system. Only in a rather weak way do the different qualities and affordances of these technologies generate particular practices of electricity consumption. Large-scale solar electricity generation may also be tied to more sustainable practices through green electricity certificates, while there are configurations of household micro-generation integrated into load management systems of virtual utilities may which rather detach these technologies from sustainable practices of household energy use.

Let us look at one more instructive example. Smart meters can be regarded as a technology which induces changes in the social practices of household electricity use – doubtlessly depending on the actor relations, institutions, values and other social practices this artefact is linked up with. In addition, the design of the meter (information provided, visualisation, etc.) and the integration into the home is important, too. As a result of these different configurations, smart meters may just improve load management of utilities and give them new opportunities to introduce additional commercial services, or they may give an immediate feedback to energy consumption for users in households (for an STS perspective on these devices, see Marvin et al, 2011; Coutard and Guy, 2007). They may also become elements of neighbourhood energy management systems which link together households in energy management and saving efforts and induce interactions and changes in collective behaviour. While these different types of configurations only make sense in different institutional and socio-economic settings, they also represent different “technical development pathways” as Marvin and colleagues point out (Marvin et al, 2011, 177) and modify social relations between electricity users and utilities as well as related social practices in a different manner. Moreover, these reconfigurations of social relations and practices can have different effects at different levels. Pre-payment meters as one of the different configurations may induce more energy-efficient behaviour at the household level, they are an element of a more individualistic and neo-liberal configuration of users within the electricity system. If a user cannot afford to pay for electricity with a pre-paid

card, this is his or her individual problem, while disconnecting a household from electricity supply is also a problem of the community (e.g. municipality) and access to public services.²³ Similarly a more active integration of users in managing their electricity use efficiently may also mean different means of social control by the utility or an outsourcing of responsibility. In all these examples, smart metering is an active element of changing social practices and relations and of making them more or less sustainable – but does in no way determine outcomes. Even if smart meters are intrinsically linked to increased information on electricity use and enhanced efficiency management possibilities, they may rather further the interests of utilities in controlling the electricity system and locking in users, or they may contribute to a reduction in electricity consumption through changed practices of household electricity use. How this plays out in reality not only depends on the opportunity space created by these technologies, but on the embedding in socio-economic structures as well as the power, strategy and tactics of actors involved in making smart meters part of a new hybrid socio-technical assemblage. Much depends on the regulations policy makers put in place, the ability of users to voice their concerns and organize, or researchers pointing out possible consequences of the different pathways, such as data protection and privacy issues.

In a similar vein, we could turn our attention to the way electric cars may be an active component in shaping new mobility practices and the history of failed attempts of implementing these technologies in their 'cultural ambience' (Hård and Knie, 2001), we could work out how passive houses change dwelling and energy use practises, or how the establishment of alternative agri-food production chains or urban gardening change system of food provision. In all such cases it would be well worth investigating how different technologies, infrastructures and production processes shape social practices, but also how they unfold their change potential and gain more influence on mainstream consumption and use patterns.

Overall conclusion

Moving towards more sustainable systems of production and consumption and changing social practices of energy and resource use, in fact means reconfiguring socio-technical systems at different levels of structuration. Strategies to achieve such transformations are often split up into technology oriented strategies of improving efficiency and reducing environmental impacts over the lifecycle of products on the one hand, and socio-culturally oriented strategies of sufficiency, changing behaviour and promoting certain lifestyles.

In this paper we have used insights from science and technology studies approaches to overcome this split and analysing social and technical change as intrinsically connected. In particular, we have tried to engage more closely with the role of technology and artefacts. Even as the relevance of the material layer of production-consumption systems is acknowledged, often only lip service is paid to the specific characteristics and the contributions to agency of the technologies and products involved, or technological characteristics are left aside in order to avoid the allegation of technical fixes or technological determinism.

With our cases we have only touched upon some of these issues without going in any empirical or analytical detail. Still, we hope that our illustrative examples have shown that the aim of more sustainable consumption and use practices also requires a close look at

²³ However, as Coutard and Guy (2007) rightly emphasize, the consequences of such configurations are more ambiguous and many users prefer pre-payment meters for various reasons.

characteristics and optional development paths of technologies and artefacts involved. As we have seen, technologies to some extent pre-structure social relations of use and sustainable social practices, they create certain affordances with respect to their social and institutional embedding, and they stabilize and solidify social structures, power relations or corridors of action (whether sustainable or not). At the same time they are ambiguous enough to leave substantial room for manoeuvring and interpretation by different social groups.

As these technologies shape practices, meanings and social relations, and they are in turn often used as a vehicle for furthering particular interests, power relations and goals (whether for utilities or users). One crucial challenge for achieving more sustainable social practices thus is the political, democratic shaping of technological development and the weaving of material and social elements together in constellations which frame the space for desired kinds of sustainable practices without determining them. How such socio-technical change processes are governed, how regulatory contexts are set, how institutions are built becomes a core issue of such a transition towards greater sustainability. As Maarten Hajer (1995, 27) puts it succinctly, "politics of sustainable development have become a matter of how this notion congeals, how the language of sustainability solidifies in new technologies, new fiscal regimes, new socio-cultural practices. Politics, then, is about dominating this process of translation."

Green growth, post-growth or no-growth, we can conclude along these lines, not only needs institutional reform and new ways of life, it also requires a different kind of machinery.

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Discussant Contribution: Beyond Growth

Tom Bauler

The title of the session “Beyond Growth – exploring the alternatives” provided an important number of potential hooks and perspectives for the contributing papers. Discussing - for instance - the alternatives in their diversity, analysing a single set of alternatives, treating of the multiplicity of understandings of what an alternative could be, even assessing critically the mainstream and working on the relationships between alternatives and (beyond) growth; all of these (and many more) could have been developed. As a consequence of this large potential, I didn’t expect to find any sensible common points which could be raised for discussion, but surprisingly there were some.

Before exposing these commonalities, I’ll elaborate shortly on each paper individually, first synthesizing my personal reading of them, then raising for each of them one single point of discussion.

The paper by Christine Ax and Friederich Hinterberger explored the foundations of a very fundamental pro-growth argument which is raised by many observers: what happens to our (European, roughly social-democratic in their natures) health- and care-systems if we wouldn’t have the macroeconomic drivers anymore to pay for them. Or to put it very polemically: is a “Beyond GDP”-society also a “Beyond-healthcare”-society? Along the lines of people like M. Max-Neef, the authors work out the idea to shift our socio-economic assessments of Welfare/Wellbeing – and more particularly the assessments of our health- and care-systems - from a set of affluence-based performance indicators towards a conceptualisation of Welfare/Wellbeing in terms of “needs”. More accurately, they seem to argue to focus our future assessments around the 3 needs of “existence”, “relatedness” and “self-realization”. Finally, they argue for a rethinking of what we call today “work”, on the assumption that an inter-a and intra-generational redefinition of work could on one hand halt the explosion of our health- and care-systems costs, on the other hand be a useful strategy to a Beyond-Growth society. The analysis as such is interesting, of course, but the authors don’t address a very crucial point in their line of argumentation: what are the dependencies, the relationships, between each of the 3 identified needs and economic growth (as measured by GDP or equivalents)? Indeed it is not very easy, given our knowledge-base on the “correlations” between needs and economic performance (be it on individual, salary, level, or on societal, GDP, level), to ascertain that needs-fulfilment is sufficiently disconnected from wealth, revenue, income... in order to bring up a non-growth society. In the same verge, a needs-based assessment of health- and care-systems are to be critically analysed with regard to their value-added to affluence- and performance-based assessments.

The second paper, by Steve McCauley, presents some empirical exploration and discusses what can be labelled as a specific, particular, contextualized alternative: local networks of craftsmanship in Japan. The author emphasises and discusses the networking characteristic of these “economies”; the very fact that a new form of craftsmanship develops in Japan over a series of platforms and networks seems indeed to be a very valuable angle of analysis. Notably because the perspective allows to focus on what members of these networks source from each other, in terms of material and services they rely their own activities on. The author discusses the implications of being a member of such craft economies, for instance with regard to their (mainstream) consumerist behaviour. While the object of study is interesting as such, because it opens up the discussion of what can be qualified as an alternative and what not, there are a number of issues, maybe of a wider scope than what could be developed in the paper, which can be highlighted. First, the boundaries of what belongs or not to a craft economy appear to be somewhat unclear, the qualification of what happens exactly within the “alternative”, what belongs to traditions and what to new pathways of developing an activity is not really discussed in the paper. Second a perspective which focuses on a specific alternative raises the question on how far the activity is actually an alternative to the mainstream. Even the way the alternative links to the mainstream could be interrogated: are these activities mere complementarities or real tentative substitutes to mainstream activities of production and consumption? Third, the question of what depends on context and what not is a further point which would need some clarification at one point; e.g. the described craft economies are located in Kyoto, which is undoubtedly the urban Japanese area where the traditional and the local is very much part of its identity, probably even of its selling argument.

The third paper by Harald Rohrer and Michael Ornetzeder takes a deep analytical stance and basically explores innovations and their relationships to “Green growth” strategies. Basically, the role of technology in the emergence and development of alternative consumption practices is discussed. Interestingly, the authors try – and manage to – to stay away from other papers/authors on similar questions where the discussions on technology-embedded solutions is often relatively un-objectified, even dogmatic to a certain extent. The original, and which I found most interesting, perspective the authors develop is the fact that they apply a Transition perspective and approach to their analysis. Interesting is also the fact that the analyses are situated in what others called “decommodification” strategies, i.e. finding ways to take activities out of the market, to locate them in a different way of interacting than via economic mechanisms. The question might appear to be pushing the issue a bit far, at least in a first reading, but the authors expand to discuss whether technology-based alternatives could render sufficiency strategies by consumers. However, the way the question is treated remains actually convincing, adding an interesting exploration to the paper.

The three papers are thus fundamentally different in their approaches to discuss “alternatives”. Nevertheless a series of 2 overarching remarks and questions can be formulated.

First, none of the papers makes their “beyond growth”-worlds very tangible. What exactly would a lesser growth path imply on the different perspectives, i.e. discussing the retro-effects of the alternatives which are explored at the individual paper-levels is missing. Of course, the papers do concentrate on alternatives, but nevertheless, these emerged in a pro-growth context (i.e. today) and hence the question of their development or transformation in a “beyond-growth”-context needs to be addressed. More generally, the papers remain relatively scarce with regard to addressing “pathways” of development of the alternatives, i.e. from alternatives into becoming mainstream is rarely addressed as a question; in other words, the papers remain relatively static in their analyses. Of course, the papers are also tributary of their perspectives, and extending their perspectives to include “pathways” might simply be beyond what is feasible to be addressed in a single paper.

The second comment is more profound, maybe more prospective. At very rare moments do the authors address issues of power, influence, agency, and values. In that respect, the 3 papers seem to be relatively floating, not really touching the level of the very important and determinant actor dynamics. Adding political readings to the discussion of the alternatives to “beyond growth” should become among the most prominent of the future works.

Discussion Report: Beyond Growth

Christoph Gran

Emerging general topics

In a general context various statements are made throughout the discussion about the importance of power – specifically the lack of analysis in this field on power and the interests influencing the sustainable consumption and the *beyond growth* debate. It is argued that the question of power needs to be discussed before alternatives can be developed. One participant points out that all discussion about pro/degrowth is misleading if it does not address the distribution of the benefits

Main discussion points on the paper by Hinterberger and Ax

The authors raise issues of pensions, aging society and health systems in a no/low grow context. An important novel feature of this paper is the broadening of the discussion to include redistribution of working hours (across the life cycle), leading to greater quality of life and less negative consequences for health. One example of this is the suggestion of focusing on the revaluation of heath instead of a focus on the consequences of illness, possibly leading to lower costs. The discussion evolves incorporating the following questions:

The paper seem to be part of the beyond GDP-discussion, not necessarily beyond growth? But what actually needs to shrink?

One participant remarks that reciprocity is not discussed in the Ax & Hinterberger paper. It is suggested that reciprocity could be an answer to the state failing to providing services?. Focus should be on complementarities as an expression of diversity. Various commentators agree that more analysis is needed in this field – possible future research questions could explore included: who is responsible for the most costs, and what is their age cohort? Why is peak time of weekly working hours, when parents have young children?

Main discussion points on the paper by McCauley

The primary point discussed in this paper questioned whether Japan is a model for adaptation to a no/low growth context, as it has been experiencing no or low growth for a number of decades. Institutions and networks of craft economies were cited as expressions of a culture embracing slow life, high quality, local production, etc. (i.e. alternative economy instead of social movement). The author describes the historic evolution of the current economic situation (and note that the mainstream economy has turned out to be very unstable, featuring low job security). To date the Japanese approach has not focused on sustainability but on social change. However, discussions about

lifestyles have risen to a new prominence in Japan following the aftermath of the earthquake catastrophe.

The audience question the extent to which the Japanese alternative economy is actually an alternative or if it is only complementary to the existing system. Does the alternative economy rely on the main system and if so would it co-collapse in case of collapse? Despite this question the participants agree even if it was just complementary to the dominant system the emergence of the alternative economy is still a good starting point, especially in the situation where alternative production processes are indeed reducing overall resource use.

Further questions are posed regarding how closed or open the “network” is? How powerful and visible is it? What is its size and impact? How many of the needs can be satisfied within the network? McCauley responded that up to 90% of needs can be satisfied. How happy are people within network? McCauley responded that they were much happier.

Main discussion points on the paper by Rohrbacher and Ornetzeder

The discussion develops around the role of technology in the sustainable consumption context and the following questions are posed: Can technology (co)generate sustainable practice(s)? Where are the connections to institutional discourses on lifestyles? How can socio-technical arrangements be established leading to sustainable social practices? Which political/democratic practice is inherent in certain technology? How does it frame or open certain societal developments (for example DESERTEC as a centralised technology vs. micro solutions)?

The paper is perceived as having a very technological focus and only a weak link was established explaining how this is leading to behavioral change. One criticism could be that the focus is on small scale changes and not on wider systemic change. However, Rohrbacher in response argues that technology might not generate change but it can possibly make it easier to frame change. ICT, for example, is one of the core drivers of change these days and often represents small scale technology integrated in larger technology systems.

From here a debate develops around the power and politics of technology and its development. One participant proffered the question who would have an interest in developing (long living) products or sustainable technologies? So far new technologies often become successful because new needs are created corresponding to the technologies. Another commentator questions how new products come about in a degrowth situation? It is suggested that better research is needed to investigate questions such as: ‘what makes innovations successful (in the market)’; ‘how do innovations beyond markets take place (Commons)’; and ‘how can we look at successful technologies and analyse their contribution to change?’.

From austerity to transformation: macro policies/strategies

Managing Cultural Dissonance in the Transition to a Postconsumerist Future

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Introduction

The national economies of the global North have been struggling since 2007 to regain their former vitality and the prolonged post-crisis period has given rise to a “new normal” characterized by persistently high unemployment, sluggish consumer demand, volatile financial markets, and general societal malaise (Schor 2010; Etzioni 2011). Viewed against more established trends in many of these countries of stagnating wages, widening income inequality, and contracting middle-class security such developments suggest erosion of several important pillars of the post-World War II consumer society (Ivanova 2011; Irvin 2011; Mullard 2011). Concomitantly, many of the long-standing cultural assumptions that have organized everyday life remain in place, though they are showing increasing signs of strain.

It is not necessary to review here the large literature on social constructionism to posit that there is typically divergence—sometimes quite profound—between mental models of understanding and the corporeal world (Berger and Luckmann 1966; Hannigan 1995). Our conceptions are assembled from a complex bricolage of lay and tacit knowledge, mimetic duplication, political rhetoric, personal and familial experience, social context, superstition, religion and more. Because large buffers typically exist between human activities and the wider surround it is normally possible to tolerate significant discrepancies without incurring perilous risks. In other words, we are fortunate to live in a world that normally provides wide margins for error. However, as scholars of societal collapse have capably demonstrated, failures to properly conjure accurate interpretations of extent conditions can have extremely parlous consequences (Tainter 1988; Diamond 2005). The state of the contemporary discourse surrounding global climate change is largely the result of poorly articulated feedback loops between biophysical reality and human understanding (Stoll-Kleemann et al 2001; Madhavan & Barrass 2011).²⁴

²⁴ Dissonance should not be confused with denialism which suggests a different social psychological response and stems more from a purposeful rejection of the validity or credibility of extent information.

Economic conditions, because of their abstractness and variability over geographic space (thus confounding opportunities for meaningful personal appraisal), pose some unique challenges in terms of enabling people to grasp evolving change in a timely way (McCloskey 2003; Waitzkin et al 2005; Storr 2010). In addition, statistical indicators of unemployment and economic growth are embedded in various expert discourses that rely on politically contested definitions. More problematic still, when extent circumstances shift, large cleavages can open up between societal expectations and lived experiences and these gaps can, in turn, lead to marked indecisiveness. In short, it takes time for mental conceptions to adjust to new realities.

It appears that the breach between dominant public narratives regarding the economy and actualized conditions in many Anglo-European countries is widening and an expanding pattern of dissonance is taking hold. The *Merriam-Webster* dictionary defines dissonance as “a lack of agreement or inconsistency between the beliefs one holds or between one’s actions and one’s beliefs.” It is a central concept in psychology and has been taken up in various allied fields such as marketing where it is deployed as a way to explain the anxieties that often accompany the acquisition of goods.²⁵

Dissonance is typically understood to be an individualized condition but the assertion put forth here is that societies (or collectivities of individuals) can also manifest this conflictive condition on a cultural level.²⁶ Some readers will likely recognize that invoking the notion of *cultural dissonance* is not an uncontroversial claim. Over the years, some social scientists have vigorously challenged the validity of this kind of scaler transferability, yet research on political culture continues to bear out the presence of central tendencies at the national (or societal) level (see, e.g., Almond & Verba 1963; Inglehart 1990; Inkles 1997). This paper seeks to explore how the current period of economic instability is contributing to macro-scale discordance in some of the most severely affected countries. In particular, the aim is to examine how the recent episode of economic overreach, and the subsequent process of financial retrenchment, is contributing to disjointedness between prevalent expectations surrounding consumption and actual opportunities to consume.

The reconciliation or narrowing of dissonance often occurs gradually, but the gap can also close abruptly and dramatically. With respect to the disparity between the arguably dire fiscal condition in the United States and the continued willingness of investors to fund the country’s large deficit, historian Niall Ferguson has recently written,

Such complacency can persist for a surprising long time—long after the statistical indicators have started flashing red. But one day, a seemingly random piece of bad news—perhaps a negative report by a rating agency—will make the headlines during an otherwise quiet news cycle. Suddenly, it will be not just a few specialists who worry about the sustainability of US fiscal policy but also the public at large, not to mention investors abroad. It is this shift that is crucial, for a complex adaptive system is in big trouble when a critical mass of its constituents loses faith in its viability.

The next section briefly discusses several historical examples in which resounding events have triggered cultural dissonance about consumption. The third section describes the emergence of consumerism as the dominant mode of societal organization

²⁵ Indeed the main objective of some forms of consumer resistance is to actively foster dissonance as a means of encouraging behavior change. See, for example, Sandlin & Callahan (2009).

²⁶ The most famous treatment of this issue is probably Daniel Bell’s book, *The Cultural Contradictions of Capitalism* originally published in 1976.

in Anglo-European countries and outlines how efforts to overcome cultural dissonance are giving rise to a nascent transition to postconsumerism. The fourth section focuses specifically on the renowned idea of the “American Dream” and explains how this trope has functioned as an aspirational heuristic in the United States. The fifth section examines the manifestation of similar expressions of cultural dissonance in Europe and the sixth section considers the case of Japan. The final section situates the prospect of a postconsumerist future within the history of macro-scale economic transitions and reflects on the role of scholarship on this issue.

Brief Insights from Recent and Ongoing Transitions

Over the past half century there have been no shortage of economic transitions and these disruptions have typically opened up large fissures between societal expectations and lived experiences. For instance, the economic plans implemented by occupying military governments during the aftermath of World War II induced widespread cultural dissonance in Germany and Japan (Rimer & Kerkham 2001; Geppert 2003; Kage 2011). For somewhat different reasons, mostly associated with the final stages of imperial decline and the debilitating burdens of two costly wars, the British public went through its own process of aspirational recalibration after 1945 (Barnett 1972; Marsh 1999; Conekin et al 1999; Hennessy 2007; Addison 2010).

The dissolution of the Soviet Union during the early 1990s is though perhaps the most dramatic example of economic transition during recent memory, a process that overturned prevailing cultural narratives and created widespread insecurity (Tsygankov 2002; Kaser 2003; Abbott & Wallace 2010; Abbott et al 2011; Popov 2012). Most of Eastern Europe and the Balkans experienced a similar phase of reorganization and it took years for societal expectations and lived experiences to realign, and in some cases pronounced public ambivalence or indeed resistance to consumerism remains a notable feature of contemporary life in these countries (Mitra & Selowsky 2002; Galasinska & Krzyzanowski 2008; Albinsson et al 2010). And these are only some of the upheavals of the last few decades. A more elaborate list would need to include China, Vietnam, South Korea, Chile, Cuba, and numerous others.

It would likely be highly instructive to delve into these cases in detail, but that is a task for another time and place. The more immediate point is that economic transitions occur more frequently than we might initially acknowledge and these experiences constitute a repository of insights that may be relevant to a putative postconsumerist transition. Common to all of these cases is the prevalence of preexisting conceptual and institutional frameworks that set the boundary conditions for societal hopes and desires. Either due to war, revolution, or the accumulated weight of internal contradictions, once-prevailing systems of economic organization were supplanted by new modes. Because of lag effects, it takes time for affected populations to accommodate themselves to the new circumstances and during this period of adjustment it can be quite difficult to navigate. The phenomenon is roughly analogous to trying to find one’s way through an unfamiliar city using an outdated map.

There is also an important lesson here for critics of consumerism in that the relative frequency of economic transitions suggests that the dominant organizational logic of Anglo-European countries is not immutable. Though it may at times be difficult to conceive, change is inevitable and despite the common perception that we are tragically locked into lifestyles that are powerfully defined and delineated by consumerism, new avenues will avail themselves. In contradistinction to the claims once offered by

development theorists such as Rostow (1960), a high mass-consumption society is not the endpoint of history (see Figure 1). With this in mind, the following sections consider the contours of an approaching postconsumerist era and the role that cultural dissonance is playing in creating conducive conditions for such a putative transition.

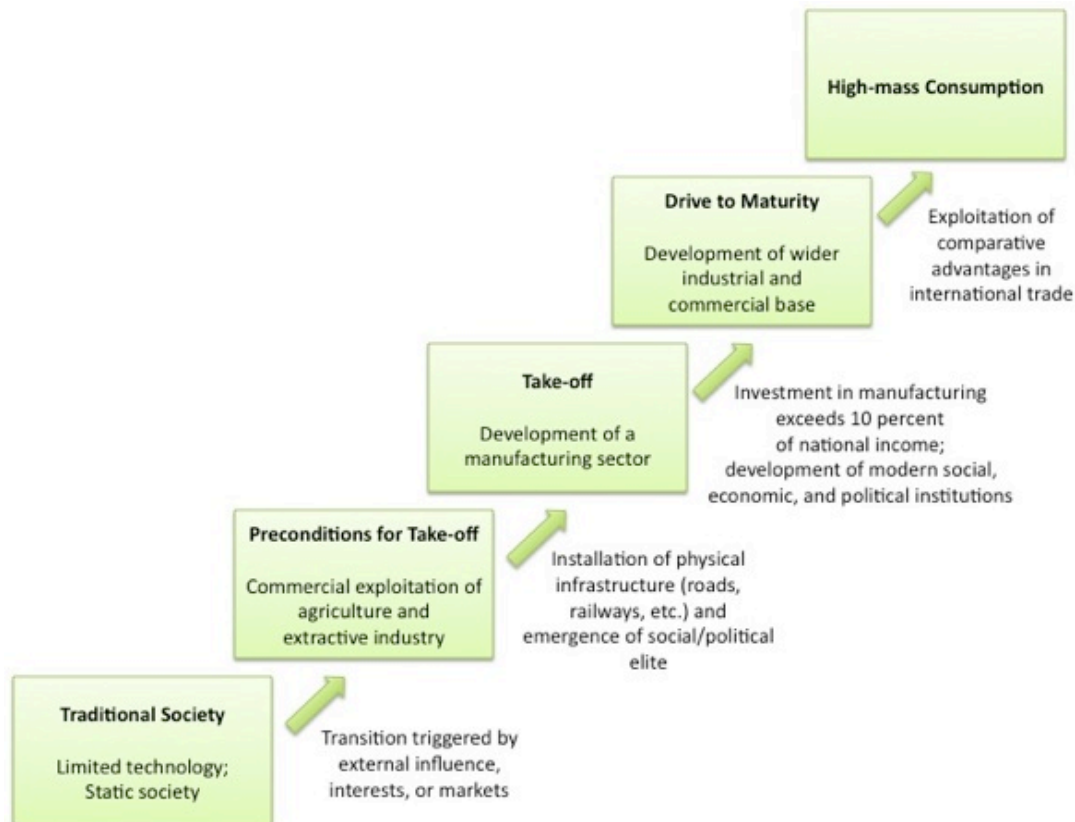


Figure 1: Rostow's Stages of Growth Model

The American Dream in Retrospect and Prospect

It is becoming apparent that the current phase of economic instability in Anglo-European countries is not just a periodic downturn in the customary capitalist boom-bust cycle, but is rather the start of a more extensive process of structural reorganization. Already in 2008, a correspondent for the Los Angeles affiliate of a major news organization was prompted to presciently intone, "Is this the end of the consumer society? The evidence is growing that America is undergoing a fundamental economic restructuring...[and there is] the possibility that some radical cultural shift is taking place...How does America adjust to a zero growth economy? Can we live without all the toys of a hyperconsumer society?" (Kaye 2008).

If we adopt the perspective of the *longue durée*, the dominant mode of economic organization over the past 250 years has progressed from agrarianism to industrialism to consumerism (Galbraith 1958; Landes 1969; Bell 1973; Braudel 1992; Kumar 2005;

Ferguson 2011).²⁷ The early consumerist era was distinguished by a Fordist model of production and consumption—later subsumed by its Keynesian successor—whereby an ample supply of relatively well-paying jobs provided worker-consumers with the income necessary to assimilate growing volumes of mass-manufactured goods (Cohen 2003; Freeland 2011). As wages and purchasing power began to stagnate during the late 1970s, the virtuous cycle started to dissipate (Lipietz 1987; Anim 1994; Gibson-Graham 2006). However, the onset of bank deregulation and the subsequent revolution in consumer finance injected unprecedented amounts of credit into consumer markets (Calder 1999; Geisst 2009). This infusion provided the resources necessary to artificially maintain (and in many respects extend) consumer lifestyles and to catalyze a period of robust consumption-driven economic growth.²⁸ This process of expansion continued in several ebb and flow iterations until 2007 when efforts to increase purchasing capacity through ever-more innovative techniques came crashing down in a wave of worthless credit-default swaps, impenetrable derivative deals, and various other financial products of dubious integrity (Reinhart & Rogoff 2009; Lewis 2010).

In the aftermath of this implosion, analysts began to observe some intriguing trends (some which appear with hindsight to actually have been set in train prior to the financial collapse). Certain leading consumption indicators have apparently been trending downward for some time. For instance, several nations appear to have reached the point of “peak car” exemplified by declining vehicle-fleet size, vehicle miles traveled, and licensed drivers (within the younger age cohorts) (Puentes & Tomer 2008; Goodwin 2010; Newman & Kenworthy 2011) (see Figures 2, 3, and 4).²⁹ The reasons for this situation are complex and likely vary across countries, but we can speculate that they derive from a combination of more volatile commodity prices (especially oil), increasing automobile operating costs, expanding and revitalizing public transport systems, reurbanizing metropolitan populations, untenable congestion levels, demographic shifts, and widening income inequality (Cohen 2012; see also Geels et al 2011).³⁰ More provocatively, Chris Goodall (2011) has recently suggested on the basis of material flow data that the UK has reached “peak stuff.” The degree to which this assessment might be applicable to other countries remains to be determined.

Are these developments harbingers that the consumerist era of continually growing volumes of resource throughputs is coming to a close? We will not know with any confidence until we have achieved some historical distance though an observation by Benett and O'Reilly (2010) merits attention.

The simple truth is that the elements that permitted hyperconsumption to flourish (near-full employment, easy credit, plentiful natural resource) aren't coming back anytime soon, if at all. The employment sector is in upheaval, way many job categories obsolete. Easy credit has all but evaporated, and the world's burgeoning middle classes will only intensify the pressure on our increasingly scarce resources. So even if the consumer masses wanted to go back to mindless excess, they could not.

²⁷ It is common to characterize this historical process as proceeding from agrarianism to industrialism to servicization (also including financialization). However, with upwards of 70 percent of gross domestic product in the relevant countries now attributable to the consumption and a preponderant share of people deriving their identities from their roles as consumers, it is more appropriate to characterize the current period as being predicated on consumerism.

²⁸ See Livingston (2011) for a provocative defense of this strategy.

²⁹ See Millard-Ball and Schipper (2011) for a discussion of the related concept of “peak travel.”

³⁰ Consideration of the codependency between automobility and consumerism is beyond the scope of this paper.

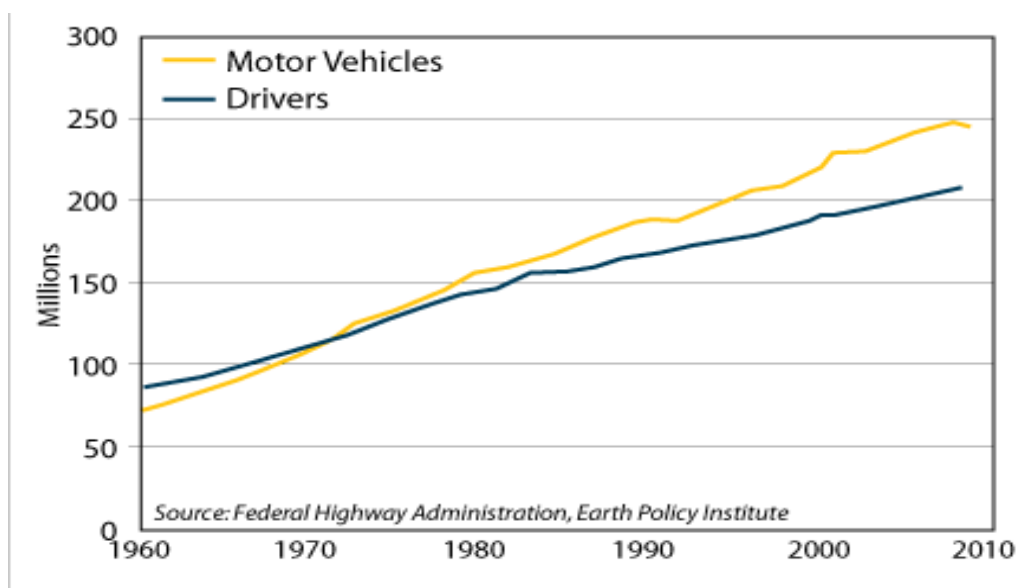


Figure 2: United States Motor Vehicle Fleet, 1960–2010



Source: Traffic Volume Trends and Energy Information Administration

Figure 3: United States Vehicle Miles Traveled Per Capita and Real Gasoline Pump Prices, 1991–2008

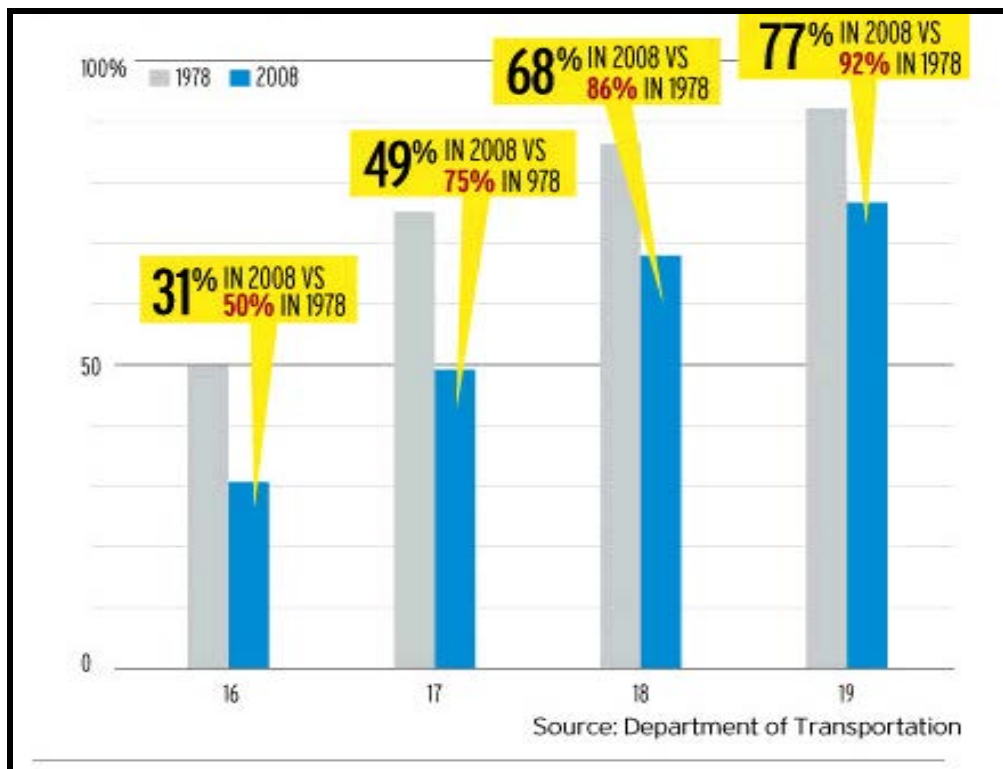


Figure 4: Percentage of United States Population 16–19 Years Old with Driver's Licenses, 1978 and 2008

A growing number of observers are beginning to grasp this situation and the debate on postconsumerism has been joined (see e.g., Roach 2008; Leonhardt 2008; Rosenbloom 2010; Walker, 2010; Whelan 2011; Cowell 2011a; Edsell 2012; see also Etzioni, 2004, 2009). Moreover, the current wave of austerity policies being implemented in Europe and the United States is likely to hasten this transition by stifling purchasing power.³¹ This development imposes an ironic and perhaps unexpected twist on efforts to transcend currently ecologically untenable modes of consumption—sustainable consumption is being triggered by poverty rather than affluence.

Sustainable consumption under these circumstances is coming to be operationalized through a multitude of efforts: alternative agro-food networks, community energy schemes, worker-owner cooperatives, passive home construction, transition towns, and planning projects to reappropriate the public streetscape for nonmotorized activities. These are commendable initiatives, but like most social experiments they are cutting against the organizational logic of a disabled, but still intact, consumerist system. Moreover, it will be a major undertaking to successfully scale up these initiatives to a level where they might begin to challenge dominant lifestyle modes.

Somewhat more optimistically, there are indications that the business community is similarly coming to recognize that fewer consumer dollars will be available for it to capture and that the era of rampant goods acquisition is disintegrating. Recent years have seen the publication of a number of books hailing a new consumer mindset

³¹ There is, of course, no single vision of a postconsumerist future and different authors invoke varying terminology to describe the era that will supersede the current consumerist era.

predicated on “mindful spending” (see e.g., Benett & O’Reilly 2010; Gerzema & D’Antonio 2010; Hsieh 2010). Even the celebrated business strategist Michael Porter is encouraging companies to embrace “shared value” and policies to encourage well-being as part of efforts to rehabilitate consumer-driven capitalism (Porter & Kramer 2011). It is however important to keep these developments in perspective. The marketing industry is quite adept at appropriating consumer disaffection to sell the next generation of products. The current enthusiasm that surrounds “green consumerism” is but the latest manifestation of this practice (Strasser 2011; Owen 2011).

A Pending Transition to Postconsumerism in Europe?

The European public does not subscribe to an equivalent synthesizing cultural narrative predicated on economic opportunity, material accumulation, financial independence, and libertarian freedom as is the case in the United States. The closest approximations to a “European Dream” are founded—somewhat incongruously—either on imperial or colonial nostalgia (Gilroy 2004) or a combination of social democracy and trans-European consolidation (Schwimmer 2004; Rifkin 2004). However, these aspirations are now actively being challenged in a wide arc of countries—most notably Ireland, Portugal, Spain, Greece, Hungary, and the UK—due to the imposition of harsh austerity policies designed to curtail public expenditures, to prevent further deterioration of bond ratings, and (for countries in the euro zone) to preserve the common currency. The requisite budgetary belt-tightening has led in recent months to growing unemployment (especially among youth), violent riots, tax boycotts, and governmental collapses. The orthodox view is that aggressive cuts will reduce outsized public budgets, restore investor confidence, and set the stage for a period of robust economic growth (Donadio 2011; Cowell 2011a). While some headway has been made on the first two objectives, as time goes on it seems that growth, at least in the conventional sense, is not going to return as quickly as proponents of this strategy have hoped. It may be the case, for better or worse, that much of Europe will be looking at low growth (or conceivably degrowth) for the foreseeable future.

Given this widening realization, there are indications that ordinary people in the most severely affected countries are beginning to face up to these new and emergent circumstances. A casual review of media accounts reveals that amidst all of the disillusionment, fiscal rectitude, and efforts to recatalyze traditional forms of consumer spending, grassroots social innovations are being pursued (see Exner and Lauk 2012 for a useful review). It is admittedly difficult to assemble these developments into a complete picture at present because of their inchoate character, but they nonetheless merit careful attention. In the interests of space, let us take up two national cases at opposite ends of the continent.

In the UK, a harsh critique of capitalism, prompted by widening income inequality and stringent austerity measures, has gained considerable ground over the last couple of years (Cowell 2011a, 2011b; see also O’Riordan 2011). This appraisal is not random or directionless, but rather is being shaped by an active politics of energy and climate change that includes planning for a low-carbon transition and awareness that the North Sea oil bonanza is coming to an end. By one count (conducted in 2005), more than 500 community renewable energy projects were being pursued and the government’s Low Carbon Community Challenge recently attracted over 500 expressions of interest (Hielscher et al 2012). With respect to agro-food systems, numerous local organizations in cities such as Manchester are working at the interface of food security and environmental justice to develop alternative networks for food production and

provisioning (Psarikidou & Szerszynski 2012).³² Though difficult to grasp, the sustainability implications of these activities need to be interpreted from the standpoint of the UK's increasingly peripheral role in European political affairs. This changing relationship is largely due to the extraordinary lengths that Prime Minister David Cameron has gone to insulate London-based financial firms from new European bank regulations (Thomas 2011).

Turning our attention to Greece, we find a country that is locked into an extremely debilitating downward economic spiral without an end in sight. Suffering from a massive public debt burden and precluded from pursuing currency devaluation, the government has been sharply reducing wages and public expenditures. European negotiators have been compelling bondholders to take "haircuts" in exchange for assurances that remaining debt payments will be made. Unemployment is spiking dangerously upward, more than 25 percent of Greek businesses have been forced into bankruptcy since 2009, and Chinese investors are buying up the country's ports and other infrastructure at fire-sale prices (Shorto 2012). Offsetting this grim situation, anecdotal evidence suggests more positively that a growing cadre of youth are reclaiming disused or neglected family farms and the number of innovative—many Internet based—barter networks is proliferating (Donadio 2011b, 2012). Another interesting development is that the country's historically low level of female labor-force participation is changing as Greek women increasingly become the primary source of household income (Kitsantonis 2011).

It though must be acknowledged that these nascent activities in both the UK and Greece—many of them arguably sustainability enhancing—represent only one dimension of a putative European economic transition. Survey data, as well as more visible signs of public rage, suggest that interethnic hostilities are increasing and gaining more visible expression. In addition, recurrent political difficulties in Belgium and more urgent calls for Scottish succession suggest that we may be witnessing the early stages of active efforts to redraw the European political map. The new governments that have come to power in Greece and Italy are wobbly at best and the youth unemployment problem—more than 50 percent in Spain and almost 5.5 million in the whole of the euro zone—poses enormous challenges (Donadio 2011a; Morris 2012). Across the continent's southern tier, suicides have dramatically increased and already low birth rates are falling further, both signs of serious societal distress (Povoledo & Carvajal 2012; see also Cooper 2011; Catalano et al 2011). At the same time, Germany has consolidated its control of several important European institutions and the country has taken advantage of a weakened euro to enhance its own international competitiveness. These developments are creating palpable angst among neighboring publics that are inescapably trapped in downwardly trending living standards (Wapshott 2012; Fitoussi 2012; Donadio 2012). The resounding, and perhaps understandable, political answer to this array of unsettling problems may very well be to deploy the conventional toolkit to kickstart economic growth.

³² See Grimshaw and Rubery (2012) and Sawyer (2012) for different perspectives of the political landscape.

Japanese Postconsumerism?

For more than two decades, the global media has portrayed Japan as the “sick man” of the international economy, a country overwhelmed by massive public debt, “zombie” banks, “hollowed out” industries, and anemic economic growth.³³ According to this view, the Japanese never recovered from the collapse of the twin real estate and stock market bubbles of the late 1980s and early 1990s and a succession of ineffectual governments failed to pull the country from its torpor (see, e.g., Carpenter 2008). Gross domestic product (GDP) peaked in Japan in 1995 at approximately US\$5 trillion and for the past seventeen years has fluctuated between stagnation and decline. Because of lapsing demand, consumer prices have been in a vicious deflationary spiral. The country’s population is shrinking, its median age is increasing (the highest in the world at 44.8 years), and there is growing consternation about how to respond to tightening Chinese hegemony in Asia. Japan’s leading industrial firms are—especially in the wake of the triple disaster of earthquake, tsunami, and nuclear meltdown of 2011—reconfiguring their supply chains and moving jobs to lower wage nations (Fackler 2010, 2012). The dominant understanding among economists and others is that Japan ineptly bumbled through the 1990s and 2000s and meekly surrendered its role as the world’s second largest economy in 2010.

But have the “lost decades” really been so bad? Are these appraisals correct, or is something else going on? In fact, a growing circle of observers has begun to develop a contrarian interpretation and this work may also have wider relevance (Bowring 2008; Kato 2010; Kelts 2010; Weil 2010; Chandler et al 2011; Fingleton 2012). Of critical importance here is whether Japan is simply the leading edge of an expansive economic transition toward postconsumerism that is only beginning to express itself on a wider geographic scale.

Various indications suggest that the Japanese are taking their diminished status in stride and at the same time asking penetrating questions about topics typically beyond the pale in other countries.³⁴ For instance, economist Noriko Hama (2012)—regarded by some observers as a Japanese version of Paul Krugman—recently wrote that a modified understanding of so-called Japanization “could be all about affluence, maturity, refinement, and leisureliness. It could be all about being grown up. A grown up economy that is the envy of the rest of the world. That could be Japan’s position in today’s scheme of things.”³⁵

Though it may be hard for occasional visitors to the country to fathom, journalistic accounts suggest that the sensibilities described above are reasserting themselves among Japanese consumers and their acclaimed enthusiasm for luxury goods is fading (Tabuchi 2009a, 2009b; Shoji 2010). Moreover, automobiles of all makes and models have become especially prominent targets for disavowal among youth and the term “kuruma banare” (roughly translated as demotorization) has been devised to capture this trend (Kageyama 2009; Cohen 2012; see also McCormack 2001 and Garon & MacLachlan 2006). Interestingly, Japanese retailers with expertise in adapting to more

³³ Conservative commentators in the United States seem to have an especially sharp ax to grind regarding Japan. See, for example, Randazzo (2009) and Scissors & Foster (2009).

³⁴ Kazuko Aso, the director of a Tokyo artists’ cooperative and lead organizer for an exhibit on display in Washington, DC, recently wrote, “This disaster put an end to the era of the post-war prosperity; the time for chasing economic success and materialistic prosperity is over. The disaster has reminded us...we can never conquer nature; we must live with it” (quoted in Hiatt 2012).

³⁵ The equivalence between Hama and Krugman is from Gross (2012).

frugal consumption patterns are starting to export their business models to the United States and elsewhere.³⁶

With the passage of time, we may find that the prevalent interpretation about Japan has been precisely backwards. In a postconsumerist world of scarce resources and impinging biophysical limits, the country's high savings and employment rates, equitable income distribution, and modest material consumption relative to GDP are likely to become envied—and perhaps emulated—characteristics.

Conclusion

Contemporary discussions of economic transitions tend to treat processes of societal transformation in largely positive and ineluctable terms. To take but one prominent example, the notion of “creative destruction” as popularized by Joseph Schumpeter (1976) suggests that periodic reinvention is ultimately a source of human betterment. This idea is anchored in an Enlightenment discourse of continual improvement and the prevailing view is that change is tantamount to progress (Wright 2004).

There is though no getting around the fact that the sequential economic transitions from agrarianism to industrialism to consumerism were wrenching and often bewildering for people caught up in the throes of change. Laws were rewritten, new infrastructure was built, and familiar routines were torn asunder. One need only read the work of nineteenth century political economists (as well as their muckraking counterparts) to get an appreciation of the turmoil caused by the wholesale shift from a primarily agricultural system of production to an arrangement predicated on industrial manufacturing. The more recent process of deindustrialization that began in the second half of the twentieth century was (and continues to be) similarly disruptive. The abandoned hulks that still stand in many former industrial districts, and the dispirited people that often occupy the neighboring areas, are evidence of both the disarray that accompanies new modes of economic organization and the inevitable incompleteness of any transition.

The nineteenth and twentieth centuries produced various initiatives to accommodate first the shift to industrialism and then the move to global consumerism. For example, sanitarians and public health officials were strong proponents of the early automobile as a way to rid densely packed cities of the problems of horse-drawn transportation and to disperse urban populations (to reduce the spread of disease). They also championed land-use zoning because it offered a way to relocate polluting industrial facilities away from residential districts (Cohen 2006, 2012). The construction of large public housing complexes in deindustrializing cities was another well-intentioned, but ultimately insufficiently thought-out, policy idea because it tended to concentrate poverty in places without adequate employment opportunities and to disregard complex system dynamics (Forrester 1969). As discussed above, the mass infusion of credit into the consumer economy represented yet another policy intervention that was designed to correct one problem—namely to enable people to assimilate surplus production during a period of wage stagnation—but proved economically catastrophic in the end.

We now likely stand on the brink of an economic transition from consumerism to postconsumerism. It is befitting to acknowledge that such changes take place within the context of complex adaptive systems and we are truly novices in planning for such

³⁶ A company that exemplifies this trend is Uniqlo, a Japanese retailer with a reputation for selling stylish clothing at inexpensive prices (Tabuchi 2009a; Wilson & Barbaro 2006).

transformations. Experiences from the past provide some instructive guidance, but each transition poses its own challenges and expresses itself in different ways depending on the conditions that pertain in particular locales. This is thus a call for caution as we move forward (see also Shove & Walker 2007). The *weltanschauung* of consumerism is deeply embedded in contemporary culture—it provides the operating system for people to negotiate their way in the world—and it would be both unwise to underestimate its tenacious hold and to expect unproblematic transformation to an alternative.

Having said this, the prescription that we are unlikely to be able to do everything should not be interpreted as a call to do nothing and this is a point on which some of the early theorists of ecological modernization had shrewd insight. We cannot let ourselves fall into romanticized traps. As we seek to catch a glimmer of a dawning era of postconsumerism, it is critical to remain forward looking and cognizant that efforts to reinvent an idyllic past are bound to fail. Postconsumerism is unlikely to be effectively premised on lifestyles grounded in either urban or rural repeasantization.³⁷ Neither will it be based on the perpetuation of expensive middle-class perquisites instituted during the twentieth century. At the same time, there are not many truly new ideas in the world and we need to gather up the threads of the past and carry them forward. Accordingly, the organizational logic of a postconsumerist future will need to entail clever combinations of the following: urban agriculture, individual and communal provisioning, labor reskilling, infrastructural retrofitting, low-carbon technologies, carbon rationing, and hyperconnected modes of social interaction. We will need to be patient as agile minds struggle to assemble these elements into workable configurations and for cultural dissonance to recede.

In the mean time, it is incumbent on scholars and others who are concerned about the future to formulate imaginaries that can begin to reveal the outlines of a postconsumerist era. It is useful to recall that the onset of industrialization was preceded by a long period dating back to the Middle Ages in which proto-industrialists sought to bring industrialism into view. Similarly, both far-sighted companies and marketing visionaries did much to anticipate (and to create) the current era. Similar engagement will be necessary to supplant the fraying consumerist age with a viable successor.

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³⁷ See Melhuish (2011) and Corrado (2010) for discussions of the conflicting tendencies inherent in representization.

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Austerity and economic crisis

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Introduction

In April 2009, in the face of the first economic downturn that the UK has experienced since the 1990s and the most serious economic recession since the 1930s, the British public was once again urged to embrace a 'wartime spirit' of voluntary thrift, sufficiency and austerity. The advocacy of sustainable consumption today is typified by the Energy Saving Trust (a Government-sponsored quango) and the Imperial War Museum's 'Wartime Spirit' campaign, which breathed new life into the call for sufficiency deployed by the Government during the Second World War, in a bid to persuade individuals to address the twin issues of the economic recession and climate change through their personal consumption practices. The campaign, based around a list of ten 'top tips' developed from the reissued 1943 pamphlet, 'How to Make Do and Mend' (Norman 2007), urged the British public to: 'make do and mend', 'walk short distances', 'save fuel for battle', 'save kitchen scraps to feed the pigs', 'don't waste water', 'waste paper is still vital', 'dig for victory', 'holiday at home', 'eat greens for health', and 'keep calm and carry on'. Apparently, this 'wartime spirit' approach had significant public support: sixty nine per cent of the 1,570 members of the public interviewed thought that communities should work together to share resources, and fifty nine per cent thought rationing or personal daily allowances were required in 2009 (EST 2009).

This twin focus on voluntary community action and a desire for Government interventions to improve equity in consumption echoes the imposed austerity associated with the Second World War. Yet despite this public support for enforced austerity, the EST favoured voluntary behaviour change in pursuit of the 'new frontier' of frugality. As Philip Sellwood, chief executive of the EST, stated:

"We are certainly not advocating a return to rationing or indeed enforced personal daily allowances. However if we could adopt just a few of the practices used during the war, such as recycling bath water for watering plants, then it would go a long way towards saving energy and reducing our carbon footprint... We can now see an age of 'thrift being the new thrust' and 'frugality the new frontier'." (EST 2009)

This disjunction between a public desire for regulation in the form of rationing and the EST's view that voluntary behaviour change is all that is needed to bring about sustainability, address climate change and simultaneously improve individuals' experiences of the recession, was mirrored by the public protests held in London on the same day as the press release. At these G20 protests in April 2009, thousands of people - climate change campaigners, economic activists and ordinary members of the public - took

to the streets to protest at the unsustainability of the current economic system and to call for radical change. Subsequently, protests in London and elsewhere have focused on the absence of sustainability in the 'austerity packages' that are being hawked around Europe, notably by the European Commission, in the face of a measured silence from the global banking system that was largely responsible for the economic crisis that blew up at the end of 2007.

The discussion of sustainable consumption is necessarily linked today with the banking crisis that has affected most financial institutions since September 2007, leading to an economic downturn and period of recession. The 'toxicity' of many financial institutions was triggered by excessive lending in a number of countries, including the United States, the United Kingdom, Spain and Ireland, especially on house purchases. This brought about a loss of confidence in the ability of the lending institutions to recoup their assets, and national governments acted to guarantee the private banking sector against a feared 'run on the banks'. These developments occurred within a context of relatively high personal (and institutional) indebtedness since the 1980s in many, if not all, the OECD countries (Thompson 2007, Ferguson 2003).

At the same time another shift has been occurring in consumer policy, this time prompted by the much wider acknowledgement of global climate change, especially after the Stern Report was published in 2007 (Stern 2007). The need to pursue 'low-carbon' solutions to economic growth rapidly altered the policy discourses surrounding consumption, and it has become an article of faith for public policy that economic growth is only tolerable if it does not exacerbate existing concentrations of carbon in the atmosphere. In 2008 the United Kingdom's Climate Change Bill was introduced, establishing a very ambitious target for carbon reductions of eighty per cent by 2050. This policy activity has been accompanied by sustained lobbying on the part of NGOs and others, including the series of Climate Camps that have repeatedly mobilised public support, to call for urgent action on climate change and a new approach to economic organisation.

This perspective is seen clearly in the document which, more than any other, represents the high-water mark of free market environmentalism: the Stern Report. Stern wrote that:

'The transition to a low-carbon economy will bring challenges for competitiveness but also opportunities for growth... Reducing the expected adverse impacts of climate change is therefore both highly desirable and feasible.'

(Stern Review: The Economics of Climate Change, UK 2007).

This quotation illustrates the way in which what had previously been viewed as a 'threat' could quickly become an 'opportunity', although the quotation fails to say for whom the opportunities exist. Unsurprisingly, the immediate responses to Stern (and the IPCC 4th Assessment of 2007) were effusive and optimistic in tone. One commentator on business and the environment wrote that:

'People would pay a little more for carbon-intensive goods, but our economies could continue to grow strongly... The shift to a low-carbon economy will also bring huge opportunities... Climate change is the greatest market failure the world has seen'. (Welford 2006,)

The characterization of climate change as a 'market failure' immediately offered economists, businesses and Government a lifeline. Rather than necessitating expensive and comprehensive restructuring in systems of provision, or even reduced volumes of production and consumption, Stern's neoclassical view that sustainability could be delivered through *increased* consumption of particular kinds of products, simultaneously

feeding the economy has come to typify the mainstream sustainable consumption discourse.

These developments in the economy and in public policy raise some awkward questions for our understanding of sustainable consumption and the policy discourses which have characterised the field. In this paper we draw on the substantial literature that suggests there is still considerable confusion over the most effective way of achieving more sustainable consumption, and several of the assumptions about consumer behaviour – such as the role of an ‘information deficit’ about the environmental costs of products and services, and the targeting of personal responsibility for policy solutions as being sufficient to lead to voluntary behaviour change. Remarkably, these assumptions are largely untested and circumstantial. Whilst policymakers and pundits alike tend to measure progress towards sustainable consumption in terms of the numbers of purchases of particular ‘green’ or ‘ethical’ commodities, where success is framed in terms of market share, an alternative discourse suggests that sustainable consumption involves frugality, thrift and a kind of voluntary austerity. If this is indeed the case, then a focus on economic growth – low carbon or otherwise – may still be unsustainable.

Macroeconomic policy and sustainable consumption today

The contrasts with public policy today demonstrate how sustainable consumption has developed as a policy discourse during the last two decades. General optimism about the economy in the United Kingdom during the period 1995-2005, and the escalation in property prices, had served to discourage saving (Bernthal, Crockett and Rose 2005, Braucher 2006) and increase consumption. At the same time the level of indebtedness had increased, even prior to the banking crisis of 2008/9. In a society in which increased equity in housing seemed assured, and borrowing was easy, individuals were prepared to buy property to rent and re-mortgage their homes with apparent alacrity (Tucker 1991). More disposable income meant enhanced personal consumption, rather than saving, and *sustainable* consumption represented another consumer choice in a buoyant market. It was one way in which the citizen, passenger, or neighbour could be re-labelled as a ‘customer’, a discursive practice which had grown since the 1980s, and which drew attention to the ubiquity of market relations (Cross 1993, Cohen 2003). For Green and Left critics it also represented a further step towards the privatization of people’s lives and aspirations and the disarticulation of community and solidarity bonds.

The interest in sustainable consumption was fuelled by the expansion of credit and market opportunities (Bernthal, Crockett and Rose 2005). It consisted largely of widening consumer choice, and making new or ethical products more available on the market, rather than in narrowing choice to fewer, more sustainable products and services. This kind of top-down ‘choice editing’ has recently been hailed as an important means of delivering sustainable consumption, and would move us away from a reliance on voluntary behaviour change towards greater product selection (Sustainable Consumption Roundtable 2006).

The rise in disposable income, for most consumers, was also driven by increasing female participation in the labour force, facilitating wider social participation for the majority (but not all) of the population (Goodman and Redclift 1991). This model of rising consumption had also been associated with longer working hours, as Richard Titmuss had argued earlier, to explain the apparent rise of the ‘Affluent Society’ in the late 1950s (Titmuss 1962) and captured more recently in the concept of ‘time poverty’ (de Graaf 2003). In addition, of course, the post-War generation of so-called ‘baby-boomers’, having

paid off their mortgages, had surplus income with which to become further indebted, or to pass on to their children. This interpretation is also consistent with a Regulation Theory approach, which helped to explain the ability of capitalism to stabilise itself in the 1970s and 1980s, but might also help explain the illusion of 'stability' during the long boom of the last decade (Aglietta 1976, Boyer 1990, Jessop and Ngai-Ling Sum 2006). The model of growth at the dawn of the twenty-first century was one of enhanced personal consumption on the basis of negotiated debt.

This 'model' of 'stabilised' debt management and enhanced personal consumption might at first appear at odds with what we refer to as 'sustainable consumption', but in fact it was quite consistent with the individual consumer-based policy discourses of the last decade. The increased purchase of consumer goods and services which carry an 'environmental', 'natural' or 'ethical' imprimatur has been bolted on to a loosely regulated market that prioritised individual choice and profitability over more fundamental shifts in behaviour. The context for most sustainable consumption discourses during the last few years has elements which were consistent with credit expansion and indebtedness, rather than 'self-sufficiency' and deeper Green credentials, as we shall argue below (OECD 2002). In fact the sustainable consumption discourses were several, and often mutually contradictory throughout the period in which the idea of Green consumerism as 'sustainable consumption' has become established. In this paper I want to draw on recent history, the post War period, to point up some of the problems and inconsistencies of thinking about sustainable consumption during a period when austerity is considered neither necessary nor easy to enforce.

Discourses of fear: climate and war

Wartime rationing and austerity represented a very different challenge from that of today. The rise in personal consumption which marked the last half of the twentieth century has served to obscure the experiences of wartime and post-war rationing and scarcity, which preceded it (Hickman 1995, Briggs 2000, Gardiner 2004, Hennessy 2006, Calder 1969). During the period of austerity, between 1940 and the end of rationing fifteen years later, the British people became accustomed to scarcity, to the imposition of administrative edict governing what they could consume and how they could spend (Sissons and French 1964, Longmate 1971, Briggs 1975, Hennessy 1993). The time line begins with enforced wartime austerity in 1940, when Churchill took over the new Coalition Government, and continues through the impulse of the Beveridge Report and post-War shortages into the late 1950s and 1960s. With the arrival of relative prosperity, the era in which the British public had 'never had it so good', in Macmillan's words, the level of personal consumption took a dramatic turn. The Great Depression of the 1930s had come about as a result of insufficient demand, according to Keynes, and the creation of the Welfare State and the post-War planned economy were attempts to enhance security and increase economic stability through increased demand. By the 1960s the improvement in household income levels suggested that the model had succeeded.

After 1940 the full effects of war were, for the first time, meted out on the Home Front, where in almost every respect the military conflicts were fought out at one remove – a vicarious war totally familiar to its citizens. However, even before the end of the war it became clear that the British public expected a radical transformation of their society as the price for the deprivations they had experienced. Even Churchill, no radical social reformer, belatedly recognised the future role of social security in "the rescue of the millions... which was necessary to national betterment" (Hennessy 2006, 25). One key example was the 1944 Education act, which "lit fuses beneath the enduring old social

orders” and, together with other social legislation laid the basis for “a genuine mass-consumption society, once rationing and post-war shortages were eased or removed altogether” (Hennessey 2006, 8). By 1950 the national diet was already better than in 1939. For most working-class people the enforced boredom of factory canteens and ration books, however stultifying, nevertheless improved nutrition. As Peter Hennessey noted:

“It was the higher socioeconomic groups that had watched their servants disappear into those factories and canteens, never to return, and had spent the war years learning how to shop and cook and keep their families tolerably fed” (Hennessey 2006, 12).

There was no injunction to spend until the late 1950s, because there was little to spend money on and the injunction to save during and after the Second World War was not only a moral one, it was a necessity, given the scale of government borrowing.

In other respects, too, the new social order was manifesting social changes. Much of the appalling pre-war housing deficit, made worse by the bombing of cities, was beginning to be addressed by the early 1950s, and some areas of personal consumption, such as clothing and furniture, which had been rationed during the war, were beginning to be seen as market opportunities. The ‘utility’ brand introduced for clothes and furniture alike, was making way for ‘ready-to-wear’ and the creation of ‘wants’ rather than the fulfilment of ‘needs’ by the mid 1950s.

The legacy of the post War austerity years was that personal consumption was grounded in family and household security, for the first time. Personal credit was still largely a thing of the future, and the opportunities for savings were limited. Even in wartime Britain it was often difficult to distinguish between ‘essential’ and ‘non-essential’ items, as Juliet Gardiner shows, in her excellent history of the Home Front, but this distinction was even more difficult to make in the succeeding period (Gardiner 2004,).

The years of austerity laid the basis for modern consumer Britain, not simply in seeming to offer choice and individuality, where it had been absent, but also in helping to disseminate new social attitudes. The post-War consensus surrounding the British welfare state, continued in the 1950s under the soubriquet of ‘Butskellism’, the hybrid name given by Norman Macrae to the common perspective of R. A. Butler and Hugh Gaitskell (Hennessey 2006, 211). The Welfare State was constructed on the twin pillars of sound Keynesian economics, and Beveridge’s attractive policies for comprehensive social security. It was established to meet need, and succeeded in doing so, but not everyone envisaged it as the launching pad for wholesale advances in personal consumption and credit, such as ensued from the 1960s onwards. It was a generation for which ‘everything was achievable’, and those achievements would not be put fully in jeopardy for another half century, under the financial crisis heralded by a ‘credit crunch’, which began in the autumn of 2008 (Hennessey 2006, 27). Without the platform provided by the British Welfare State it is difficult to imagine an exit from the siege economy of wartime, but wartime austerity was the platform on which unsustainable consumption was built in the last quarter of the century.

Voluntarism and rationing

The situation of consumers in 1940, or 1950 for that matter, was very different in most respects from that of today, where ‘voluntary simplicity’, ‘downsizing’ or a ‘lowered carbon footprint’ is deemed desirable by advocates. Yet it is really only those who consume the most today who are able to both participate in these activities, and make a

difference to the outcome (e.g. Bond 2005). Consumer 'satisfaction' was an oxymoron until the late 1950s, when a new era of consumerism was made possible through mass production and indeed encouraged to support economic renewal after the war. However, to what extent did the nation put on a united patriotic front to meet the economic challenges of war? In wartime personal consumption and market choices were severely limited, but people did acknowledge that changes in their work and daily life could also carry private advantages – this, perhaps, was an early precedent for Soper's 'alternative hedonism' (Soper 2008). Food production is a case in point.

The nation's food supply had been seriously jeopardised by pre-war shifts in production: much of the land was under pasture and the animals were fed on imported fodder, so reversing the trend was not easy to undertake (Gardiner 2004). Under the Emergency Powers Act the Ministry of Agriculture could requisition farms and intervene wherever farm production was unsatisfactory. In addition the government controlled the slaughter of livestock and the price offered to producers. 'Luxury' crops, such as cut flowers, were forced out and a massive campaign was undertaken to grow more food on allotments and smallholdings. By 1942 it was estimated that "over half the nation's manual workers had an allotment or garden", and by the end of the war probably one tenth of total farm production came from allotments (Gardiner 2004, 166). By 1944 there were over half a million new allotments (Briggs 2000, 59). However, a closer look at this evidence suggests that the move to allotments was both more and less than an act of patriotic fervour. A survey in *The Economist*, published in the same year showed that only one fifth of allotment holders claimed to be working them to help the war effort. Over half said their main aim was to produce fresh food for themselves, family and friends, and about one fifth cited 'fresh air' and the desire 'to save money' as their chief objectives. This suggests that "a combination of public and private interest lay behind much voluntary, and even compulsory, war work" (Briggs 2000, 59). Self-sufficiency was engineered by necessity in wartime, yet contributed to the wellbeing of individuals and their communities. It underlined the wartime propaganda that personal sacrifices would ultimately contribute to military victory.

The 'war economy' of 1940 is often viewed, with hindsight, as a successful attempt to galvanise people for a common cause, setting clear economic and social priorities and enlisting widespread public support for them, under a national Coalition Government. It is worth recalling the scope of this challenge, "to direct the economy, straight and fast, towards the production of weapons" (Calder 1969, 69). In 1939 plans were laid for a three year war: shipbuilding was to be doubled, two million more acres were to come under the plough, and imported raw materials were to come under the monopoly control of the government. The Ministries of Supply and Food used a system of 'Controls' to manage production and control demand, working closely with the private sector trade associations. In the first few years of the war the 'belt-tightening' was highly selective, and most people who could afford luxury goods obtained them easily (Calder 1969, 70). There was rapid inflation, especially of clothing and food, although most unfurnished accommodation was subject to rent controls. By the spring of 1940 there was a real risk that inflation might even trigger more wage pressure, and even strikes (such as happened in the still privatised coal industry).

This was the context in which rationing was introduced to the British consumer, initially on a very tentative basis, but later on an unprecedented scale. The evidence, from Mass Observation and elsewhere is that the public were ready for it: "people minded doing without their usual quantities less than they minded the unfairness which came with the shortages" (Calder 1969, 71). At the same time in the early stages of the war it proved difficult allocating labour to sectors where it was most needed, such as munitions

production. There had been too few skilled workers during the period of re-armament in the late 1930s, and more labour was needed to replace those who were being called up into the forces. Even the full potential offered by women's employment, so obvious during the First World War, was only gradually re-acknowledged (Ciment and Russell 2007).

The emphasis on voluntary behaviour change prevalent in contemporary sustainability discourses was also a feature in wartime discourses of sufficiency. According to popular myth, encapsulated in television programmes like 'Dad's Army', about the Home Guard, much of the 'success' on the Home Front can be attributed to ordinary peoples' willingness to work together, even if it often appeared eccentric. Volunteer organisations exemplified the deeper voluntaristic tradition of the nation. It is argued that, in combination with labour controls, wartime voluntarism succeeded in forging a war economy out of a domestic economy – saucepans were literally turned into Spitfires.

The evidence, however, is more mixed. The methods of 'command and control' exercised by the state in wartime were most effective in drawing out the public's full potential when they were linked to voluntary efforts. Government edicts did not receive immediate legitimacy, especially in the first year of the war, and several critical studies of morale such as the reports from the Mass Observation archive, suggest widespread public unease with the inefficiencies, and injustices, of controls (Calder 1969, Calder 1992). As Asa Briggs has argued, the "distinctively British combination of voluntary effort and compulsory service... has to be charted occupation by occupation, region by region", it was not self-evidently successful (Briggs 2000, 35). In fact even mobilising women's labour on a voluntary basis was still inadequate for the war effort, and women were directed into jobs in 1941, the year in which civil defence also ceased to be voluntary. Again, contrary to the popular imagination the industrial war effort effectively reached its apogee in 1943, two years before the war ended, and after this date a major preoccupation of the authorities was how to return men and women in the forces to civilian work. Demobilisation rather than mobilisation was the policy challenge. In some respects the post-war years suggest that: "the 'war effort' deserved praise, but more than fifty years later it demands discussion as much as recollection and celebration. In some respects it left Britain less prepared for years of peace than its enemies". (Briggs 2000, 35). One aspect of this was that the wartime deprivations also contributed to the demand for social improvement after the war.

If voluntarism is only a partial explanation of the public mood in wartime, and one that needs to be prised from its ideological wrappings, so do the successes of rationing. The war economy meant that resources of labour and capital were diverted from domestic production into the industries most directly employed in conflict. Food production needed to increase on the limited land base available to the British, to save on imports from North America, and to meet the ever increasing needs of the 'non-productive' sector represented by the war economy. The threat of famine, or its imminence, was not lost on political leaders, especially after the debacle at the end of the Great War, when Britain had been forced to ration most food, with the exception of milk, vegetables and fish. During the winter of 1917-1918 food rationing had ensured adequate supplies of food to British households, although imports from the United States proved necessary in 1918 (Ciment and Russell 2007, 299).

Food rationing had been anticipated by most of the public before it was introduced. Within a few months food rationing was in operation: the National Identity Card and the Food Ration card were familiar staples of wartime Britain, which only ended in 1952 (for ID cards) and 1954 (for ration books). Peter Hennessy argues that "selling rationing to the people during the war was the most successful Government public relations exercise" he ever encountered (Hennessy 1992, 47). The food rations were linked to recipes and good

health, and cooking meals on limited resources was championed by radio celebrities, including Lord Woolton, the Food Minister and the 'Radio Doctor'. However, even Hennessy admits that "there is a danger of compiling an over-rosy picture of genius and solidarity at the store and tin the queue" (Hennessy 1992, 48). Food rationing enabled demand to be met by supply, ultimately through the introduction of a 'points system' introduced in 1941. As Gardner commented, "all rationing could do – and this was by no means negligible – was to ensure a fair distribution of basic items, be they food or clothing" (Gardiner 2004, 177). The existence of the ration also drew attention to those who were able to flout the rules, through wealth or criminality, and as such probably fuelled the feelings about inequality which helped to bring the Labour Government to power in 1945. The great success of rationing was to 'bring the battle front' into the home, putting women, particularly, into the 'front line' (Gardiner 2004, 181).

Wartime rationing was supplemented by campaigns to reduce waste. Richard Hoggart commented in the 1980s that the folk memory of people who had lived through the war was infected with "the built-in rules of thumb of the permanent siege economy" (quoted by Hennessy 1992, 308). "There is still", he wrote, "behind every dealing with money and things, the fear and the hatred of waste. That old phrase, "you'll pay for this", is joined by "it's a sin and a crime to be so wasteful", "fancy good food being thrown away", "waste not, want not", and dozens of similar expressions all of which express the fear of excess. These ingrained attitudes and values reflect the fact that rationing, of petrol, clothes, furniture and food, was not a wartime phenomenon alone. In fact there was no easing of rationing until 1949, and in 1947, two years after the war ended, it was at its worst. It was to be several years before children saw, for the first time "the first pineapples and bananas, the first washing machine, the first television set. The world opening before us was not a pale imitation of one we had lost, but a lucky dip of extraordinary things we had never seen" (Susan Cooper quoted by Hennessy 1992, 309).

Thus the austerity associated with the war years was followed by conspicuous overconsumption, since this type of lifestyle was newly available to generations that had grown used to the tight rationing of resources. If wartime austerity and its discourses of 'waste not, want not' and 'make do and mend' were ultimately followed by overconsumption, then the use of this kind of approach in the present to generate voluntary sustainable consumption behaviours – as in the 'Wartime Spirit' campaign – could conceivably be misplaced, and have even less relevance when the economic recession subsides.

Energy and sufficiency: saving and reducing waste

Another area of public policy which seems to resonate with the more radical Green agendas of the twenty-first century is that of saving, localised sourcing and waste management. These are all key elements of industrial ecology and 'life cycle analysis' today, and are often heralded as areas of potential Green investment. To what extent did the call to self-sufficiency in wartime translate into better use of materials and resources, including fuel, and encourage people to think in terms of saving, rather than spending?

A key element in the wartime economy was the heavy dependence on hydrocarbons: electricity, gas and coal. Since most electricity was generated from coal, the mining industry was a key area of industrial participation, and despite government efforts there was a drift away from the coal mines throughout the war. Partly to address this problem, young men were conscripted into the industry as 'Bevin Boys', exempting only those in key, reserved occupations.

During wartime many other activities were labelled as forms of 'national service'. These included activities within the household, such as childcare undertaken by grandparents, which released married women for the labour force. Another activity which increased during wartime was recovering materials from bomb sites. The vast scale of child evacuation in the early stages of the war (much of it reversed subsequently) brought a new infant labour force into play – children, and especially girls, were expected to help around the house, and interviews with girl evacuees suggested "they were more in need of rest than of work" (Briggs 2000, 106). Organisations like the Boy Scouts and Girl Guides collected waste paper on an impressive scale. Responding to the government's campaign to encourage household pig rearing one Scout group even collected twenty tons of pig food in one month. In rural areas, "Scouts spent over two million hours in harvesting and other unpaid farm work, while in hospitals they were employed as cleaner, telephone operators and stretcher bearers", some of them even becoming known as 'hospital Scouts' (Briggs 2000, 108).

Conclusion

This paper has compared some aspects of the austerity programmes in Britain during the Second World War, and the subsequent decade, with contemporary measures to reduce consumption and enhance sustainability. It has argued that during wartime both austerity and sufficiency were key planks in the policy discourse, and that they were the product of increased government powers, enhanced regulation and more emphasis on voluntary measures throughout the civilian population. This conjuncture was made possible by the threat of military defeat and, indeed in the first two or three years, the prospect of invasion and occupation by enemy forces. The moves to austerity and sufficiency gained considerable public support and were bound up with – although always capable of undermining – national morale. There is both circumstantial and documentary evidence that, provided the burden of wartime austerity was shared 'fairly', the public response was largely positive. The largely favourable response to the Beveridge Report, which was published in 1943, underlines this claim (Nicholson 1966).

The period of rationing and austerity led, in turn, to demands to widen social insurance, and improve health and life chances in the post-war world, for which the principal architects were Keynes and William Beveridge. During the 1950s a broad consensus developed around policies designed to reverse pre-war social and economic conditions. The period of austerity and 'belt-tightening' was followed by one of affluence, in which personal consumption rose and personal security increased. Economic growth was increasingly harnessed to provide previously unseen levels of private affluence, and helped to fund improved social services.

In time, however, the moves away from austerity not only increased levels of personal consumption; they also generated new levels of credit and debt, particularly associated with equity in house ownership and increased personal mobility. To some extent, then, the concern with environmental problems in the late 1950s was associated with 'plenty', rather than 'scarcity', and policies came to reflect a concern with the situation of succeeding generations, rather than past ones. The drive to sustainability was linked to intergenerational equity and fears for the future were linked to issues like climate change, rather than military defeat.

In this sense the comparison between austerity Britain and the current challenge to 'decarbonise society' (Redclift 2009) are not so much historical parallels and contrasts as succeeding historical periods, linked inexorably by the experience of economic growth in the second half of the twentieth century, not only in the United Kingdom but throughout

western Europe. Wartime austerity and sufficiency (1939-1955) gave rise to enhanced levels of personal and family security (1956-1997) when sustainability was largely seen as a desirable rather than necessary policy goal. Heavy reliance on new forms of financial capital, increased dependence on house equity, and easy access to credit, helped to precipitate both private and public sector indebtedness, and a loss of confidence in the markets which had made the protracted economic 'boom' possible. At the same time, the dependence on hydrocarbons became linked with 'externalities', principally Global Warming. The subsequent period (1997 onwards) was one in which increased insecurity was allied with calls for more sustainable consumption, not primarily as a new device to get people to spend, but rather as a way of managing limited resources more effectively. The major driver now is climate change, but the imperatives, unlike those of wartime, are not so tangibly identified, and are often politically contested, not least because personal consumers are not forced by events to make the necessary economies. Sustainable consumption, which only a decade ago might be seen as a market refinement, is now often viewed as a necessary (if inadequate) response to narrowing economic possibilities. Whether both the political will and the political means exist to consume more sustainably, the current policy dilemmas over sustainable consumption are a product of the past, as well as a mirror to past periods of real enforced austerity.

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Institutional Change for Strong Sustainable Consumption

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Introduction

The current austerity politics in Europe, resulting in stagnant or declining disposable incomes for the majority of the population, is the result of neo-liberal growth policies. It illustrates brutally to the rest of Europe what has been an encroaching reality to some countries over the last decade: that economic growth of the economy does no way guaranty increasing incomes of the populations' majority (an expectation based on the post-war experience), let alone an increase in welfare or quality of life. However, so far the hope for betterment in a foreseeable future still hides the ugly face of globalised casino capitalism behind a veil of (deliberate) ignorance. On the other hand, if neoliberal growth politics were replaced by degrowth politics, *ceteris paribus*, stagnant income would result as well – a limited median income growth could be achieved by redistribution of wealth (which is anyway necessary due to justice concerns).

In this situation, celebrating the accidental shrinking of the economy as an achievement for degrowth and the environment is not only wrong (Latouche seeing that pointed to the character of degrowth as to “a healthy diet voluntarily chosen”, as opposed to starvation). It is also politically fatal as it equates a painful situation with environmental progress, thus undermining public support, and offers a whole arsenal of policy campaign arguments to the defenders of the status quo. Instead, while the dominant political narrative of perpetual growth is fading as we move from the age of abundance to an era of externally enforced frugality, a new definition of sustainable consumption fitting resource constrained development conditions is necessary: sustainable consumption does no longer mean voluntarily refraining from making use of some of the consumption options available (which were part of an overall unsustainable development and of limited effectiveness due to rebound effects) but the ability to lead a dignified life / maintain or enhance the quality of life despite shrinking resource availability.

Max-Neef et al. (1989) distinguish human needs like subsistence, protection, affection, creation, identity and freedom from the means by which humans satisfy them, the satisfiers. Whereas human needs can be considered an anthropological constant, satisfier choice varies with factors like culture, wealth and the products on offer. Rather obviously, many needs are best satisfied not by products but by non-commercial services, such as care in a family or amongst friends. Whenever products are involved, truly sustainable consumption is about choosing true satisfiers, not about neglecting needs.

Environmental Space

The Concept

This definition matches the two Brundtland criteria for sustainable development, i.e. overcoming poverty while respecting environmental limits and sees consumption as a mechanism of self-realisation and life style choice within the available environmental space which steers clear of both environmental and social unsustainability. This has been operationalised by the Environmental Space concept in the past, distinguishing a space for free choice of consumption patterns from two zones of unsustainability: the domain of environmentally unsustainable overconsumption and the one of socially unsustainable underconsumption (Spangenberg, 1995; 2002). The upper limit of consumption, the “ceiling of the environmental space” was defined by the needs to reduce CO₂ emissions to a global per capita level in line with limiting global climate change, and the need for a dematerialisation of production and consumption reducing the global resource consumption by about 50%. Again assuming a universal right to environmental space use, equal for every citizen of the Earth, this led to reduction targets of 90% for the overconsuming affluent countries.

The lower level, called the “floor of the environmental space”, is not that easy to define, since as a socially required measure it is more a relational than an absolute demand. However, the criterion defined was that it must be sufficient to allow for a dignified life, which includes the opportunity to actively participate in the processes of the respective society (politics, culture, and many more). Thus not only essential needs (often defined as physiological demands) need to be met, but psychic and social needs as well, i.e. the full set of needs identified by Max-Neef et al. (1989). Human well-being, a good life, universal human rights (including social rights) and the extended definition of health by the WHO are related to this definition; in Latin America this line is known as “linea de dignidad”. This is not a concept alien to economic thinking (already Adam Smith (1776) emphasised the necessity to provide all people with the means to lead “a life without shame” – not necessarily for “keeping up with the Joneses”), but it plays no role in at all in current neoclassical economics.

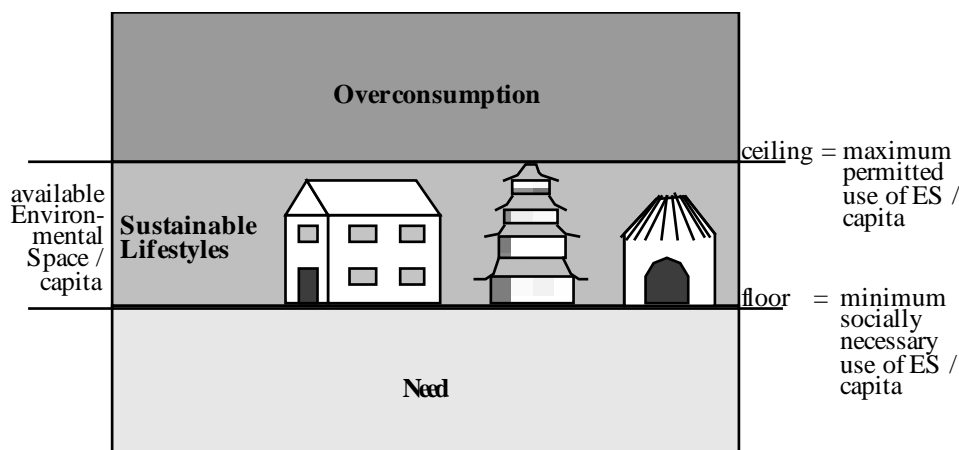


Figure 1: The environmental Space concept. Source (Spangenberg, 1995)

Environmental Space revisited:

The “planetary boundaries”

The information base for defining the delineations has improved significantly in the last couple of years, although the basic approach has remained the same. For the “ceiling”, the “safe operating space for humanity” defined by Rockström et al. (2009) provides an extended empirical basis, emphasising the key dimensions to care for because a significant (biodiversity, nitrogen cycle) or slight (climate) transgression of the acceptable limits to damage has already occurred, or is soon about to happen (phosphorus cycle, ocean acidification).

The “social protection floor”

For the floor and its diverse operationalisations in different countries, the concept of a “social protection floor” developed and propagated by the ILO in collaboration with the WHO plays a similarly important role (ILO 2011). It emphasises the necessity of society-specific approaches, based on comparable quality criteria derived from the objective of “relieving people of the fear of poverty and deprivation, delivering on the promises of the Universal Declaration of Human Rights” (p. xxii). For this behalf it suggests measures and institutional reforms (supported by the International Trade Union Confederation) to achieve both, basic income security, and universal access to essential affordable social services.

Furthermore, chronic and pervasive underconsumption is not only unjust and socially unsustainable, it can also create problems for environmental sustainability. Enabling investments into longer-term solutions to pressing environmental challenges (Lebel, Lorek 2008) should become an additional criterion for defining the social protection floor, over and above the social criteria. These have been defined by the International Labour Organization ILO (2011) in collaboration with the World Health Organisation WHO, based on an initiative supported by the [United Nations System Chief Executives Board for Coordination \(UNCEB\)](#) since 2009 and grossly endorsed at the 2012 UN Conference on Sustainable Development in Rio de Janeiro (United Nations 2012).

Consumption implications

Defining upper and lower limits to resource consumption can be done for individuals or for societies. However, when doing so the different character of the two dividing lines must be taken into account: the *línea de dignidad* criterion necessarily applies to every citizen (no one should live below it), constituting a right to a minimum income based on the criteria mentioned. Sustainable consumption then includes and requires channelling resource use towards those consumers for which the marginal utility is highest, i.e. the poor, thus maximising the societal utility gained from (reduced) resource consumption (Lorek, Fuchs 2011).

For the upper limit, an overshoot of individual consumers could be tolerated, from a global point of view, as long as the average of the respective society remains below the “ceiling”. While an individual obligation to stay below the threshold would immediately introduce a maximum income, expressed in resource consumption units, a society wide definition would require deciding about a maximum acceptable spread between the lowest income (the floor) and the highest permissible income which would have to be adjusted regularly, in line with the development of the average consumption, to guarantee that the ceiling is not broken.

Considering natural resources a common heritage of humankind and basing calculations on the principle of equitable sharing are basic ethical approaches which still apply today, and they are contextualised now by the desire for improving social justice, in and between societies and countries. Assuming that past growth rates are neither achievable nor desirable in affluent countries, and aware of the fact that the recent increases in relative poverty happened during periods of relatively high growth, A call for a degrowth policy (slimming the economy in physical terms) followed by a similarly physically defined steady state economy are plausible. However, if growth is no longer a reliable option, improved justice can only be brought about by redistributing consumption options from the rich to the relatively poor, ensuring that reductions in material consumption fall to those with the lowest marginal utility of consumption: the wealthy (Lorek, Fuchs 2011). The “ceiling” helps to make this abstract demand operational.

Furthermore, an upper limit to resource consumption (implemented most effectively through a limit on income), and the resulting increase of income distribution equality is a significant contribution to sustainable consumption. It not only reduces the overconsumption of the rich systematically, but also status competition and thus the psychic consumption necessity (Fischer-Kowalski et al. 1995; Strasser 2011) on all income levels. Such a change of definition of what is substantial or strong sustainable consumption (Lorek 2010) does in fact mean, requires institutional changes on all levels, from societal organisations via institutional mechanisms to institutional orientations.

Institutions for Sustainable Consumption

Institutions I: orientations

Starting with the latter, this includes the change of orientations from “more consumption” to “less but better consumption”, because – as Mario Giampetro described it – “in a world full of people with increasing expectations but a plummeting level of resources per head, it should be perfectly clear that we are heading for troubled water” It can be pioneered and spearheaded by the current high consumption groups, for example as part of postmodern lifestyles emphasising either green values or – much more frequent and powerful – the health benefits accruing from abstaining from certain forms of consumption. The successful movements for the prohibition of alcohol in the 20th and of smoking in the 21st century are based on health arguments, proving this point. However, people expecting an improved quality of life from voluntary simplicity or consumption restraints tend to be high-consuming individuals, representing a societal niche rather than a change of mainstream thinking. The same can be said about the individuals called LOHAS (Lifestyle Of Health And Sustainability), also mostly high level consumers, who promote a lifestyle of better, not even less consumption.

But can changing household consumption really make a difference? On the one hand, there are obvious limits to the freedom of choice for household members, not only due to financial restrictions, but also to social processes (the social identity function of products makes individual changes difficult: the peer group effects) and the fact that each consumption decision is taken in a multi-actor framework where for each actor the degree of freedom of choice is co-determined by other actors (Spangenberg, Lorek 2002). On the other hand empirical studies from Switzerland have shown that the difference between low polluting and high polluting households is significant: controlled for expenditure levels, the variance of impacts (here determined as GHG emissions) varied between half as much and twice as much as the average. Although only realised by a relatively small group, obviously there is a potential for significant improvements if people adopt the low impact

behavioural pattern – but also a risk of much higher additional damage if the high pollution life style emerges into a role model. Already today, due to the asymmetrical distribution of impacts, the influence of high polluters on the total Swiss performance is twice as high as the one of low polluters. The author concludes that “policy makers are well advised to consider measures designed to tame the high emitters and prevent the dissemination of their consumption patterns” – a combination of motivation and stigmatisation processes seems to be necessary, but not (yet) available, plus legally set limitations supported by financial incentives: strong sustainable consumption policies need to combine the effects of external regulation with extrinsic and intrinsic motivation (Girod 2009).

However, what characterises – at the same level of expenditure – those groups of consumers which have a particularly high, and those with a particularly low pollutant profile? Low polluters are characterised by purchasing patterns which in all environmentally dominant fields of human consumption (Spangenberg, Lorek 2002) opt for low impact choices: regarding construction and housing, they live in younger buildings, with less fossil fuel consumption for heating, and show a lesser share of single family detached houses. Regarding mobility, they buy less expensive cars, show less car use, and less overall mobility. Regarding nutrition, their meat consumption is lower, and they tend to buy more organically grown food. While high polluters opt for quantity and undertake more flights, low polluters spend the money they save by eco-efficient consumption on better quality (organic food) and more leisure, a sector with below-average specific pollutant emissions (Girod 2009).

More generally, regarding the environmental impact, a quantity factor and a quality effect have to be distinguished: sustainable consumption politics has to develop restrictions regarding both, affecting the rich and the dirty, which are often but not necessarily identical. Above the minimum level of expenditure necessary to meet basic human needs, disposable income can be used to increase the quantity or to improve the quality of consumption. If budgets are constrained (which they usually are), quality improvement expenditure increases are crowding out volume increases, and vice versa. This applies also to the eco-efficiency approach which argues with win-win situations, promising financial gains from less resource intensive consumption: when the money saved is spent again, it can be on improved quality or enhanced quantity. In both cases, as a rule of thumb, savings are reduced by a rebound effect whenever a win-win is claimed. While the effect tends to be much stronger for the quantity option, also high quality products tend to require more inputs per product. However, while with increasing quality (and thus increasing price) the embodied resource content in a lifecycle perspective (the ecological rucksack) tends to increase, the *resource intensity* (resources per unit of price) tends to decrease. Thus the size of the rebound depends of spending pattern chosen for the money saved: for more quantity or more quality.

In total, buying *better but less* is necessary to reduce resource consumption counteracting the increase caused by a more equitable income distribution (high levels of inequality reduce overall resource consumption by the resource consumption intensity decline of the rich combined with ‘tightening the belt’ for the vast majority of the population, while simultaneously increasing their desire for increased consumption standards)(Lorek, Spangenberg 2001). However, better consumption absorbing the gains from eco-efficiency to avoid rebound effects can only be an improvement relative to a certain level of expenditure, a significant but relative decoupling. In order not to be overcompensated by income growth, additional measures like income capping still make sense.

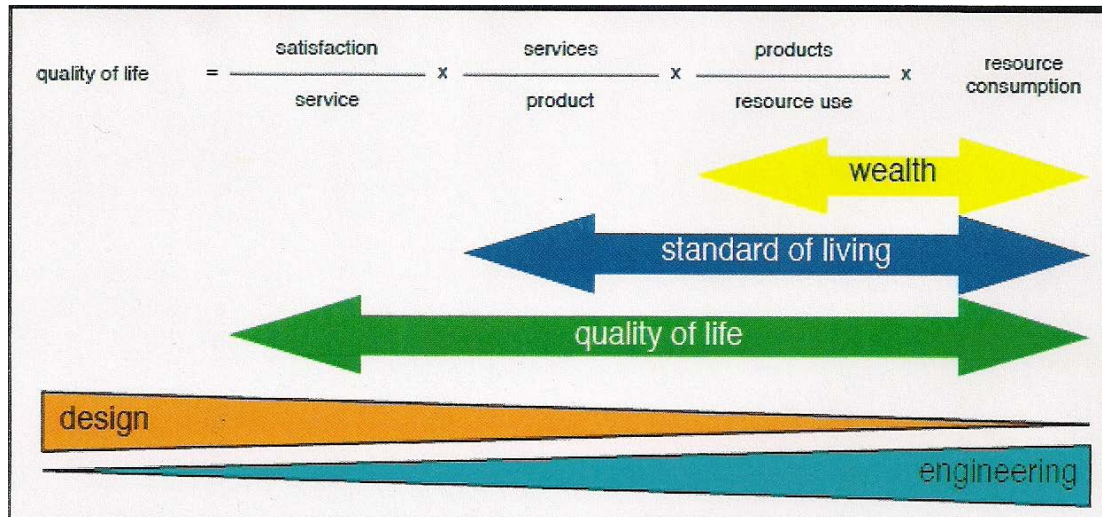


Figure 2: Efficiencies, their contribution to quality of life, and the contributions of engineering and design³⁸

To comprehensively address the rich and the dirty, it is important to distinguish between wealth, standard of living / affluence, and well-being / quality of life (figure 2). Since the medieval ages, the term wealth is used to describe a *stock of assets* sufficient to live a decent life on them; not only the volume, but the ownership is decisive. The standard of living is a more recent term, a notion pointing at *flows of services* (income, rent, interest) derived from the stocks of wealth. What counts is the access to the flows, the right to use them at one's own discretion, not the ownership as such. A focus on the standard of living requires a consumer identity based on access to and command over services – the insistence on ownership is then somewhat anachronistic. Today such a shift from ownership to access is visible (for instance mobile phone are often not assets, bought on the market, but part of a service flow), but it is far from sure that it will indeed transform consumption behaviour: such trends flourish with confidence and optimism towards the future, and tend to be undermined by social insecurity and precarisation leading to a re-traditionalisation of behavioural routines in times of crises (Kraemer, 2002).

The situation is particularly challenging with transport and mobility: cars are not just service delivery machines for transport, but more than most other consumption items prestige objects important for status demonstration. They are (at least in Germany) objects of emotional identification as means of expressing an actual or a desired identity. Changing to a smaller car is a social status setback.³⁹ Ownership of an expensive car is one aspect of individual status seeking. Small but expensive sports cars can have a high reputational value (Porsche owners were known as the ones managing to look down upon

³⁸ The influence of design is stronger closer to the consumer side as it influences not only the product but also the consumption behavior. Engineering is crucial for the development, functionality and efficiency of products. Product ownership relates to material wealth, whereas the standard of living refers to the services enjoyed and includes nonmarket services. Its environmental impact is determined by the production (products/resource) and product efficiency (services/product). Satisfaction efficiency/satisfaction/service) is the key to a low consumption good life, a qualitative component implying social and institutional criteria (Source: Spangenberg et al. 2010).

³⁹ However, with radical changes the criteria change as well: completely giving up car ownership and changing to active (walking, biking) and public transport, plus occasionally using shared or rented cars, can be accepted as a lifestyle choice without status loss.

others from below) – the size that matters most is the one of the price tag, plus for many men the top speed. A highly mobile lifestyle is a social phenomenon, professionally enforced by globalising business, and in private life (although the delineation tends to be more and more difficult) by social relations which are no longer locality based but rely on the ability of like minded people to organise themselves, with physical distances playing a minor role (lifestyle communities on the web are an extreme example). These are some of the reasons why despite overwhelming arguments (individually health benefits of physical activity and pollution exposure reduction, collectively air quality improvement and accident risk reduction) a reduction in car ownership and use is not taking place, and monetary quantifications (a net gain of up to 50,000 €) have not motivated individuals, as little as the annual public health gain of 33 € per capita has set politicians in motion (Rabi and de Nazelle 2011).

The example illustrates the abstract statement that better but unlimited consumption is not an environmentally sustainable option (just as unqualified consumption reduction is not socially sustainable). Only once an upper limit to consumption has been established and where necessary enforced, significant effects are possible and easier to achieve if the front runners act as and are recognised as new role models. Then this transition can reach the middle class, representing the bulk of consumption decisions. When “better but less” has become the social norm of consumption decisions, shaping the standard search routines of shoppers, we are getting closer to substantially sustainable consumption.

Consuming quality products with an extended life span, repairable, upgradable, made from environmental benign material in socially and environmentally responsible production processes has several implications. On the one hand, it reduces resource consumption if (and only if) the extended use time of products overcompensates the additional resource input used for higher quality (Spangenberg 1995). The same applies to private work/do-it-yourself vs. small scale handicraft vs. large scale industrial production goods, constituting the environmental superiority of self-made goods over mass products despite the higher efficiency of large scale production, due to the economics of scale. On the other hand, as it will make products more expensive, it further reduces the number of products bought, while enhancing the number of services available from any product over its lifetime: the ‘psychic income’ (Fisher, 1906) may even increase while the waste volumes decrease (waste time is life time minus use time). Buying better products (i.e. better satisfiers of essentially unchanged human needs, Max-Neef et al., 1989) is furthermore a way of reducing consumption while avoiding rebound effects.

However, this requires a new kind of products. The challenge to design for sustainability DfS is to provide products which are not only efficient during the production and dissemination phase, but are also real satisfiers offering increased satisfaction efficiency (Blincoe et al. 2009; Spangenberg et al., 2010). We have called that the “satisfaction efficiency”, the final step in the disaggregation of efficiency in figure 3 (Spangenberg 2010; Lorek 2010). That requires some innovative thinking on developing and marketing products: if they are to be more sustainable during their use phase, this use phase must be extended, product replacement postponed, fashion partly ignored, against all economic incentives on the side of business (producers, retailers, etc.) who benefit e.g. from planned obsolescence and replacement necessities. Schmidt-Bleek (2008) has called that “designing antiques”, products people do not want to give up and replace, but value and maintain. This can be achieved for instance by enhancing the emotional attachment to a certain product by designing them to be personalised, or even entering co-design/co-create by designing products tailored to an individual’s or a potential consumer group’s specifications (Ninimäki and Hassi, 2011; Lebel and Lorek 2008). “Fertile products” can be assembled (and thus repaired), modified and brought into their final shape by the

consumer, creating a new feeling of ownership (Fuad-Luke 2008). However, if some manufacturers offer higher quality, longer lasting products, and they are bought, maintained, upgraded and repaired despite the cost involved, this will provide business opportunities for those involved in post-counter and/or post-consumer dealing with products (REconomy, see figure 4), but for those involved in extraction, refinement and mass production the future would and should be bleak. Besides this, the production must be dematerialised (Schmidt-Bleek 1992), leading to a DEconomy with less throughput per unit of final consumption. Such a dematerialised economy necessarily offers less throughput and less jobs in providing it (exploration, exploitation, transportation, processing), and probably also less profit and income – but here societal power structures are finally decisive.

Of course both, recycling on the highest possible level and increasing resource use efficiency (the right hand components of overall resource efficiency, see figure 3) are not independent of consumers' attitudes: without acceptance by consumers, and thus a cultural change, neither less consumption, nor less resource intensive consumption or less new consumption will be possible. On the other hand, today consumers' choices are hampered by the lack of sustainable products, true satisfiers generated through REconomy and DEconomy.

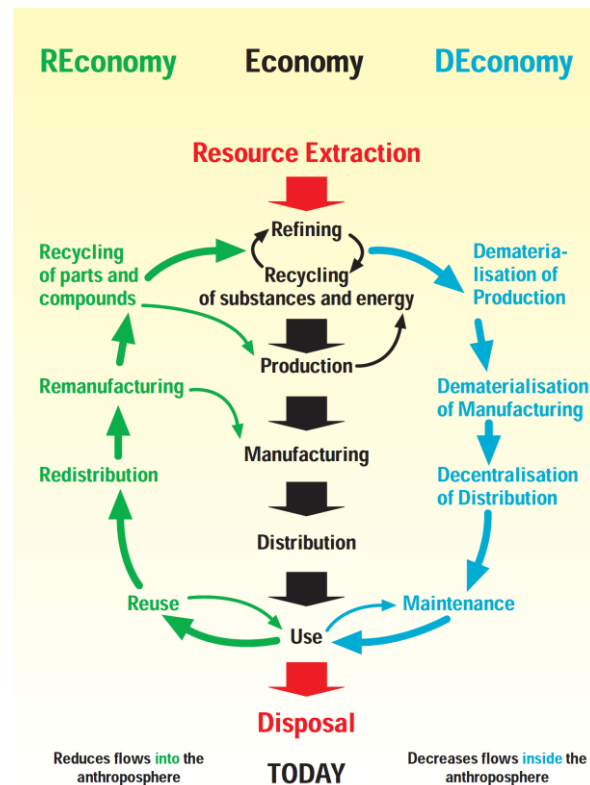
$$\text{Consumption efficiency} = \frac{\text{Consumer satisfaction}}{\text{Resources activated}} =$$

$$\frac{\text{Consumer satisfaction}}{\text{Services consumed}} \times \frac{\text{Services consumed}}{\text{Services generated}} \times \frac{\text{Services generated}}{\text{Products produced}} \times \frac{\text{Products produced}}{\text{Physical input}} \times \frac{\text{Physical input}}{\text{Resources activated}}$$

Satisfier efficiency	Supply/use efficiency	Product efficiency	Production efficiency	Provision efficiency
Design for Sustainability DfS	Consumption patterns	Product-Service-Systems PSS	Eco-efficiency	Ecological Backpack

Figure 3: Consumption efficiency disaggregated⁴⁰

⁴⁰ Traditionally, a tool is considered efficient if it effectively fulfils its task, to the satisfaction of its users, at minimum costs. On a closer look, efficiency is the effective, durable and convenient fulfilment of functional and symbolic needs and wants, using a maximum of human capital (ingenuity) and a minimum of natural and economic capital. The factor analysis in figure 1 illustrates this: Physical input is measured as material flows, products are tools made (designed, engineered and produced) to fulfil a function, the fulfilment of that function is the service (humans provide services mostly by using products as service-delivery-machines), and satisfaction is a subjective term, the "psychic income" (Fisher 1906).

Figure 4: Economy vs. REconomy vs. DEconomy⁴¹

For the lowest income group, their request for secured consumption options is justified (up to a socially sustainable level), but the secured or increased consumption levels which are necessary to allow for an active participation in the respective society should be understood as just that, a social insurance, not the first step on the consumption escalator. Thus the communication of the concept must always emphasise both, that every human deserves the “floor”, but no educated person would wish to consume above the “ceiling”, and as a result it is normally good and fair to impose limitations.

Of course such a redefinition of attitudes, as necessary as it is, is difficult, for both high and low income strata. Consumption patterns are part of our cultural heritage and change is usually slow. In the three domains of household consumption dominating the environmental impact (construction and housing, nutrition, mobility) it has been a long standing privilege of first the nobles and high religious representatives to publicly squander resources as part of expressing their superior position. Stone castles and palaces vs. wooden huts and houses, horses and carriages vs. walking or at best donkeys, banquets vs. malnutrition characterised most of the feudal societies in and beyond Europe. However, given their low absolute numbers, while this was socially and democratically problematic (to say the least), it was not environmentally critical. But when ‘the rich and

⁴¹ Overcoming the throughput economy by adding the REconomy, reducing the inputs needed from the ecosphere into the anthroposphere, plus structural change towards dematerialisation, the DEconomy, reducing the volume of resources circulating in the anthroposphere. With less material to be extracted, transported and transformed, the energy consumption will necessarily drop significantly, although quantitative assessments are difficult. Obviously, none of the structural changes indicated in the graph will be effective or even possible without social innovation on the consumer side, without strong sustainable consumption.

the beautiful' took over their role as societal elites, these attitudes and role models shaped lower class desires; their struggle for improvement of the living and working conditions imitated life styles of higher classes. As fulfilling some of these consumption aspirations became possible with Fordism (although the workers had to pay a high price through Taylorism). Economically driven and socially desired mass production turned into mass production from an environmental point of view. The roots of unsustainability are indeed deep, but those of counter-movements against such privileges and wasteful lifestyles are just as old as those patterns themselves.

Institutions II: mechanisms

Both the floor and the ceiling require institutional mechanisms to be implemented, however different ones for different income strata – besides an anti-poverty policy an anti-wealth policy is necessary, too (less popular amongst decision makers, but frequently resonating with ordinary people, regardless of their overall political orientation).

For the lowest income strata, an unconditional minimum income is required, part of which should not be paid out in money but in – mostly physical – goods and services. It could be realised as an extension of the existing social security systems, now providing the “floor” transfer income. This is not to repeat the past experiments which replaced monetary payout schemes by provision of goods like clothing or school books, often violating the human dignity of those affected, and justified by economists with the suspicion that recipients would always misuse the transfers they receive (which says little about the recipients but a lot about those economists). The scheme suggested here follows a different approach and aims for the opposite effect, i.e. for strengthening human self-determination; it is a rights-based approach, as begging for charity is not in line with human dignity. Its core is providing a free supply of a certain minimum, sufficient for a dignified life, of water, electricity, heating, mobility etc. to help sheltering the poorest members of society against the impacts of volatile resource markets and stemming all attempts to play social vs. environmental sustainability, as liberal politicians and business, supported by neoclassical economists, currently try to do in Germany.

Even the most effective welfare state cannot react to price hikes caused by market volatility without a time lag, and thus those which have neither a disposable income high enough to buffer these hikes by reducing the consumption of other, non essential items, nor enough savings to bridge the gap, are exposed to energy poverty and water cut-offs in the case of monetary transfers, but sheltered from them by the provision of a physical supply floor. That is one reason why in Germany the proposal is reaching the policy level. For instance, the National Energy Consumers Association (Bund der Energieverbraucher) supports such a solution for electricity, demanding that the first 500 kWh/yr should be cost free for every household. As a result, such a basic income consisting of physical and monetary components could replace those pensions, unemployment benefits, scholarships etc. below the floor niveau, but must be topped up by additional payments in case earned entitlements are higher than the floor level.

The income loss this implies for the utilities involved should be compensated by progressive pricing systems for households (not the losses resulting from the price reductions for industry granted over the last few years: here at minimum linear cost structures are needed), which would simultaneously establish incentives for saving resources for the better-off, while including an element of socially desirable income and asset redistribution. This could be a first step towards a change of the pricing system including bans on all financial incentives supporting consumption increases like “buy two get three” offers, reduced prices per unit in case of buying more or larger packages, etc. In

particular degressive price structures for energy, water etc. should be replaced by progressive ones as they are not only stimulating consumption but also socially unfair: as the rich consume more (in terms of money, but also regarding resources, see Lorek and Spangenberg 2001) than the poor, the result of degressive pricing is that the rich pay less per unit of consumption than the poor. Regarding changing price structures and thus the economic dynamics by changing the institutional framework, this is not yet the end of the story: imagine that resource extraction licences (coal and ore mining, gas and oil drilling, water abstraction, quarrying etc.) would not only define limits of area and duration, but also of volumes: Then all of a sudden the incentive structure would be changed from one promoting as-rapid-as-possible exploitation to one where the entrepreneur must carefully consider how to spread the extraction over time. Other symbolic examples refer to automobility: why have railway managers a car and a driver and do not use the rail (they have a free ride anyway)? Why does a step forward in the career usually mean a larger, and not a more efficient company car? Examples abound where consumption promoting institutions limit alternative options and undermine their credibility by making “bigger is better” to the motto of status good competition, not “better is better”.

The situation is different for the highest income strata, as substantial or strong sustainable consumption requires enforcing absolute limits to their resource consumption. Only few of the highest income group will voluntarily give up part of their wealth and consumption; here less motivation to change their orientations and more institutional mechanisms restricting consumption are needed. This could be achieved, for instance, by introducing a maximum income, realised e.g. by income caps or by taxation above 90% for all income higher than a certain threshold (as it was the case in the USA in the pre-Ronald Reagan era). Add to that sufficiently high levels of property tax, inheritance tax and wealth tax, plus corporate taxes above the income tax level, a financial transaction tax etc., and neither the public deficits nor financing the social floor is an insurmountable problem any more. Re-establish the functional income distribution of just 35 years ago, in the late 1970s, and all financial problems of the welfare state are solved: empty public coffers are just the one side of the coin; the other has been accumulating private wealth. As only the rich can afford a poor state and with it the erosion of quantity and quality of public services, redistribution plus a slim but not starving state are sustainable development imperatives.

Is that just radical NGO talk, impossible suggestions, with no chance to resonate with the population at large? In France, president Francois Hollande promised a 75% top income tax on those earning above € 1 m a year, which including social charges means well above 90% (the US level of the early 1970s). He also wants to increase the annual wealth tax on assets worth more than € 1.3 m, and increase the tax on dividends – and with these campaign promises, he won the election. On the campaign trail, Mr. Hollande has claimed that his “main opponent is the world of finance”, and it hardly a surprise that Anglo-Saxon liberals cry foul, labelling him “the rather dangerous Mr. Hollande” (The Economist 2012a) and consider the whole French debate as misguided by politicians and media. While still hoping that campaign promises do not count for real political intentions, and betting the ‘forces of reality’ to reign him in to a neoliberal policy, they interpret the suggested taxation as a signal “about the way France treats financial success” (The Economist, 2012b). However, out of the few people affected by the 90% payment obligation, the vast majority comes from the grossly oversized and overpaid financial industries (and the others have reached this salary level only in the last decade, again stimulated by the financial sector). It remains to be seen, however, which alternative means of distinction will develop once income levels are no longer suitable for this behalf, and if they are in line with sustainable societal development.

Economists' arguments that with higher taxation rates the brainy business leaders would leave the country doing so is a challenge realistic only to a very small group of overpaid top earners, most of them in the banking and speculation sector. Moving business is possible only for the sector which has no physical production, i.e. finance, the failed physically unproductive business sector producing no real values but speculative bubbles, with its obscene bonuses and profit margins a parasite of the real economy which (in its current manifestation) any decent society would be happy to get rid of in order to stabilise its overall economy. The society in this case must be the European one, of course, and the progressing harmonisation of the fiscal systems throughout the EU could better be used for undoing the structural damage the financial sector has caused in the last decade instead of enforcing neoliberal deregulation and austerity policies. That includes readjusting the salary structures across the business sector (another societal mechanisms in need of change) – the existence of tax rates as suggested above would make the introduction of an upper limit to salaries a relatively easy task. In addition, the pension system must be reformed and transformed from private to public systems, to reduce speculation, secure pensions and base them on employment and income developments instead of corporate profits, thus avoiding a straightjacket for future economic politics.⁴²

A drastically downsized financial sector (banks, insurance companies, fonds) serving households and the real economy is an economic necessity, but local loans and savings banks providing such services are not on the run. Furthermore, the prediction of the flight of all the bright and the talented from the high taxation rates is not only rather hallow, but contradicts past experience (the income differentials have been much higher in the USA than in Europe for most of the time since WW II).

⁴² One of the most important mechanisms in an ageing society is the way society cares for the elder, retired, first active and later in need of caring. The current practice is one trying to reduce the retirement period, force people to work by threatening them with old-age poverty if they stop paid work at the time they had been promised they could do so – and indeed old age poverty has been reintroduced at the beginning of the century in the countries where it had been overcome, and enhanced where it had been omnipresent before (OECD 2011). That is one reason to apply the floor principle with its physical transfers also to the pension system. The second effect to be taken into account regarding the pensions is the ongoing promotion – also by many governments – of private pensions; in Europe, their success became possible only once governments announced they would not keep their earlier promises to guarantee a decent retirement payment. The effect of the privatisation (besides the forced savings reducing consumption and thus economic activity, and the enormous financial volumes cashed in being channelled to speculative investments as there is a shortage of lucrative real-world investment opportunities, not least due to the reduced consumption and employment, thus co-producing the series of bubbles and their bursting) is not only increasing insecurity (also of the public system: in the imploding bubbles billions of Dollar, Euro, Yen and Pound of social security saving have been “burnt”). It is also politically dangerous, constituting a Procrustean bed for future economic and social policies of whatever government is elected: With a rising share of voters in retirement age, no government can ignore their demand for a secure, decent, non-declining (and at best significantly increasing) pension. Having a public pension system implies that salaries should be high and full employment reached, because then social security payments are high and pensions secure. With a private system, the money comes from the economic success in the same year, but this time not from the workforce but from the corporate surplus. So every government trying to make the pensions secure has to do its best to increase corporate profits, even if this goes against good work, decent salary levels and full employment, as it is currently the case. Besides that, pension funds are highly growth-oriented investors: privatisation of public services is socially as much as environmentally unsustainable. At least those private systems which had to be saved by governments when rushing to rescue banks and insurance companies, and which are now in state ownership or custodianship should be forced to return this activity into the hands of public institutions.

Overall conclusion: Change agents needed

The real question for modern society now is how we can find a way to create a sublimation of these two elements: a Partnership that is the Leadership.

The suggestions made are not equivalent to overcoming consumption based capitalism, but would modify it significantly. Thus although the resistance would be enormous, those supporting such a transformation could not be stigmatised as revolutionaries and utopians, in particular as all proposals are based on past experience abroad, practices in past or existing societal subgroups, or on ongoing discussions. Thus the agents involved are first of all the “usual suspects”, including not only environmental and justice NGOs, but also trade unions, ethically motivated members of religious groups, and consumer organisations.

A new potentially powerful group are those middle class persons which after long striving for a better life now feel betrayed in a situation where also white collar workers subjectively feel the threat of precarisation. Their key motive is the loss of certainty regarding their future, and the decreasing possibility to plan one's own life. Sustainability communication would be well advised to address this aspect in future campaigns and communications.

In Europe, so far the far right and fascist groups are the political beneficiaries of the crisis, and in particular of the austerity politics. It is high time to a better alternative, such as strong sustainable consumption in a degrowing economy, leading to improved quality of life. If that transition does not start soon, we will lose the chance to choose if we want it by design or by disaster – it might soon be too late for design.

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Discussant Contribution: From Austerity to Transformation

Antonietta Di Giulio

Introduction

In my contribution as discussant, I will not really comment on the three papers. Rather, I will point out some questions that intrigued me while reading the papers of this session and some points I perceived as being controversial.

I am a philosopher, so I will not focus on empirical data and so called 'hard facts' and I will not raise questions about economic theories. I will rather address assumptions and basic questions I think could and should be discussed also in the follow-up of this workshop.

I arrange my points and questions in four issues: "Sustainable consumption", "How much is too much?", "Austerity", "Transition yes, but how?".

Sustainable consumption

I think the simple statement that we cannot do without consumption will remain uncontested. So, when talking about sustainable consumption, we do not imagine a national or global society without consumption, but one with a different consumption. There seems to be consensus so far that sustainability in consumption does not just mean to buy the right (ethically and environmentally sound) products. In other words: Sustainability cannot be achieved by increasing the consumption of particular kinds of goods. But: what exactly does it mean then? While Joachim Spangenberg in his paper basically pictures sustainable consumption as relying on a new kind of product going along with new patterns of consumption, Maurie Cohen, as I perceived it, in his paper implicitly pictures sustainable consumption basically as a kind of consumption relying on regional or even local networks of production and consumption. Personally, I think that focussing on regional or even local products endangers global sustainability. Therefore I think that before talking about how to achieve sustainable consumption we should spend a little bit of time to discuss what we mean by sustainable consumption and find out whether we basically have the same vision of it.

So, the first question to discuss is a very simple one: What is sustainable consumption? (By that I do not mean how we assess it, but what it looks like!)

How much is too much?

Both Michael Redclift's paper and Maurie Cohen's paper assume that in consumption we have a problem of all sorts of 'too much' - too much resources used, too much dirt, too much inequity and so on. So, explicitly and implicitly they both pose the question of 'how much is enough?' We tend to only state the problem but to not answer this question and we tend to not answer the related question of 'how do we define how

much is enough?' – let alone the question of 'how do we put it to reality once we defined how much is enough?'. And even if we give answers for instance in form of CO₂-emissions or similar these answers are far away from real consumption behaviour of real persons. I am convinced that as long as we cannot give a positive answer to these questions we will not succeed in achieving the cultural shift in values and perception we need for real transition. Joachim Spangenberg in his paper tried to give an answer with the notion of "environmental space" (with a lower and an upper level, the "floor" and the "ceiling"). Furthermore, he is the only one not only talking about the problem of *overconsumption* but also of *underconsumption*. I think we should spend a little bit of time discussing the usefulness and applicability of his concept.

Therefore, I suggest discussing the following question: How convincing are Joachim Spangenberg's suggestions and how do we judge their applicability?

Austerity

As Michael Redclift shows in his paper, the imposed austerity Europe experienced during World War II and the following years was the breeding pot of what we nowadays call consumerism and assess as unsustainable consumption. So, imposed austerity does not seem to be a promising way. But this in some way contrasts with the current austerity policies we encounter in different countries. So, the question is, whether we will relive the same we already know that it goes along with a high chance of failure with regard to sustainable consumption. Or, put in other words: What should or could be done to avoid what happened once wartime austerity was overcome? I might have missed it, but in Michael Redclift's paper I did not find an answer to that. Furthermore I kept asking myself how we depict the difference between voluntary self-sufficiency and voluntary austerity.

So, one of the questions to discuss is: In what way does the so called 'new age of austerity' differ from prior imposed austerity and what makes us so sure it is a contribution to a cultural change towards sustainability?

Transition yes, but how?

There is, not surprisingly, one common denominator in all three papers: The current economic crisis and the different accompanying problems. All three agree that we face or already live an economic transition moving away from affluence and abundance. All three explore the challenges or opportunities of this transition with regard to sustainable consumption. The consequences the three authors deduce though differ a lot. To exaggerate I would say that Maurie Cohen bets on the current economic crisis as a window of opportunity for changes in the economic organisation while Michael Redclift would deny that because of the accompanying policies of austerity and their possible legacy of even more unsustainable consumption, whereas Joachim Spangenberg would not rely on the economic system and its actors at all but ask for stronger institutional and therefore governmental regulation. In addition, in contrast to Joachim Spangenberg, who emphasises the role of a discourse about quality of life with regard to a cultural shift towards sustainable consumption, Maurie Cohen emphasises the role of a crisis with regard to a cultural shift towards sustainable consumption.

So, I have two further questions to discuss: (1) How important with regard to sustainable consumption are crises and if we view them as being important, is this not rather unethical as it leaves us waiting for the next crisis or even engineering it? (2) What role of

the government do we depict and what picture do we have of the relation between government and economic actors?

Conclusion

To summarize, these are the questions I suggest to discuss during this session and beyond:

1. What is sustainable consumption in the sense of what it looks like?
2. How convincing are Joachim Spangenberg's suggestions and how do we judge their applicability?
3. In what way does the so-called 'new age of austerity' differ from prior imposed austerity, and what makes us so sure it is a contribution to a cultural change towards sustainability?
4. How important with regard to sustainable consumption are crises and if we view them as being important, is this not rather unethical as it leaves us waiting for the next crisis, or even engineering it?
5. What role of the government do we depict and what picture do we have of the relation between government and economic actors?

Discussion Report: From Austerity to Transformation

Marlyne Sahakian

Emerging general topics

Power

The question of power appeared again in the discussion that followed this session, with the main insight: most of the wealth and production capacity continues to be monopolized by fairly large financial institutions and enterprises. Their interest is to keep the general public consuming products or product services. Western European countries continue to lead Eastern European countries towards unsustainable consumption, despite the insights into the failures of unsustainable consumption formulated in Rio and made widely public in the early 1990s. In the actual situation powerful interests have attempted to keep the financial crises separate from the environmental crisis. As long as the recent power structure persists, change is hardly possible. Who is indeed going to set limits for growth and for consumption? How many holidays are we allowed, what is the upper limit? Very few people – in whichever position – are agreeable to setting and adhering to limits. What is been called for, therefore, is not just governments making better politics, but systems of changes, all parts of the systems – government, culture, consumption patterns. Academics in particular need to think bigger, in terms of more complex issues. The main question raised in the discussion were, who would be the change agents necessary for putting in place fair austerity measures? What political parties or other entities would be able to implement such measures?

Believe systems

In the economic crisis, the solutions that are constantly being proposed are based on assumptions that caused the crisis in the first place. The reason behind this is that the belief system has not been touched. It indeed seems easier to deny a physical reality for psychological convenience; but only for so long. Hanging onto neo-liberalism may be a strong tendency now, but the consequences are potentially catastrophic. There are established cases of societies who disappeared by holding onto their beliefs. Psychology devotes a huge literature to such kinds of cognitive dissonance. When people have beliefs contradictory to what is happening, they tend to adapt their belief system to go with that new situation. Such a readapt requires less energy.

The call for changing the believe system is challenged with the example of the American Dream. In the post-war years it became limited to: a house, two cars, education. Instead it also means a freedom to choose a particular lifestyle, and hard work that pays off. In this understanding it is argued, we don't have to discard the belief system(s) but to come up with a different interpretative frame. There are some signs of hope, the solidarity economies for example which may be offering a new interpretative frame without forcing us to confront our value system.

A counter example is given from Denmark. During the ten years of liberal conservative governance a main project was to minimize the State and the role of public authorities, through privatization. Combined with this was a remarkable tax relief for the rich. This is following the belief system that if the rich are happy with the tax system, they will invest in the country and hire people. However, despite a reduction in state spending through less public service state deficit increased because of less tax income. Only the Norwegians have moved back some of this expensive privatization.

Narratives for sustainable consumption

Participants argue, we have started thinking about 'degrowth' but we still don't have the narrative to explain what this actually is. We don't have clear ideas on how a degrowth path would look like. We raise the question, but without a clear picture, we are only reinforcing the growth paradigm as this seems less frightening.

In concrete terms an example is given from India, based on Hal Wilhite's research. Regarding new housing developments there, people don't want what was perceived as "traditional". They want "modern" homes and much of the imagery associated with this is the Western home, which is oftentimes inappropriate for tropical climates. When a "green architect" tries to propose something different, a well ventilated home let's say, with holes in the roof and an air shaft with natural humidification, people don't want it. It's neither "modern" nor "traditional" but would be a new imaginary how sustainable consumption looks like. Such imaginary needs to get visibility.

Main discussion points on the paper by M. Redcliff

As interesting aspect is highlighted: people seem ready for rations these days, provided it is done in a just or fair way. The paper also states there is a need to combine voluntary and State action, that both are needed. We have a tendency towards 're-traditionalization' in times of crisis (moving back home). From here develops the substantial question: Is sustainable consumption a heritage of the past achieved through these means (war time frugality), or should we sell and explain sustainable consumption as a new form of progress? Most likely poverty is not an attractive association for sustainable consumption; instead it must be associated with a good life. We better shouldn't wait for shocks to change the direction.

Main discussion points on the paper by M. Cohen

Austerities measures are most often about rolling back government services. In the US, e.g., the private sector replaced the public sector. It's not a move towards a degrowth perspective but turning these services over to the growth sector. The main problem here is that the poorest people don't have the money to buy the private sector services. Most of the 20th century included drivers that political interests were able to appropriate: favorable demographic trends, a Fordist-based political economy that ensured increasing wages, etc. Those drivers, however, are now cutting in the opposite direction. But no matter how much political power you may have, you will have a hard time reversing the current patterns of globalization, stagnation of wages, etc.

Main discussion points on the paper by J. Spangenberg

Participants question the assumption that equity can be reached through better distribution of income, especially a higher taxation for high income groups. They argue that our social security system is already looking at thresholds. So how would such a

proposal work? Which political party represents these options? The argument of redistribution is challenged as well in terms of the ecological aspect. How can taking money from the rich help in terms of sustainability. Social justice increases but how is it going to contribute to sustainable consumption? Lots of people will have more money to spend and will spend it an un-sustainable way.

Spangenberg reminds that much higher taxation was the case pre-Reagan even in the United States. If this is not possible today, then sustainability is not possible today. The current situation is in no way resilient or stable. Extreme right and fascist groups are gaining the most in terms of popularity. It's a time of rapid change. The end of growth requires redistribution, as inequity will not be resolved by growth opportunities. The definition of SD is to address the needs of the poor: the sustainable development floor is important. People need a sense of justice, mechanism of fairness. If role models continue to consume at the max, there will be aspirations to imitate them. Redistribution enhances consumption opportunities, and that means the quality of consumption must change towards "less and better".

Pathways for Change

Happy sustainability as a lifestyle

Beyond the Easterlin paradox

Maria Csutora

Corvinus University of Budapest

Introduction

There is a general agreement within the scientific community, that ecological services provided by planet Earth cannot support the population of 7 billion at the economic welfare level of the Western societies under current technological conditions. (Wackernagel et al. 2004) We still would like to sustain a stable level of subjective welfare, measured by life satisfaction and happiness, without jeopardising the life supporting systems of the Earth. O'Brien (2005) defined sustainable happiness as the pursuit of happiness that does not exploit other people, the environment, or future generations. Thus, studying the fundamental nature of the linkage between ecological services and subjective wellbeing became crucial. A large number of authors tried to assess how much the two are tied both from economic and psychological disciplinary viewpoint. In psychology this research has led to the formulation of "aspiration theory" linking personal goals to subjective wellbeing. (Kasser and Lee 2003) Economics was inspired by the so called Easterlin paradox, exploring the contradiction between happiness of wealthier people in the US at an assigned moment and the decoupling of high GDP growth from the stagnating level of happiness in longer term. As an outcome of ongoing debates "happiness economics" came into being.

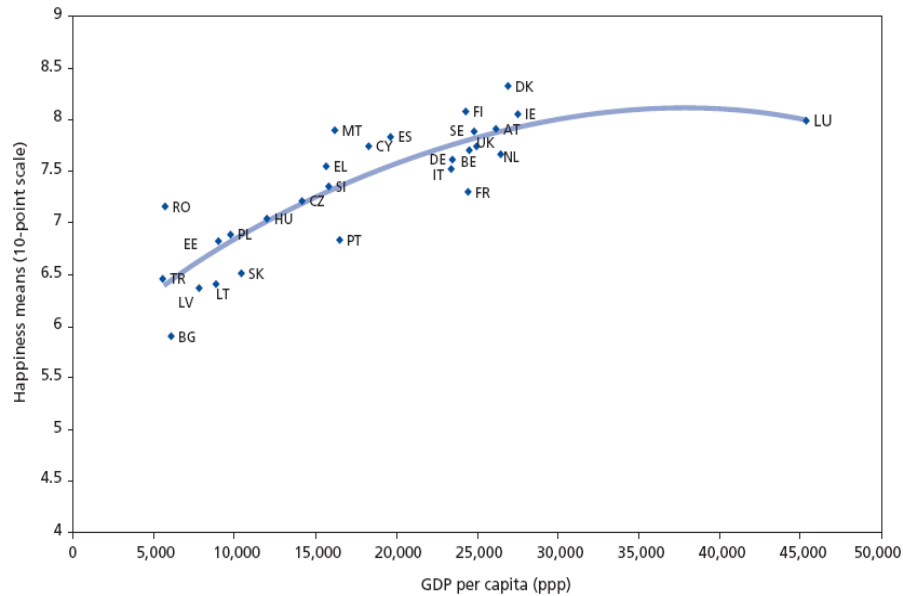
The economic crisis does impact our feeling of material security and may also impact our life satisfaction and happiness. Are we sentenced to unhappiness whenever we are forced to give up our current consumption level?

The link between ecological impacts and subjective wellbeing is difficult to be tested, thus the ultimate question is most often approximated by misplaced questions on linking income to subjective wellbeing or linking pro-environmental behaviour to subjective wellbeing. In the first part of the paper a very short discussion follows about the essence of these streams. Then this paper attempts to re-establish this link and directly measure the dependence of our subjective wellbeing on associated ecological footprint. Alternative theories will be developed to what is generally supposed and these theories will be tested on a representative sample.

The paper discusses the potential for achieving the same level of happiness at a modest level of ecological footprint.

Income and subjective wellbeing

The impact of financial situation on subjective wellbeing is studied in-depth in psychological as well as in economic literature. Their conclusions, however, are different in terms of the weight attributed to the amount of disposable income in increasing subjective wellbeing. Economists tend to emphasise the statistically significant relationship between the two variables. (Figure 1)



Source: EQS 2003; Eurostat 2004. Mean values.

Figure 1: Happiness means and GDP per capita in Europe

Easterlin (1973), however points out that average national happiness has remained constant over time despite the multifold increase in GDP per capita over time in the US. At the same time, positive correlation between individual income and individual life satisfaction can be measured at micro level. Divergent explanations were offered by various well-known economists to this phenomenon. Veenhoven and Hagerty (2006) found that “happiness had increased slightly in rich nations and considerably in the few poor nations for which data are available” (p. 421). Bjørnskov et al. (2008, p. 317) found that “while current GDP growth does not affect trends in well-being, accelerations in GDP growth do. In addition, faster GDP growth and faster growth of government consumption than in neighbouring countries induces positive trends in life satisfaction. Their findings are consistent with the predictions of aspirations theory and the theory of reference group comparisons”. The dispute is still going on.

At the same time, psychologists warn about the doubtfulness of that relationship, although acknowledge the presence of the interrelation. (Kasser & Ryan, 1996, 2001, Nickerson et al. 2003)

They also point out the possible destructive nature of financial goals. Income and financial goals belong to extrinsic goals. In a large sample representative empirical survey Martos and Kopp (2012, p.566.) found that while the orientation toward extrinsic goals may contribute to the present mood and satisfaction, they may bring along personal costs in the long run.” In case of „meaning of life”, importance of negative aspirations proved to be

a negative predictor.” In contrast, the pursuit of intrinsic life goals may indiscriminately support well-being.”

Happiness economics, the psychological theory of subjective wellbeing and the economics of ecological services are popular scientific streams, not properly linked together yet. Some former research serves evidence that such a link is meaningful and may provide interesting insights and findings. The indicators of income and social wellbeing must be complemented, though, with ecological footprint. The essential question for sustainable consumption is the dependence of subjective welfare on ecological footprint rather than on mere income. Interrelationship among the three indicators must be revised and will be tested.

Linking subjective wellbeing to pro-environmental behaviour

Pro-environmental consumption behaviour is sometimes used as a proxy for sustainable consumption. The two are, however, different terms. The former supposes a certain level of environmental awareness and conscious choice of goods for environmental reason. The latter might be instinctive behaviour or behaviour provoked by coercive economic situation. The emphasis should be on the environmental impacts of behaviour, rather than on the values driving that behaviour. Thus, the question remains whether sustainable consumption is achievable without sacrificing the accommodated level of subjective wellbeing.

Brown and Casser (2005) studied the link between ecologically responsible behaviour and subjective well-being. They found that people living according to voluntary simplicity principles have lower ecological footprint and higher level of life satisfaction. Their sample was, however, very limited and specific (200 middle- and high school Caucasian students in the US) They found the intrinsic value orientation being responsible for increased level of life satisfaction.

Veenhoven (2004, p.1.) suggested that “a shift to sustainable consumption involves a minor reduction in happiness, at least, temporarily, but that we can live quite happily without that luxury.” He found that heavy energy users were happier in the Netherlands. He admitted, however, that the association between the two proved to be weak with high variance. (See Figure 2)

Csutora (2012) also found, that although “green” consumers not necessarily show up a reduced footprint compared to “brown ones”, but the former are definitely happier than the latter. Thus green consumption may indirectly increase the subjective wellbeing per footprint ratio as it contributes to the increase of subjective wellbeing at an assumed level of footprint. The discussion, however, halted with this single statement and did not go further in analysing the link between life satisfaction, happiness and consumption patterns. Life goals and values do matter, resulting in varying levels of happiness at the same level of ecological footprint.

This paper goes further and asks whether happy and sustainable lifestyle is possible in European society and whether it can be traced by empirical research. The research questions asked are the following:

- How much our subjective wellbeing depends on the resources supported by Earth? Can we sustain a relatively high level of subjective wellbeing while producing low level of ecological footprint?

- What kind of lifestyle and consumption pattern is able to produce a high level of life satisfaction at low level of ecological footprint?

Easterlin paradox: Alternative hypothesis proposed

Based on previous research the correlation between ecological footprint and subjective well-being will be reconsidered in this paper. The link is apparently straightforward for low levels of income, but becomes quite forced and faint after that. Lack of money is assumed in the study to make people unhappy, but material wealth does not make much happier after a certain level reached. Different paths for happiness open up, once that point achieved with no more struggle for satisfying basic needs.

With low level of income the correlation between income and happiness seems close. After reaching a certain level of wealth, however, an inflection point can be found, after which the association faints. Tremendous increase in income is needed in order to generate further measurable increase in happiness. The regression line becomes close to parallel with the horizontal axis suggesting a weak relationship if any. Also, most graphs referring to citizens rather than countries plot mean values for income groups rather than all dots, omitting to share the determinant coefficient for the regression with us. With all dots plotted, the link between income and happiness can hardly be captured. The strength of the relationship is significant, but extremely weak.

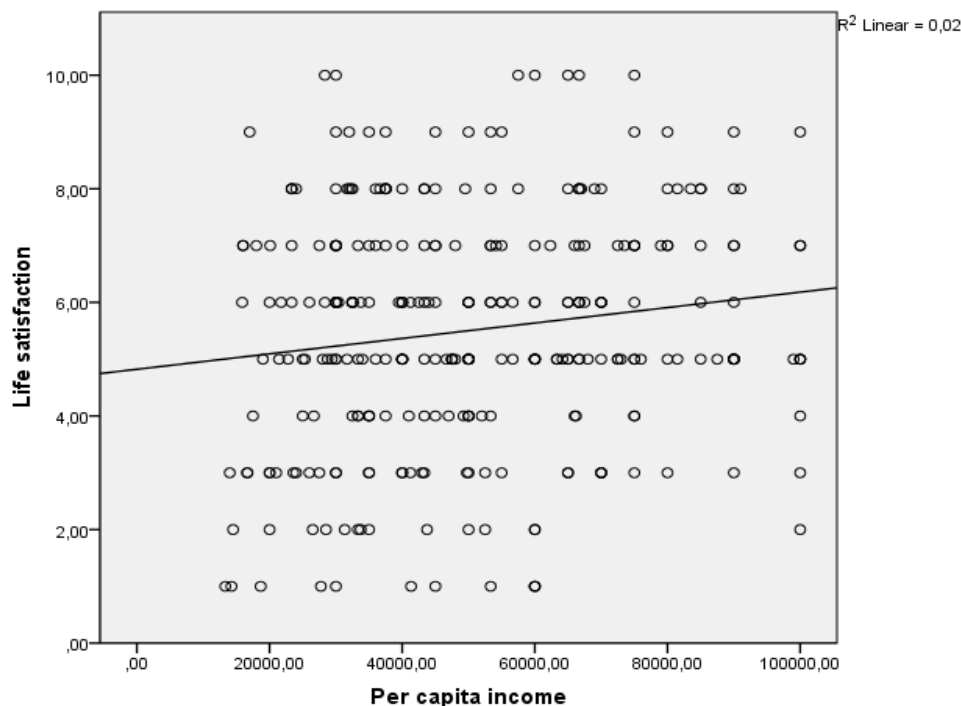


Figure 2: Life satisfaction and per capita income

Another interesting general feature of such graphs is the likely presence of heteroskedasticity hidden in data. At higher level of income the variance of points apparently increases. This leaves potential to alternative theories that go beyond a single logistic curve linking the two variables. Perhaps the link breaks at a certain level of income and two different clusters of points with different features are hidden causing the high variance observed.

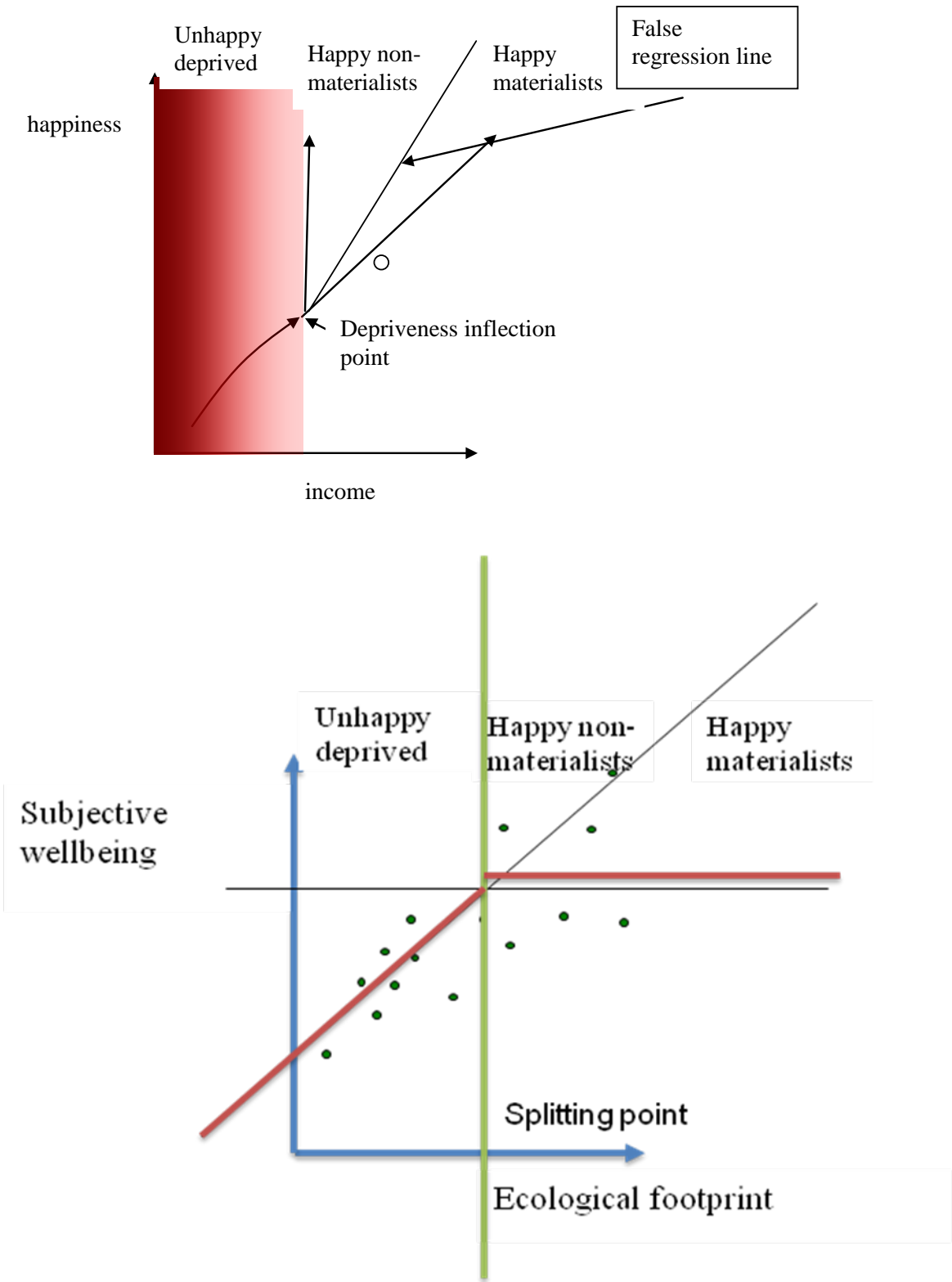


Figure 3: A false regression assumed between happiness and income

From a false regression line a false statement can be drawn:

Lack of money does make you unhappy = Money makes you happy

The false nature of the regression line can be suspected from the figures of certain previous studies. The correlation between income and happiness visually seems to be quite strong in most figures before the inflection point, but becomes quite forced and vague after that point is reached. Without a the regression line printed, correlation after the inflection point would not be supposed.

This paper advocates a new approach described as “splitting point in subjective welfare”. It accepts that constant struggling for basic goods may deteriorate the subjective welfare of poor, but after arriving at a splitting point where basic needs are not at risk any more, further increase in consumption is not essential to maintain a high level of life satisfaction.

Two pathways exist beyond that point: one for those with materialistic goals. They may increase their income and footprint and feel happier or fail and feel unsatisfied. With non-materialistic goals both happiness and life-satisfaction can be increased without significant increase in ecological footprint.

Money does not make you happy, but lack of money does make you unhappy. The close correlation between unhappiness and lack of money cannot be automatically translated into correlation between high income and happiness.

The regression line between income and happiness might appear false, once the deeperstructure of society based on income and happiness unfolds.

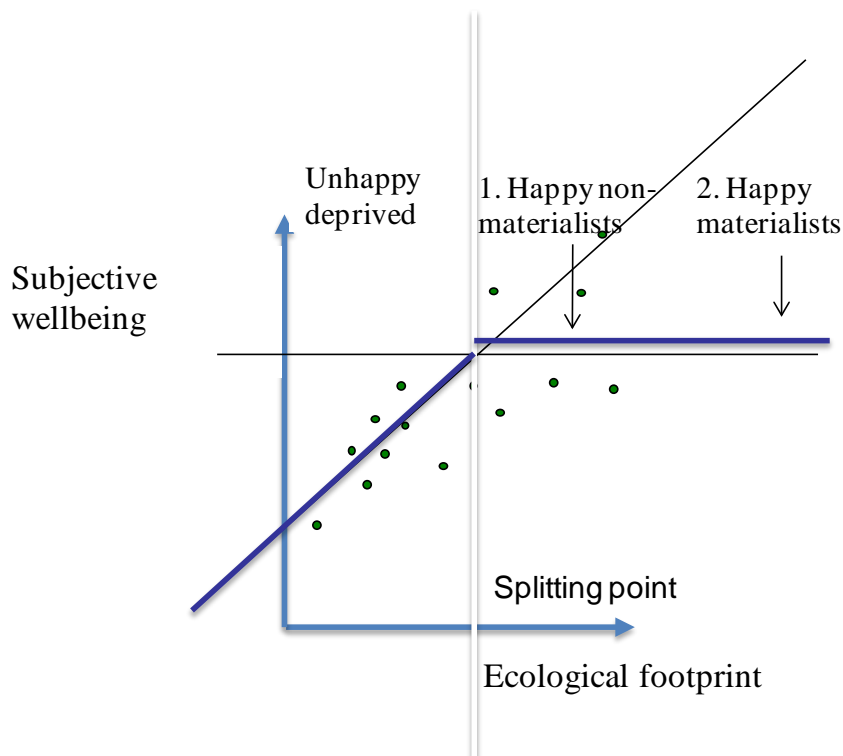


Figure 4: Two possible paths towards increasing subjective welfare

Preliminary results of the empirical analysis

In 2010, a survey was carried out in Hungary in order to collect data on the spending structure of consumers, their consumption patterns, their environmental attitudes, demographic data, and life satisfaction issues. The survey was financed through the Norwegian Financial Mechanism. Interviewing was carried out by TARKI, one of the largest Hungarian professional opinion polling companies. The survey was collected from a representative probability sample (selected in multiple stages with proportional stratification), $N = 1012$. All adults with an address in Hungary had equal probability of becoming part of the sample. All Hungarian regions were included in the sample with a total of 70 localities. First a sample of settlements was drawn. Then the random walk technique was applied to select the dwelling. Finally, one person was chosen within a dwelling to be interviewed, using the Leslie Kish key to select the person within the household. The survey sample was representative of the population aged 18+ in terms of sex, education, type of settlement, and educational background. The questionnaire was carefully piloted on a smaller sample before the survey.

A compound based method was used to calculate the ecological footprint of consumption activities, which comprise a critical part of total ecological footprint. Food, transport, and household energy were considered important contributors, so respondents were asked detailed survey questions regarding their daily diets, mobility habits, and energy use.

There is a correlation between net household income and total ecological footprint as suggested by previous literature.

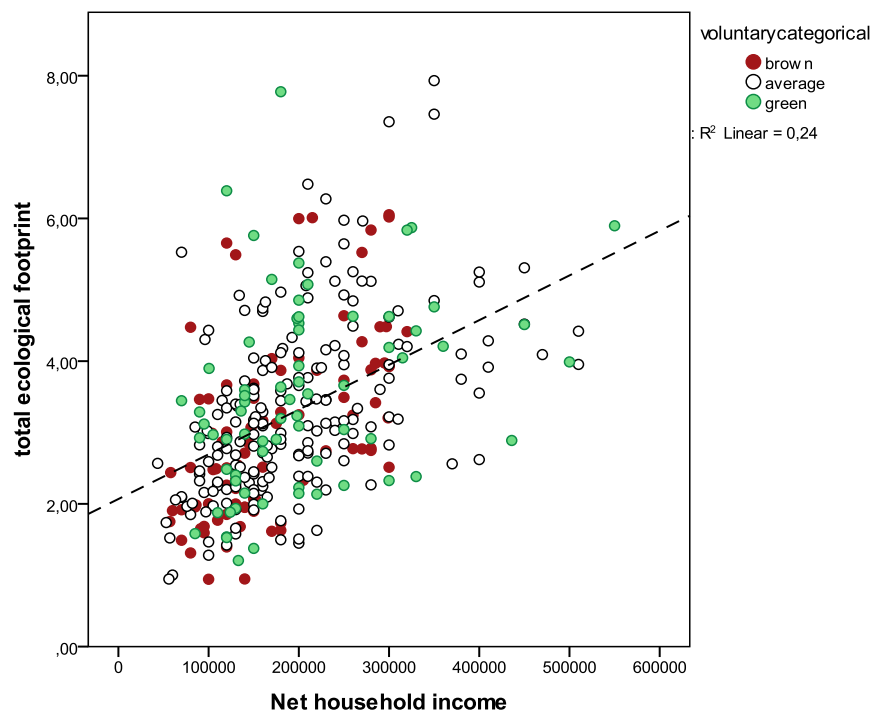


Figure 5: Net household income and total ecological footprint (Csutora (2012, p. 156))

The association between the two is, however, weak and does not predict a strong association between ecological footprint and subjective wellbeing. Thus the correlation between the variables has been tested based on the database data. The correlation among variables is presented in Figure 5.

The results reassure the preliminary hypothesis about the weakness of correlation between ecological footprint and subjective wellbeing. Although net household income does correlate with both components of subjective wellbeing and ecological footprint and this correlation is weak for happiness. The most interesting finding is, however, that ecological footprint correlates with life satisfaction weakly and does not correlate with happiness at all. Thus, driving a happy life without imposing high burden on the environment does not appear to contradict each other according to these results.

Correlations						
		Ecological footprint	Happiness	Life satisfaction	Net household income	Per capita income
Ecological footprint	Pearson Correlation	1	,055	,161**	,359**	,533**
	Sig. (2-tailed)		,121	,000	,000	,000
	N	793	793	792	367	367
Happiness	Pearson Correlation	,055	1	,724**	,189**	,080
	Sig. (2-tailed)	,121		,000	,000	,093
	N	793	1013	1011	447	447
Life satisfaction	Pearson Correlation	,161**	,724**	1	,274**	,236**
	Sig. (2-tailed)	,000	,000		,000	,000
	N	792	1011	1011	446	446
Net household income	Pearson Correlation	,359**	,189**	,274**	1	,745**
	Sig. (2-tailed)	,000	,000	,000		,000
	N	367	447	446	447	447
Per capita income	Pearson Correlation	,533**	,080	,236**	,745**	1
	Sig. (2-tailed)	,000	,093	,000	,000	
	N	367	447	446	447	447

** . Correlation is significant at the 0.01 level (2-tailed).

Table 1: Correlation between subjective wellbeing, income and ecological footprint

A regression analysis between happiness and income was also carried out with splitting point at different household income level. The regression proved to be significant below the level of roughly 220000 HUF, but became insignificant above that level. Thus it seems, different paths for happiness open up, once that point achieved. The single regression line, suggested by previous literature can be decomposed into two lines, as the nature of the link changes beyond a point of income reached. Although one single logistic regression line instead of two lines is preferred by most researchers, this approach is proved to be more elegant than exact. Unfortunately only about 25% of people live beyond that level of income, so the original hypothesis still holds for most people.

A similar analysis has been carried out for testing the relationship between ecological footprint and subjective wellbeing. A regression analysis between happiness and income was also carried out using splitting point at different ecological footprint level. Here I used life satisfaction instead of happiness as an indicator for subjective wellbeing. Using regression analysis I found an overall significant relationship between life satisfaction and ecological footprint, but the regression line, again, was decomposed into two lines. A splitting point was found around 2.7 gha, well below the average footprint of 3.4. Beyond that level, the association between ecological footprint and life satisfaction became insignificant. The good news is that 535 people, more than 67% of valid responses, belong

to that group. Thus, for majority of people, ecological footprint is not a good predictor for subjective wellbeing. This increases the potential for a politically acceptable sustainable consumption policy.

Further analysis has still to be carried out about the reasons and intercultural validity of these findings. One possible explanation might be in the high share of heating related ecological footprint in the total EF. Energy footprint is a major component of total footprint. Roughly 75% of the energy footprint, is determined by heating-purpose fuel consumption. It seems to be uncorrelated with environmental awareness nor with income, but is dependent on socio-economic conditions such as home size, or physical condition and age of the building, etc. People do not move into smaller house whenever their income is reduced. Thus very often old and low income people are characterised by high level of energy related footprint and low level of subjective wellbeing. By reducing their footprint by retrofitting of their houses, they could increase their level of wellbeing and reduce their footprint substantially.

Clustering lifestyles

Cluster analysis was carried out using the quick cluster procedure as well as the two-step cluster analysis procedure to explore identifiable groups of similar life satisfaction and ecological footprint characteristics. The analysis seems to justify the presence of happy non materialists, no matter which procedure used or whether 3 or 4 clusters have been produced. In case of three groups, the following features have been found:

Final Cluster Centers			
	Cluster		
	Happy non-material	unhappy deprived	Happy material
Ecological footprint	3,32	2,91	6,43
Life satisfaction	7	4	6

Table 2 : Results of the cluster analysis

Further analysis focused on exploring the lifestyle patterns of the three groups. Happy non materialists are happier and more satisfied than other groups. Their monthly net income is about the average, while materialists earn more and the deprived group earns less than average.

Happy non-materialists eat meat as often as materialists, still their ecological footprint is significantly lower. They probably have a lower tendency to eat too much. Their mobility footprint is only one third of the materialist group and they spend much less on holidays and travel. Their electricity footprint, however, is higher than that of the materialist group. This is probably because they tend to spend more time at home and around the house (e.g. gardening, creative hobby, family life). They find joy at home and with their family while materialists need to go away from home to find some joy. They tend to live in a family with a kid or kids, while 85% of materialists live alone. Altogether they lead happier and more satisfied life than materialists at about half of the footprint of materialists.

Descriptives

		N	Mean	Std. Deviation
Happiness	Happy non-materialists	339	7,63	1,340
	deprived	316	5,18	1,901
	Happy materialists	120	6,53	1,753
	Total	775	6,46	2,001
Net monthly income	Happy non-materialists	250	81441,98	55555,684
	deprived	224	70958,82	40902,317
	Happy materialists	77	135668,18	112785,116
	Total	551	84758,11	65412,430
Spending on holidays	Happy non-materialists	339	49793,51	80201,956
	deprived	316	14873,42	36828,428
	Happy materialists	120	89133,33	94710,344
	Total	775	41646,45	73562,232

Table 3: Lifestyle features of the three clusters

Conclusion

The Easterlin paradox has a straightforward solution, provided that the theory described in this article correct. In longer term you may cease the causes of unhappiness linked to deprivation, but you cannot make people happy by merely increasing material wealth beyond a certain point. Moreover, the link between ecological footprint and subjective wellbeing is much weaker than that between income and subjective wellbeing. Thus, decreasing ecological footprint without compromising subjective wellbeing is less ambitious goal than sustaining welfare without compromising income.

The hypothesis was tested on a database gained from a representative survey in Hungary, 2011. Reanalysing data from the world value survey also took place. The empirical analysis confirmed the potential for feeling the same level of happiness at very different levels of ecological footprint. Value choice does matter in increasing the likelihood of feeling happy. Green consumers, although are less successful in decreasing their ecological footprint due a BIG problem – are happier at all level of income than average or brown consumers (Csutora 2012).

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Pathways to Sustainable Living in Times of Crisis

Experiences from the EU action research project 'InContext'

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Abstract

How can people achieve sustainable lifestyles in the current economic crisis that both reduces inequity and enhances traditional economic thinking? Answering this question calls for new approaches and methods that go beyond current conceptualisations of consumption and strategies for changing consumption patterns. Such novel approaches should lead to new conceptualisations of consumption, as well as new methods and tools that are able to develop pathways and strategies towards sustainable consumption systems both in economic growth and in times of de-growth and austerity.

The interdisciplinary EU research project InContext has taken up this issue and develops and applies innovative methods to deal with societal challenges. InContext addresses the complexity of the contexts of individual behaviour by integrating both behavioural and structural explanations for individual behaviour, and taking into account both the inner context of individual behaviour, e.g. needs, values, cultural norms, as well as influences from the outer context. The latter comprises the systems the individual is operating in, including institutional context and laws; as well as their multiple interactions. As such it also is a core aim of InContext to foster sustainable communities, as they to a large extent establish this system the individual is operating in. The paper argues that understanding and systemising micro-level action and innovation is important to achieve the foreseen changes.

The paper will deal with the following parts of the project: First, at the individual level the theoretical framework is based on the capabilities approach and focuses on the fulfilment of individual needs through strategies that add to sustainable development. The capability approach contributes a normative, non-paternalistic description of the good human life. The capability approach has been extended by modelling the influence of values, learning, awareness and emotions on behaviour, whereas practice theory is used to embed individual behaviour in societal structures.

Second, case studies inquire into alternative consumption and production practices towards greater sustainability in both the energy and food domains. Case studies focus on the conditions of emergence and diffusion of alternative and more sustainable niches,

and how concerned actors individually and collectively cope with inner and outer context aspects to enact more sustainable lifestyles.

Third, action research, consisting of three pilot projects, incorporates the theoretical and case study findings into a transition management process. The process involves a group of frontrunners who go through a process of reflective learning, experimentation, awareness rising and capability development. These frontrunners develop a shared sustainability vision of their community and learn to initiate actions towards its fulfilment. Increased involvement and capability development will make communities more capable of dealing successfully with local sustainability problems both in prosperous and austere times.

Introduction

In 1992, increasing political and social awareness of the challenge of sustainable development resulted in the adoption of Agenda 21 at the United Nations Conference on Environment and Development in Rio de Janeiro, drawing attention to the need for increased efforts to initiate pathways to sustainable development at the local and individual level.⁴³ Over the last two decades, research into the limits of economic growth has reinforced the importance of such efforts and led to the devotion of considerable resources by governments, businesses, civil society to support local and individual level sustainable development policies and initiatives. These scattered efforts, while unsuccessful in steering mainstream social practices onto a sustainable pathway, have highlighted the strengths and weaknesses of existing approaches and stimulated innovative thinking on how to address the challenge of sustainable development.

However, with the onset of the global financial crisis in 2007/8, attention and priorities among many governments and policymakers have shifted decidedly away from the challenges of sustainable development and overconsumption towards more short-term and traditional economic growth policies. Despite a return to economic growth in much of the global economy, lingering concerns about economic performance in Europe and the United States, in particular the size of national deficits, has ushered in an age of austerity, marked by significant declines in public spending, higher unemployment and massive cuts to social programs. Accordingly, the world faces a scenario in which squandered opportunities to invest in sustainable development policies, such as the Green New Deal, in the early stages of the economic crisis is compounded by growing budget restrictions, and rising economic and social inequality.

Considering this panoply of challenges raises the following two **questions**: *How can people achieve sustainable lifestyles in the current economic and policy environment, while improving sustainable consumption practices? How can we go beyond current conceptualisations of consumption?*

Finding answers to these questions is of particular relevance in the run up to this year's Rio + 20 Summit, as world governments will soon convene to discuss the challenge of sustainable development with the benefit of two decades of hindsight. Current preoccupation with technocratic solutions under the Green Economy approach, however, indicates that the core problems of over-consumption will not be addressed. Developing appropriate solutions will require learning from past failed policies to develop new approaches, methods and tools that go beyond current conceptualisations

⁴³ The authors would like to thank Andreas Graf (Ecologic Institute) for his contributions to this article.

of the problem of overconsumption, such as awareness raising and targeting the production system's eco-efficiency. These approaches and methods should address the inner and outer context of consumption and behaviour in an aligned and integrated way, and be applicable at the local and individual levels in order to take advantage of existing activities of local governments and communities, such as low-carbon and sustainability policies, as well as maximize local action. Furthermore, they must be able to develop pathways and strategies towards sustainable consumption systems both for times of economic growth and times of de-growth and austerity.

The interdisciplinary EU research project 'Individuals in Context: supportive environments for Sustainable Living' (abbreviated as InContext) has taken up this issue by working to develop and apply innovative methods for dealing with such societal challenges. It addresses the complexity of the individual behaviour contexts by taking into account both the inner (e.g. knowledge, personal interests, values, priorities and basic needs) and outer context (ex. politics, policies, infrastructure, social institutions, culture, habits, and lifestyles) of individual behaviour, thereby addressing both behavioural and structural explanations. An action research project, InContext complements knowledge gained from theoretical research and a series of in-depth case-studies with pilot projects aimed at developing and testing an innovative community based transition approach. These processes enable InContext to draw lessons on the adoption of sustainable practices, while exploring ways to facilitate sustainable citizenship, and address societal challenges by strengthening communities and improving well-being. The paper argues that understanding and systemising micro-level action and innovation is important to achieve the foreseen changes. The paper will deal with the following parts of the project.

The paper is organised as follows. Section 2 gives an overview of the background, organisation and assumptions of the InContext project. Section 3 deals with the issue of needs & need fulfilment and explains how this can be conceptualised using a refined capabilities approach. Section 4 reports on sustainable consumption niches. Section 5 introduces and describes the community arena, a participatory methodology involving local actors and citizens for developing visions and strategies for sustainable development and sustainable consumption at a local level. Finally, section 6 concludes with reflections in response to the following questions:

- What can we learn from InContext with regard to a transition towards sustainable lifestyles and consumption patterns.
- What insights on innovative methods to deal with societal challenges, such as austerity, does InContext offer?

Core Concepts of InContext

Four perspectives

InContext distinguishes two strands of contexts determining the opportunities (drivers) and constraints (barriers) shaping individual behaviours related to sustainable development: the inner and outer context. This differentiation based on ideas of E.F. Schumacher (1977), which have been further developed by Ken Wilber (1995) as part of his Integral Theory. Integral Theory can be understood as a meta- framework of (holistic) understanding. It differentiates four basic perspectives on any phenomenon which are made up by the combination of individual and collective as well as on subjective and objective aspects of this phenomenon (Wilber 2001: 187).

Thus, the following four perspectives exist (see also table 1):

(1) individual behaviour in its empirically observable dimension (for reasons of understanding we will call this in short: behaviour), which is the outer individual perspective, and deals with actions such as turning on the light, driving a car, eating⁴⁴ (UR),

(2) individual experience, which is the inner individual perspective and deals with needs, feelings and values (UL),

(3) cultural and ethical aspects, which is the inner collective perspective and deals with social institutions, culture, habits, and lifestyles (LL).

(4) social and systemic aspects, which are the outer collective perspective and refers to systemic variables such as politics, policies, infrastructure, and organisations (LR).

As used in the project, the *inner context of individual* behaviour refers to the individual inner perspective (UL), whereas the *inner collective context* refers to the cultural perspective (LL). Finally the *collective outer context* refers to the systemic perspectives (LR). In this way we include individual and collective as well as subjective and objective aspects. Of course, there are far more elements than we can reasonably describe in this document. As their importance depends on the specific contexts, we remain rather generic here.

	Inner	Outer
Individual	Individual Experience (e.g. needs, individual values, thinking and feeling)	Bodily expression of individual behaviour (e.g. movement of body: putting food in mouth, turning on the light)
	Upper left (UL)	Upper right (UR)
Collective	Culture and ethics (e.g. social norms, cultural symbols, codes of conduct, social roles...)	Social, economic and ecologic systems (e.g. market economy, political institutions, infrastructure, ecosystems)
	Lower left (LL)	Lower right (LR)

Table 1: Four perspectives structure
Source: Schumacher 1977, Wilber 1995, strongly modified

⁴⁴ At the very basis these consist of physical, biological or chemical aspects of body, body parts, brain, organs etc. involved in behaviour. Due to the magnitude of possible different behaviours, we will not try to go into detail here.

Policy interventions to further sustainable development have up to now primarily focused on addressing the external context in order to transform individual behaviour. Behavioural patterns and consumption modes, however, cannot adapt in a sustainable way without acknowledging the intrinsic importance of the individual. Current approaches analysing and enabling transition towards sustainable paths do not sufficiently take into account perspectives from within the individual, i.e. the internal context. Mass communication campaigns targeted at individuals and their mind-sets still frame sustainable development from the perspectives of policy makers and scientists and target the cognition of individuals, neglecting the deeper layers of the individual. Furthermore, the shift from production-based sustainability (e.g. the quest for product efficiency) to consumption-based sustainability calls for shifting attention to and targeting the cognition of individuals in new and innovative ways.

In this paper it is argued that addressing the external context alone is not sufficient to trigger mainstream sustainable behaviour at individual and collective levels. On the contrary, an integrated study of both the internal and external contexts is required as a base for both policy-making and empowerment of local communities.

Needs

How we are conceptualising the inner context and understand behavioural change is subject of the next section.

Individual needs and the capabilities approach⁴⁵

Lifestyles are sustainable when their implementation does not hinder the ability of others to meet their needs, either now or in the future. InContext addresses individuals confronted with this societal challenge and aims at developing a model that can explain some of the key issues related to this confrontation. Specifically, InContext goes beyond usual approaches to transition management (cp. section 5) to include the *inner* context of behaviour, i.e. the needs, values, beliefs, etc. of individuals in the context of achieving sustainable lifestyles. Here, we build on the importance of needs for individuals (Reader 2005).

There are two reasons for addressing the concept of needs: (1) the parallel to the Brundtland definition of SD (at least in wording, as the Brundtland Commission had a different, more concrete understanding of needs; cp WCED 1987) and (2) the link between needs and well-being: meeting needs has a direct positive emotional effect (Spillemaeckers et al. 2011), implying that talking about needs has the potential to reach the hearts and not only the heads of people, an essential issue in achieving sustainability transitions (Rauschmayer et al. 2011).

Following Max-Neef (1991), we distinguish between fundamental human needs that are abstract, few, and finite in number (such as: freedom, affection, or subsistence) and strategies meant to satisfy these needs (such as: owning a car, caring for parents, eating a bowl of rice). This needs-concept allows people to identify with and connect to one another (even across generations), as everybody has the same needs. The differentiation between needs and strategies allows us to distinguish a level of connecting needs from a level of concrete behaviour, which may differ for individual, social, or environmental reasons between individuals (also compare Guillen-Royò 2010, Jolibert et al. 2011).

⁴⁵ A more extensive version of this chapter can be found in Schäpke/Rauschmayer 2012.

Basically, we start with rudimental behavioural model: people select strategies in order to realize their needs. Realizing their needs can be equated with realizing their human flourishing.

Two reasons necessitate the further inclusion of the concept of freedom into this behavioural model: **(1)** *Uncertainties and complexities* as well as **(2)** *paternalism*.

(Ad 1): Leach and colleagues (2010) argue that uncertainties and complexities are necessarily related to questions of sustainability: due to uncertain causal relationships, novelty, but also to changing normative frames of what is to be sustained. Therefore, they argue that approaches to sustainability must be increasingly procedural and actively involve stakeholders rather than using outcome-oriented models based on scientific knowledge. Stakeholder processes imply the use of local knowledge and the acceptance or even the encouragement of changing values, therefore, they must include freedom in their design if effectiveness and legitimacy are to be achieved.

(Ad 2): Paternalism might result in dependency or refusal by the paternalized. In the 1980's, needs-related concepts such as the Basic-Needs-Approach (e.g. Streeten 1981) have been understood as paternalistic approaches to human development (Leßmann 2011). While freedom might be categorized as a fundamental need (as Max-Neef does), Amartya Sen gave freedom a place of still higher importance when evaluating a person's well-being not only by the doings and beings this person achieves, but also by the freedom to live in different ways. When developing the capability-approach, he argued for a more conceptual embedding of needs-based approaches, claiming that the Capability Approach is suitable for this task (Sen 1983: 515).⁴⁶

While we do not wish to diminish the difficulties of the Capability Approach for sustainability issues (see on this Leßmann 2011, Leßmann & Rauschmayer 2012), it still has another important advantage (Rauschmayer & Leßmann 2011), i.e. the explicit acknowledgment of other-regarding motivational sources for behaviour. These sources are particularly important for sustainability issues – as sustainable development essentially is about caring for the powerless: the world's poor and future generations. Acknowledging that people may achieve some doings or beings because they intrinsically care for the well-being of other persons, distinguishes the Capability Approach from other current approaches used for policy evaluation which are based on a narrow utility-maximising image of man.

While the Capability Approach mainly considers measures of extrinsic empowerment and focuses on the outer context in the context of human development programmes, it can also be employed in combination with psychological approaches (such as the theory of planned behaviour, Ajzen 1991) for dealing with the inner context and intrinsic empowerment (cp. Pick & Sirkin 2010). Compared to the field of human development, however, the issue of sustainability requires a specific focus on normativity and other-regarding motivation (DiGiulio et al. 2011). Therefore, the model of personal development has to be combined with additional models e.g. norm-activation theory etc.

To begin our explanation of Figure 8 we focus on the key aspect we want to explain and influence within InContext: the behavioural strategies. From here we follow the assumed influences between the different variables backwards along the arrows. Within the Needs-Opportunities-Abilities approach, the individual behavioural strategies are thought to be dependent on the intention of a person to behave in a certain way

⁴⁶ However, the relationship of normativity and paternalism remains a subject of discussion within the project team. Some project team members argue that normative approaches that aim at fostering sustainability remain intrinsically paternalistic.

(Gatersleben and Vlek 1998). This implies that we focus our analysis on behaviour that is chosen consciously. Behavioural routines and habits are therewith not in the centre of attention of the model. Behavioural intentions depend on the a) perceived possibility to choose a strategy as well as on the b) motivation of the individual (ibid.).

- a. Possibilities to choose (here used synonymously with capabilities) depend on the given opportunities to behave, which depend on outer context resources and conversion factors (natural, social, economic, etc.) available to the individual. Capabilities also depend on the personal abilities to use these resources; these abilities are determined by personal agency, well-being, personal skills and knowledge.
 - Personal agency is understood as “the ability to define one’s goals in an autonomous fashion” (Sen 1985, as stated in Pick & Sirkin 2010: 68). Agency also includes the freedom to orientate one’s life according to one’s values, i.e. to improve one’s own well-being or to improve the life of others (Leßmann 2011). These values again are influenced by cultural and social aspects, as depicted by the arrow coming from the outer context to personal agency. Individual well-being as well has impacts on the abilities of a person to behave.
 - Well-being includes the objective standard of living of a person, such as health, income etc., and subjective, psychological elements like happiness or feeling content. It relates to his or her own standard of living as well to the standard of those persons dear to him or her.
 - Skills and knowledge are understood in a general way including e.g. education or work experience. With regard to the InContext goal of fostering sustainable behaviour, those skills and knowledge contributing to sustainable development are of central interest here (cp. Ott 2002).
- b. Besides the possibility to choose a strategy, motivation is an important factor determining behavioural intentions. The assumption that motivation to behave is fuelled by individual needs and the perceived abilities to behave lies at the core of our behavioural model: people carry out behavioural strategies to meet needs. Gatersleben and Vlek discuss a number of different concepts of needs, including that of Max-Neef (Gatersleben & Vlek 1998). Due to differing use of the term ‘needs’, we reiterate that by needs we mean the most fundamental dimensions of human flourishing.

In our circular model we assume two types of feedback processes: First, the repercussion of experiences with behavioural strategies on individual skills (experience, learning), well-being (by needs getting met), and personal agency (e.g. due to experiencing own abilities to change something). This “individual inner” feedback loop from behaviour to agency and well-being is in line with the idea of intrinsic empowerment developed by Pick and Sirkin already sketched in section 3.2. Second, behavioural strategies impact the collective context aspects, e.g. by maintaining or questioning social or political institutions and policies or by changing the impacts of consumption on natural resources. This second feedback loop leaves room for the idea of co-evolution and joint development of individual and collective context aspects and behavioural strategies. Impacts of individual behaviour changes on elements of the collective context will generally remain rather low. At the collective level, on the other hand, transition arena processes (cp. section 5) may facilitate such feedback. In terms of outcome evaluation, however, the impacts of behaviour on the collective context play another important role in InContext, as they determine whether we judge a specific behaviour to be sustainable or not.

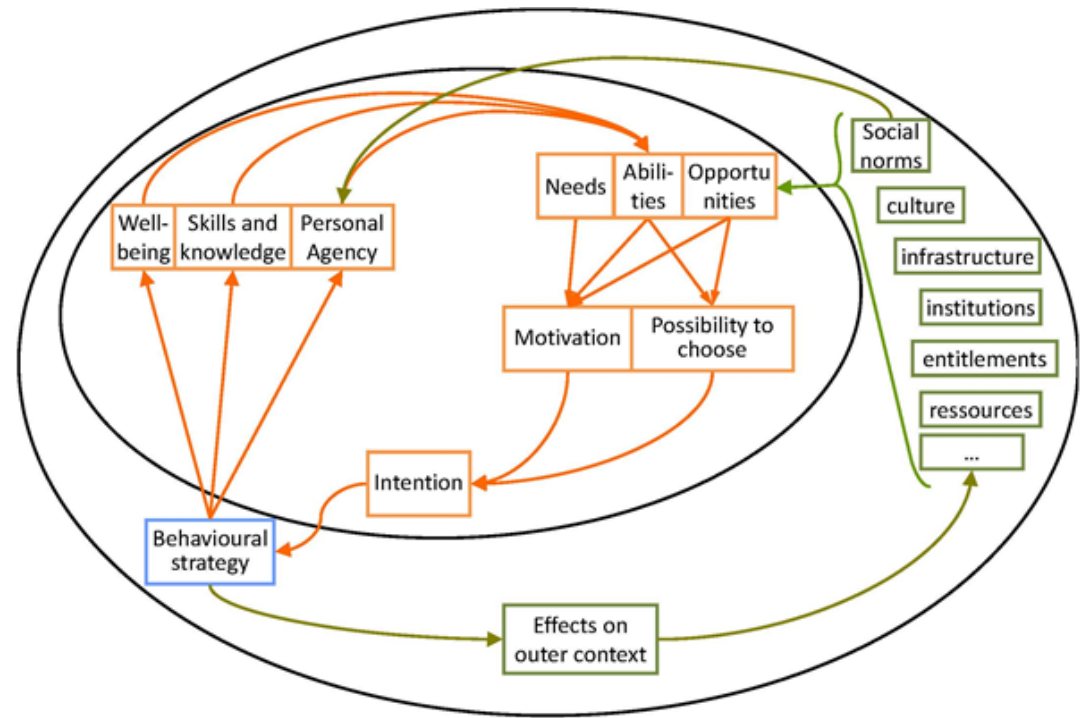


Figure 8: Aspects influencing individual behaviour – a feed-back model (source: Schöpke and Rauschmayer 2012) Caption: individual inner context: **orange**, individual outer perspective: **blue**, collective inner and outer context: **green**

Pathways to sustainable consumption niches

Introduction

Much of today's debate on rethinking our consumption patterns is concentrated on promoting eco- and material-efficient products/services, or to advocating patterns of sufficiency. Both strategies – and their promoters – are often seen as being exclusive and in tension with one another. In reality, there is a third set of strategies which intend to develop an alternative lever of action in so far as they question some of the foundations of today's system of exchange of goods and services between producers, retailers and consumers; i.e. they question markets as being the only thinkable, feasible, efficient and equitable institutions of exchange. Such strategies of "*de-commodification*" (Boulanger 2008) take many forms, but generically consist of substituting non- (or differently) commercialized exchanges for commercial (or market-based) ones. In other words, *de-commodification* is in most instances about fundamentally changing the nature of a consumer, of a producer, of their relationships to a product (or service) and of the structures and norms of the exchange. From a sociological perspective (Hinrichs 2000; Murdoch, Marsden and Banks 2000; Winter 2003) these strategies of *de-commodification* have been analysed as a matter of *re-embedding*⁴⁷ current exchange relations into their soci(et)al networks and cultures. As a reflex in times of crisis – parts of its origins being

⁴⁷ See also the work on *embeddedness* by Polanyi and by Granovetter, which is mirrored by Giddens for whom modernity is co-defined by processes of *dis-embedding*, i.e. of "*lifting out of social relationships from local contexts and their recombination across indefinite time/space distances.*" (Giddens, 1991 : 242).

undeniably economic and market-defined – *re-embedding* and *de-commodifying* parts of our consumption might be a worthy avenue of thinking.

In other words, parts of the analytical energy to think, conceptualize and enhance pathways of sustainable living should be devoted to improving our understanding of initiatives that grow ‘organically’ into more sustainable livelihoods by questioning the fundamentals of our consumption patterns. While macro-reflections in such directions have existed for some time (e.g. for France: Ayres 1996, Gorz 1975, Illich 1973, Latouche 2006), only recently have efforts (Seyfang & Smith 2007, Shove & Walker 2010, Smith 2006, Spaargaren *et al.* 2011, Tukker & Butter 2007) been devoted to systematizing observations - and thus understanding - micro-initiatives operating (at least partly and mostly in an implicit manner) a *de-commodification* strategy to consumption.

Consequently, parts of the InContext project investigate the **patterns of emergence, solidification and diffusion of existing ‘alternative’ consumption niches**. This sub-objective fundamentally boils down to the posing of two core questions: How to qualify, define and circumscribe *niches* when the focus of analysis is put on alternative consumption/production patterns? What are the dynamics that co-organize the evolution of such consumption *niches*?

Underlying concepts and research questions

The systematization of the observation of **consumption niches** is enabled by the existence of a (relatively) common framework of analysis emerging from research. The building blocks of this framework are anchored in Transition Management/Approaches, Socio-technical Innovation Studies, Practice Approaches/Theory, Reflexive Modernization/Governance and Institutional Economics/Politics. We will briefly elaborate on the main building blocks of these approaches before discussing the case study approach chosen to implement the empirical analysis in InContext.

Epistemologically, and heuristically, *Transition Approaches* - and their interventionist form *Transition Management* (Loorbach 2007) - are the overarching references, themselves grounded in (*Socio-technical*) *Innovation Studies* (Geels 2004; Rip 2006; Kemp *et al.* 1998). Applying a Transition Approach to consumption patterns implies the consideration of ‘alternative’ consumption patterns as societal (or socio-technical) consumption *niches* which emerge in partial contradiction to (or in the context of) the ‘usual’ way of consuming/producing (i.e. the regime). This process is similar to that of technological innovations, which emerge as commercial niches before spreading over their market (i.e. the regime). A fundamental objective of InContext is better understanding the interaction, resistance, and integration of niche-type consumption/production patterns with the regime. How do the ‘alternative’ and the ‘normal’ consumption/production patterns interact and influence each other? Consequently, *InContext* focuses on both the analytical qualification of consumption/production niches (i.e. enhancing our understanding of their very nature), as well as the exploration of their evolution (i.e. exploring the pathways they take).

The observation of interactions between consumption niches and their regime is all the more vital, because niches tend to constantly adapt and redefine themselves as a consequence of such interactions; e.g. some characteristics of the niches are integrated into the regime, or niches evolve to form part of the regime. Such **diffusion processes** of consumption niches have been identified in InContext to take two basic forms: a) consumption (and lifestyle) niches, which increase in size, in participants, in consumers adopting the niche model; e.g. they enlarge. b) Consumption niches, which are “copied”

elsewhere into different contexts, e.g. they are replicated. A specificity of consumption niches with regard to their diffusion is that these dynamics of evolution have been observed⁴⁸ as being potentially lethal to some forms of alternative consumption/production niches in as far as the 'alternative' is necessarily defined by opposition to the 'normal', and consumer/producer motivations to invest into participating in niches also depend on the degree of 'alternativeness' of the consumption/production pattern itself, a characteristic which invariably tends to vanish when niches engage with regimes.

In InContext, we try to identify and account for **contextual factors** which allow to understand the diffusion of such consumption niches by adopting two distinct perspectives: a) depicting the 'external' factors, which influence the niche formation and evolution; e.g. what governance mechanics do public authorities develop with regards to the niche?; b) rendering the 'internal' factors, which define the main, most important, niche characteristics; e.g. what is the role of personal motivation?

Conceptually, the exploration and qualification of the adoption and diffusion of consumption niches builds on two distinct underlying building blocks. On the one hand, we focus on an analysis of contextual and internal factors which form into **'configurations that work'** (Rip & Kemp 1998), i.e. which interlink (and allow to underline) the heterogeneous set of undetermined elements that form an alternative consumption niche in its very specific configuration of enabling (and disabling) factors. On the other hand, a focus is given to the analysis of the **'collectives'** that form the consumption niches.

Methodologically, a bottom-up - almost ethnographical - approach was chosen to perform the analyses. After developing four detailed case study analyses we try to identify some recurrent explicative 'traits' in the emergence and diffusion of consumption niches. The objective is not to adopt a comparative approach, as we do not control for context variations for instance, or to identify the causalities of a 'successful' emergence and diffusion of niches. The particularities, and strong contextualisation, of niches do not allow for such approaches. The objective is rather to concentrate on the investigation of the richness and complexity of such individualized alternative consumption patterns, a perspective which is reinforced by the fact that we adopt **practice theory** (Shove & Walker 2010; Ropke 2009) as an entry point for explaining consumption patterns in their specific societal settings. Practice theory approaches, i.e. a meso-level analysis, allow investigating consumption beyond the influence of a specific (micro-level) 'artefact' (i.e. a technological object). It allows situating the practice of everyday lives in the 'societal' context of large-scale socio-technical innovations (i.e. the macro-level evolutions which define society).

Overview of case studies and emerging questions of governance

The exploration of pathways to alternative consumption patterns and living is operated through a series of 4 in-depth empirical case studies. Case studies have been selected in different socio-political settings, in different countries, on different consumption domains. The intention being not to develop a comparison, we targeted case studies to allow for a maximum of variety in order to catch that necessary richness of insights. Empirical explorations are grounded on extensive document analyses, a series of in-

⁴⁸ For a detailed observation of such a disturbance of a niche in the organic farming/consuming sector, see Smith (2006).

depth interviews with engaging consumers (and where applicable, with producers), a face-to-face Participatory Network Analysis as well as on-site observations.

<i>Niche</i>	<i>Country</i>	<i>Nature of the 'collective'</i>	<i>Consumption domain</i>	<i>Synthesis description</i>
GELA Gemeinsam Landwirtschaften	Austria	Community-supported agriculture project	Vegetable and fruit production, distribution and consumption	Gela is the first Community-Supported Agriculture project in Austria. Consumers sign up in advance for a one-year or a season provision of organic vegetables grown at a local biodynamic farm. The CSA is co-managed by a group of active consumers and the farmers.
Veggie-Thursday	Belgium	Not-for-profit organisation	Promotion of vegetarian/vegan food consumption	In 2009, the "Thursday Veggie Day" (TVD) is launched in Ghent promoting vegetarianism, with the support of the municipality in order to promote the adoption of a veggie/vegan day a week as a commitment towards sustainability, health and animal suffering.
Wolfhagen 100% RES	Germany	Local Authority	Local renewable energy production	The city of Wolfhagen aims to cover, by 2015, its entire communal energy need (households, commercial and industrial business) with locally generated renewable power plants.
Emission-Zero	Belgium	Consumer-producer cooperative	Local renewable energy production and consumption	Promotes socially-aware wind projects and short electricity supply chains. It also actively supports a model based on a locally generated renewable energy owned by the citizens/residents.

Table 2: Case studies of consumption 'niches'

Each of these case studies is extensively analysed by focusing on a set of common research questions: a° what internal and external factors form the 'configuration that works' and that enabled the creation and emergence of this particular niche of alternative (sustainable) consumption and production practice?; b° to what extent these configurations highlight possible pathways of diffusion of these niches?; c° what forms of governance developed in the niches and collectives, how are these niches and collectives governed by public authorities and how both forms of internal and external governances interlink and co-evolve?

With regard to the last set of questions related to the governance mechanics of niches and collectives, case studies show that there is no clear emerging governance pattern of

'one size fits all', which would enable the 'successful' patterns of diffusion of the niches. These niches, being very diversified in nature, clearly develop different patterns of diffusion, ranging from a simple enlargement to 'new' adherents (i.e. as it is observable for the Veggie-Thursday) to a much more complex pathway of allowed - or even supported - replication in to different locations (e.g. as is the case for GELA, itself being a replication of a German CSA). As a consequence of such diversified 'configurations that work', and diffusion patterns of the niches, the forms of governance by public authorities are at least as diversified. In GELA, public authorities, both local and national/European, interact very sparsely with the niche almost to a degree of mutual ignorance and virtual non-interaction. Emission-Zero on the other hand is relatively strongly framed by public regulation (e.g. by the regulatory reference framework for renewable energy, or by the regulatory framework for cooperatives), but is clearly a citizen-initiative with hardly any public support or interest. The Wolfhagen case can in some of its perspectives be understood as a case of public engineering, in as far as it is public authorities and actors who conduct the entire process. Finally, Veggie-Thursday is a civil society initiative with strong backing and empowering by public, local authorities (e.g. the city of Ghent finances much of the initiatives and is the first public actor to integrate the Veggie-Thursday scheme in its internal, administrative functioning).

As a consequence for public authorities, the governance of such niches and collectives, and be it only the passive tolerance of such societal initiatives, is increasingly difficult to conceive and implement. Even a very prudent implementation of a micro-level governance in terms of a loose promotion of civil initiative experimentations might not adequate depending on the niche and collective. In other words, even adaptive governance schemes might not be totally satisfactory, in the sense that some niche and collectives are very sensitive to any type of attempt of governance form the outside. Again, in some instances, it is the degree of alternativeness (also towards public actors) that profoundly defines the very nature and being of the niche and collective.

In a series of future analyses, and notably by crossing our observations from the case studies with those from the transition management experimentations (see below), we expect to be able to refine the level of detail on the needed (or to be avoided) governance mechanics.

Community Arena: changing inner & outer context at local level

Transition Management and Backcasting

Long-term transitions and system innovations to sustainability call for participatory, integral and systemic approaches, such as transition management (Rotmans et al 2001; Loorbach 2007; Loorbach 2010) and participatory backcasting (Robinson 2003; Quist & Vergragt 2006, Vergragt and Quist 2011; Quist 2007; Giddens 2009; Robinson et al 2011). As a form of transition governance transition management (TM) has rapidly emerged over the last decade as a new approach dealing with complex societal problems and the governance of these problems towards sustainability (Loorbach 2007, 2010). Participatory backcasting (BC) builds on a longer tradition of non-participatory, expert-led studies, but since the mid-1990s a strong participatory branch has developed in countries like the Netherlands, Sweden, Canada and the UK.

Both approaches are used to develop desirable future visions, new narratives and agendas as well as to support a process of coalition building and learning among involved stakeholders. Transition management focuses on a group of individuals (called frontrunners) who come together in a series of meetings to agree on a shared problem

description, formulate guiding principles for a sustainable future and determine pathways for how this vision is to be achieved. Participatory backcasting follows similar flow and has been defined as "generating a desirable future, and then looking backwards from that future to the present in order to strategize and to plan how it could be achieved" (Vergragt & Quist 2011: 747). It may but does not always include a focus on implementing and generating follow-up activities contributing to bringing about the desirable sustainable futures.

It has been shown that participation in backcasting processes leads to individual and group learning through interactive vision development and assessment, in particular through meetings, discussions and other ways of (structured and facilitated) interaction (e.g. Van de Kerkhof & Wieczorek 2005; Quist et al 2011). Moreover, impact, in the sense of spin-off, implementation of the agenda, changing discourses and related attitudes of dominant actors, or the decision to pursue other ways can be pointed out in transition management (Loorbach & Rotmans 2010), whereas in participatory backcasting spin-off and follow-up activities could be found after 5-10 years (Quist 2007, Quist et al 2011). Whereas both transition management and backcasting have been applied to address a variety of issues on different scales, the application to consumption and local settings is still limited, though some examples can be found (Quist et al 2001, Green and Vergragt 2002, Carlsson-Kanyama et al 2007, Kok et al 2006, Eames & Egmoose 2011; Spekkink et al. forthcoming).

Both approaches share a strong focus on stakeholder involvement, stakeholder learning and the development and assessment of desirable future visions, including turning the latter into actions and action agendas. First and second order learning can be distinguished. In the group setting, first order learning takes place through the introduction of new knowledge whereas second order learning is conceptualised to take place through consciously confronting and questioning different worldviews and perspectives and their underlying values and beliefs (i.e. interpretive frames). All this happens in a social setting and through interaction, which links to concepts of social learning (see Garmendia & Stagl 2010 for a discussion on social learning). In addition, diffusion of learning is important, which takes place through individuals who are able to disseminate and embed it within their organisation or network. This calls for involving what is in TM being referred to as front runners that have the ability to become change agents.

Table 3 outlines more similarities and differences between transition management and participatory backcasting. For a more elaborate discussion on the differences between TM & BC see Wittmayer et al 2011a; 2011b).

<i>similarities</i>	<i>differences</i>
- Stakeholder participation, focus on actor/stakeholder level	- TM is rooted in transition theory building on the Multi-Level Perspective, BC is agnostic about system innovation theory and niches
- Shared vision development	- TM has a stronger focus on developing a shared problem definition
- Higher order learning by involved stakeholders	- In TM implementation and follow-up is key, whereas in BC it is more an add-on\
- Turning long-term visions into short-term actions & agendas	- BC has larger methodological diversity, TM has a more focussed profile
- Stakeholder commitment to results & agendas	

Table 3: Similarities and differences between transition management and participatory backcasting

Development of the Community Arena methodology

This section presents the methodological framework of the community arena, a co-creation tool for sustainable behaviour by local communities. The developed methodology builds on transition management (especially as applied in the deprived Rotterdam neighbourhood of Charlois, see Spekkink et al, forthcoming) and participatory backcasting for sustainable households which involved both traditional stakeholders in workshops and consumers through focus groups (Quist et al 2001, Quist 2007, Green and Vergragt 2002). The methodology has also been enriched with inner & outer context distinctions based on insights from social & environmental psychology, learning theories on both individual and group level (see Wittmayer et al 2011a) and the discussion in Section 3, in particular the capability approach.

The concept of learning is used to understand how changes in the inner context of the individual can be connected to the collective level of all individuals in the community arena, as well as for diffusion outside the community arena (see for a discussion of this, Brown et al 2003). Learning is essential for dealing with complexity and uncertainty. According to Garmendia & Stagl (2010) individuals are indeed the learners, but the learning process takes place in social settings and is socially conditioned. This social setting can enhance and stimulate second order learning, which is understood as a lasting change in the interpretive frames (belief systems, cognitive frameworks, etc.) of an actor. These frames comprise interlocking empirical and normative values and beliefs, which guide action, including its communicative and expressive dimensions (Grin & Loeber 2007; Grin et al. 2010). This kind of learning is based on the capacity to question the assumptions that underlie one's actions, values, and claims to knowledge, which again relates to changing the inner context. Please note, that raising awareness at the individual level links to extending what is consciously considered and decided upon.

The outer context is targeted through the development of normative future visions for a local community by a small group of frontrunners from this community. After having jointly defined the problem at stake, main principles for guiding the development of the future vision are agreed upon. The future visions and pathways towards future visions are developed based on the ideas, input and creativity of the group. This includes one or several sketches or images of a desirable sustainable future for the community which can be an (urban) neighbourhood or a (rural) municipality. These images describe not only the outer context of a desirable future, but will include also views on the inner context, e.g. changes in beliefs, preferences, values, capabilities, both at the individual level and at the group or collective level.

Though an explicit distinction was made above between the inner and outer context of individual behaviour, it should be noted that they are inter-related, mutually influence each other and co-evolve in a process that not only results in awareness and empowerment for sustainable development, but also in changes for making the local outer context (more) sustainable. Crucial is that the individual inner context does not change isolated from its context, but that the individual process is embedded in the collective group process in which learning and identity at the group level evolves too.

In short, the community arena focuses on articulating, confronting and connecting individual inner contexts in a participatory process so as to collectively reflect on (un-) sustainable perceptions and behaviour. The premise is that by raising awareness and sensitivity amongst engaged citizens about other ways to look at reality, they open up to new opportunities to (i) think about their individual behaviour in the broader societal context, (ii) to consider alternative more sustainable strategies for need fulfilment and

(iii) to enhance possibilities for changing the inner and outer context in pursuit of sustainability.

Based on the discussion above, the community arena methodology has been developed, consisting of phases/steps, preceded by a pre-preparation phase/step. Each of these phases has a different function in the process and generates different outputs. The process consists of at least five participatory meetings (for a more elaborate description see Wittmayer et al. 2011a), in which different methods and instruments are planned. Table 4 shows the phases, as well as their key activities and outputs.

Phases of the Community Arena		
	Key activities	Key output
0. Pre-preparation	A. Case orientation B. Transition team formation	A. Initial case description B. Transition team
1. Preparation & Exploration	A. Process design B. System analysis C. Actor analysis (long-list and short-list of relevant actors) incl. interviews D Set up Monitoring framework	A. Community Arena process plan B. Insightful overview of major issues/tensions to focus on C. Actor identification and categorisation + insight inner context D Monitoring framework
2. Problem structuring & Envisioning	A. Community arena formation B. Participatory problem structuring + *meeting C. Selection of key priorities D. Participatory vision building + *meeting	A. Frontrunner network B. Individual and shared problem perceptions & change topics C. Guiding sustainability principles D. Individual and shared visions
3. Backcasting, Pathways & Agenda Building	A. Participatory backcasting & definition of transition paths (*meeting) B. Formulation agenda and specific activities + meeting C. Monitoring interviews	A. Backcasting analysis & transition paths B. Transition agenda and formation of possible sub-groups C. Learning & process feedback
4. Experimenting & Implementing	A. Dissemination of visions, pathways and agenda B. Coalition forming & broadening the network C. Conducting experiments	A. Broader public awareness & extended involvement B. Change agents network & experiment portfolio C. Learning & implementation
5. Monitoring & Evaluation	A. Participatory evaluation of method, content and process + *meeting B. Monitoring interviews	A. Adapted methodological framework, strategy and lessons learned for local and EU-level governance B. Insight in drivers and barriers for sustainable behaviour

Table 4: Phases of the Community Arena; *meeting

The community arena, as a participatory approach for initiating and supporting reflection and action to sustainable development, bears the promise of being one possible approach addressing the societal challenges we face in terms of e.g. the current economic crises or when aiming for enhancing austerity. The methodology contributes to capability building and empowerment at community level aiming to make local communities and their members more resilient to structural uncertainties and incidental shocks. By combining the individual and bottom-up level on the one hand, with the long-term vision development, governance, agency, broad stakeholder involvement and implementation focus of TM/BC, it may contribute to the next generation of Local Agenda 21 initiatives.

Variety and diversity in three participatory pilots

The community arena methodology is currently being applied through an action research approach in three local communities in Austria, Germany, and the Netherlands. For selecting these pilots, a strategy of diversity and variety has been employed, as can be seen from the characteristics shown in Table x. This exploratory approach allows for learning from the differences in the pilots, thereby increasing the range of learning.

	Finkenstein (A)	Wolfshagen (D)	Carnisse (NL)
Inhabitants	8.509	13.840	10.533
Type of community	Market town consisting of a conglomerate of twenty-eight villages of which six are dominant, situated at the border of Austria with Slovenia	rural town (with a core city and eleven rural districts), situated in the centre of Germany	Urban neighbourhood of Rotterdam, situated in the West of the Netherlands
Characteristics	decentralised structure, conflict of interest between tourism, population and industry, hardly any community meeting facilities, two language groups	high percentage of commuters, population decline, frontrunner in renewable energy, fading city centre	deprived neighbourhood, high turnaround of inhabitants, severe budget cuts threaten the continuation of main community facilities, around 170 nationalities and high migration

Table 5: Some characteristics of the three pilots

Reflections on potential insights

How can we achieve a sustainable lifestyles in the face of the current economic crisis? The EU funded FP7-project InContext attempts to identify innovative responses to these societal challenges. The project objective is to facilitate pathways towards alternative and sustainable behaviours of individuals to foster collective activities towards more sustainable communities. This section summarizes preliminary insights into potential

responses and outlines preliminary conclusions with regard to how new conceptualisations of consumption can be achieved.

The distinction between basic needs, strategies (i.e. any concrete action, which we define as attempts to fulfil a basic need), and capabilities build the core of InContext's theoretical approach. We conceptualise the shift to sustainable lifestyles including changed consumption patterns as a function of actors' awareness of their own and other's needs and the translation of these needs into actors' strategies. The distinction of needs, strategies, and capabilities guides our attention to the fact that humans can apply a variety of strategies to satisfy basic needs. However, in daily life, we are rarely aware of this distinction and actions are regarded as if they are ends in themselves; fundamentally existing choice goes unrecognized and path dependencies seem to profoundly determine individual and collective action. If concrete actions, like consuming a certain good, are perceived as a pathway or means to achieve something else (e.g. the need for freedom) an actor's notion of potential alternative pathways might expand because they can also be achieved alternatively.

At the same time, it is quite obvious that behavioural change will not be induced by the mere awareness of actors that they could engage in alternative practices to meet their needs. Actors are caught up in their habits, norms, peer expectations, structural factors, etc. This is where the concept of capabilities comes into play. Certain circumstances can encourage actors to broaden their view, to perceive alternatives and to actively engage in alternative practices. InContext tries to identify key elements of these circumstances, and to create supportive environments that enable actors to engage into new practices. InContext will translate these findings into policy recommendations at a later stage of the project. InContext looks at and implements micro-level initiatives towards sustainable development by looking at two types of transition examples: niche development (investigated by our case studies) and community arenas (as implemented by our pilot projects).

We assume that the dynamics of the niche development (as described in the case studies) as well as of the community arenas (as facilitated by the pilot projects) have several elements in common. Both approaches, the niche developments as well as the community arenas, share characteristics that might be instructive for understanding their potential to induce innovative change with regard to lifestyles as well as consumption patterns. In the following paragraphs, we give a first glimpse of possible insights into these characteristics, that could also provide cornerstones for the future project's recommendations. The list is neither complete nor final and mainly serves to share and discuss our thoughts within the research community:

Joint processes: Both approaches InContext is studying emphasise the importance of joint processes like emerging processes within social networks (in the case of niche development) respectively or facilitated group processes (in the case of transition management). For the case studies, the driving forces for these processes seem often related to the wish to draw borders to mainstream behaviour while in the transition arena, it is more social learning that inspires/motivates individuals to take action.

Taking into account inner factors: Both approaches decisively depend on inner factors, such as personal motivations or actors' wishes to fulfil their needs in an alternative and more sustainable way.

Investigating and creating supportive environments: The case studies pay attention to the surrounding factors that support the creation of alternative niches. We try to identify key features that allow experimental approaches to be put into practice and to be sustained for a sufficient time period to make the project viable. In the pilot projects,

we actively try to create supportive environments for sustainable living that enable people to identify and implement alternative strategies to fulfil their needs (the terms 'needs' and 'strategies' understood as outlined in chapter 2).

Provide room for experiments: One of the key features for supportive environments to emerge seems to be that there is sufficient room for experiments. This means that actors need to enjoy a certain degree of liberty: be it that existing rules and procedures are applied in a less stringent way or that these actors find ways to financially sustain themselves for a certain period of time irrespective of the economic success of their project. Transition arenas try to create this room for experiments by involving and inspiring relevant actors that are necessary to implement the project in the respective local community. Though room for experimentation is less actively created in the case of niche development as analysed in the case studies, they in fact are the result of experimentation processes. At the same time, case studies show that the governance of such experimental environments is far from easy, and above all far from being generalizable.

The role of frontrunners: Frontrunners seem to be essential for the emergence of alternative practices at the micro-level. In all four case-studies, it was the vision and the driving power of individuals that was essential for making alternative practice a reality. This phenomenon is also reflected in the set-up of the community arenas that are specifically designed to address and favour the emergence of frontrunners in local communities. The question remains open whether the stimulation of frontrunners remains a project-duration limited dynamic, or whether such stimulation can develop into long term self-sustaining dynamics.

Dynamic conceptualisation of drivers and barriers: It seems that the traditional concept of 'drivers' and 'barriers' for transition fails to go into sufficient depth. First, circumstances that could be regarded as drivers towards a certain transition at first can become barriers over the course of time (e.g. when practices that have been developed out of a motivation of being "alternative" or "rebellious" lose their attraction their creators once they become more mainstream). Second, for understanding human behaviour, it might be more useful to regard 'barriers' not as 'barriers to sustainability', but rather as driving forces for the fulfilment of other basic needs of the actors. This shift opens the scope to identify potential alternative practices that serve both the environment and the actors' individual well-being.

This is what so far can be concluded as regards the emergence of innovative practices at micro-level. As regards their broader uptake – precondition for a visible impact of such initiatives – for example through diffusion, upscaling or broadening the scope of such initiatives remains an open question up to now that we aim to tackle during the remainder of the project.

InContext is at the time of writing this paper (April 2012) midway through the project period. This paper introduces key elements of the project. The main purpose is to provoke discussions about our approach at a sufficiently early stage in order to generate input that we can still implement during the second half of the project.

InContext attaches considerable importance to the applicability and distribution of its research results. We will, therefore, continue to discuss preliminary results of our research through the usual academic canals, but even more so in dedicated 'reality check fora', in which we invite representatives of local governments to see how our findings resonate across different geographic and cultural regions of Europe.

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Social and solidarity based economy, what opportunities for sustainable consumption in times of crisis and beyond?

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Introduction

The emergence of local currencies and barter systems in Greece today can be seen as a response to a dire economic situation, but could also be viewed as part of a wider revival of socially-motivated and solidarity-based economic activities in the past two decades, what is known under the acronym ESS (*économie sociale et solidaire*) in French, Spanish and Portuguese-speaking countries. While modern forms of social economies can trace their roots to the early period of Western industrialization, they have been given new impetus in reaction to neo-liberal policies of the 1980s, followed by the effects of globalization, and the recurring regional and global financial crises. In English-speaking countries, these activities are part of what is being called the human or people economy, or new economics. The goal of this paper is not to provide a comprehensive overview of ESS, but rather introduce this growing area of research and practice conceptually and empirically, to then understand how this “social movement” – as it is increasingly being called – can be relevant to those interested in “sustainable consumption” research and policy-making.

Social and solidarity-based economies are defined as an umbrella term for diverse activities that share a common understanding of economic activity as being embedded in social relations. This diverges from the dominant economic growth paradigm that compartmentalizes the spheres of economic development from social and environmental promotion, with a priority given to economic growth at all costs. To date, this form of development has proven to be “un-sustainable” and has led to growing inequalities, financial crises, and negative environmental impacts – all of which are taking place within countries and at the global scale. ESS activities include certain fair trade, micro-credit, or social reinsertion programs, and can be organized in different ways, from non-profits to mutual societies and cooperatives. For this paper, a focus is being placed on what are called complementary currencies or, more specifically, community currencies, as one aspect of ESS and as illustrated through case studies on Argentina, Japan and Switzerland. The main research question is to understand in what way community currencies live up to ESS guiding principles and how this relates to “sustainable consumption”.

The research presented in this paper is based on a literature review and desktop research, in both English and French. First, the theoretical underpinnings of ESS will be briefly

summarized in relation to sustainable consumption concepts. Second, ESS will be considered from a historical perspective in order to understand how such activities emerged as well as the institutional underpinnings that can explain different levels of ESS engagement in various regions of the world. Third, an analysis of existing empirical research in three countries will serve to understand in what way one aspect of ESS – complementary or community currencies (CCs) – adhere to ESS principles and inform sustainable consumption transitions. In the conclusion, I discuss how these historical, empirical and theoretical perspectives can be relevant to sustainable consumption research and debates.

Research results: an overview of the Social and Solidarity-based Economy (ESS)

Theoretical concepts

The social embeddedness of economic activity in ESS research

Often cited as the founding principle of social economics, the vision of economic activity as being ‘embedded’ in the social realm was first put forward by Karl Polanyi in *The Great Transformation* (2001, originally published in 1944⁴⁹). Based on an analysis of the industrial revolution in England, Polanyi argues that the economy has a social purpose, and is subordinate to and inseparable from social relations. His substantivist⁵⁰ position is that “The individualistic savage collecting food and hunting on his own or for his family has never existed,” adding that “the divorce of the economic motive from all concrete social relationships [...] would by their very nature set a limit for that motive” (2001: 57). Polanyi proposes four ideal-type models to describe the economy, including production, financing, distribution and consumption: 1) The market economy; non-market economies including 2) House-holding (relations between family members), 3) Redistribution, and 4) Reciprocity – all present in pre-capitalist and contemporary societies⁵¹. Redistribution is a system whereby the production and distributions of goods and services are centralized, an activity that is typically entrusted to the State and regulated by public authorities.

ESS activities are most often associated with the reciprocity economy, yet how to define this ideal-type based on Polanyi’s work is still a matter of debate. Reciprocity constitutes a form of economic activity based on the transactions of giving, receiving and the obligation to give in return. Drawing from Bronislaw Malinowski’s (1922) research on the *kula* trade, Polanyi notes that organized reciprocity is not limited to a relationship between dual groups but between various subgroups, creating solidarity between people and translating into power relations that can serve to maintain the stability of a society. According to Jean-Michel Servet, reciprocity must be understood beyond this transactional definition and the notion of “the gift”. For Servet and based on an in-depth reading of Polanyi’s body of work, reciprocity should be defined in opposition to the market system, in that those engaged in

⁴⁹ A less common reading of this important work reveals Polanyi’s concern for inequalities: “Where do the poor come from?” he asks, quoting the rising number of pamphlets concerned about the issue at the turn of the eighteenth century, at a time of economic growth. “To the bewilderment of thinking minds, unheard-of-wealth turned out to be inseparable from unheard-of-poverty” (Polanyi 2001: 106).

⁵⁰ See “The Formalist-Substantivist Debate” in Wilk and Cliggett 2007 for a historical introduction to this academic quarrel, which became for “an obstacle instead of an inspiration” (2007: 4).

⁵¹ A chapter entitled “The Economy as Instituted Process” in *Trade and Market in the Early Empires* expands on the notions of reciprocity and redistribution (Polanyi 1957: 250), although there is still much debate on how Polanyi defined reciprocity in his work (see Servet 2007).

this type of activity are in complementary relations based on voluntary interdependence (Servet 2007: 264). For Servet, Polanyi above all subscribes to the idea that people are “invested with the potential of solidarity, consciously interdependent on others, in that they are members of society with commitments” (2006: 18), or engaged in a form of altruism.

The “democratization” of the economy has become another a defining aspect of the solidarity-based economy, based on the participatory engagement of citizens (Defourny and Develtere 1999; Fraisse, Guérin et al. 2007), or “the desire to promote democracy on the local level through economic activity” (Laville 2003: 396). Democratic decision-making processes are at the heart of ESS organisational structures, as described in a historical reading of ESS below. “How to reconcile equality and freedom are still the principal issues of democracy in a complex society” (Laville in Hart, Laville et al. 2010: 82), which the market economy has failed to address. For Laville, one solution is in recognizing and building upon the existence of a “plural economy”, one where the market is not solely responsible for wealth creation and prosperity. Laville argues that Polanyi’s four ideal-types do not function as isolated compartments, but rather intersect and inter-depend in different ways and in various contexts. The existence of social services creates the favourable conditions for companies to operate, for example, or public procurement policies, trade regulations and other forms of state power are also intrinsically linked to alleged “free market” systems (Laville 2003). One way of democratizing the economy is by diversifying currencies, in a move away from monolithic economic systems towards system diversity (Belgin and Lietaer 2012). Community currencies are “designed and implemented mostly by civil society, mostly locally and grassroots, and mostly in a democratic way, emphasizing the citizen’s appropriation and redefinition of money in a participative process” (Blanc 2011: 6). These currencies can therefore be seen as a tool for ESS activities, as further explored in the empirical research presented below.

What we can conclude from this brief analysis is that ESS is tied up conceptually with notions of *diversity* (the “plural economy”, including the market economy but also house-holding, redistribution and reciprocity); drawing from a broad reading of the reciprocity economy, the motive and goal of ESS is *solidarity*, or complementary relations based on voluntary interdependence. We can also add to this the concept of *democracy*, or that ESS activities are governed towards the goal of egalitarian participation and rendering the economy more democratic.

The biophysical limits of economic activity and social practices in sustainable consumption research

The biophysical dimension of consumption is well documented in “sustainable consumption” studies, or the recognition that patterns of resource consumption can lead to negative environmental impacts, such as local/global pollution and loss of biodiversity. While Polanyi wrote about limits in nature, and mentions waste and pollution, the notion of economic activity as being subordinate to environmental limits can be credit to Nicholas Georgescu-Roegen, the father of bio-economics. Understanding consumption patterns and trends from a biophysical perspective means taking a systemic approach to consumption and assessing values based on environmental resources (material and energy), rather than solely price valuation. However, most definitions of “sustainability” do not adhere to this conceptual framework: “Sustainability” has traditionally been defined as the intersection of three spheres, where economic growth meets environmental and social considerations, but with a strong emphasis on economic growth as being compatible with environmental

promotion (WCED 1987). In bio-economics and its offspring ecological economics, the very notion of economic growth is incompatible with that of system limits.

“How much” materials and energy a household consumes tells us close to nothing about “why” and “in what way” those consumption patterns persist or change. For this, different conceptual frameworks are needed, that combine a biophysical understanding of consumption, with the view of consumption as tied up with social life. This is where the literature is not consistent. One of the main questions that has occupied social and environmental scientists as well as policy-makers concerned with “sustainable consumption” for some decades is how to conceptualize “environmental behavior”, or rather how ordinary people perceive, evaluate and manage their daily lives in relation to environmental considerations. This raises the issue of where to ‘locate’ the social: is it at the level of human cognitive processes, in interactions between human agents and built systems, or in the cultural context? The understanding of social life in “sustainable consumption” research and policies continues to be dominated by the view of human nature as being driven by individual need or greed – linking consumption as an economic activity⁵² to behavioural psychology approaches to understanding human nature (Stern 1992; Stern, Dietz et al. 1997).

In the past ten years, the focus has shifted to understanding “sustainable consumption” as embedded in the social realm, including social practices and involving the perspectives of sociologists and anthropologists that have long studied consumption and consumer societies. The contours of this theoretical framework are varied, with researchers proposing differing perspectives on what constitutes a practice (Reckwitz 2002; Shove 2003; Warde 2005; Røpke 2009; Spaargaren 2011), building on earlier work by Bourdieu (1979), Giddens (1984), Schatzki (1996) and Reckwitz (2002). In parallel, researchers who have highlighted the strong neo-liberal tendency to over-individualize environmental responsibility have shifted the discussion away from the “consumer” to that of the “citizen”, seeing consumption not solely in relation to the market economy but linked to the conceptual area of democracy (Maniates 2001; Trentmann 2007; Zacaï and Haynes 2008; Ekström and Glans 2011). The result has been increasing discussions on the role of community-driven sustainable consumption, the influence of peer groups on pro-environmental trends, to name but a few.

From this brief overview of “sustainable consumption”, we can conclude that research in this area attempts to bridge concepts from the environmental and social sciences. *Systemic approaches* are applauded, yet there is no consensus on whether economic activity should be subordinate or not to the earth system, and whether economic activity is embedded in social life or driven by individual need and greed. More recently, sustainable consumption has included views of the consumer as “citizen” tied up with principles of *democracy*, moving away from the market economy as the sole mode of operation for “sustainable consumption” practices.

Historical perspectives: evolution and definitions

The evolution of ESS: from the Middle Ages to today

The Middle Ages is often cited as a period of great diversity in terms of the community-driven nature of its economic activities, in the creation of the first guilds, fraternities and other secular groups, which remained nonetheless very much under the tutelage of

⁵² Consumption also involves non-economic activities, such as gathering and eating mushrooms from a forest, for example, or the deliberate non-usage of products and services.

powerful state and religious interests (Defourny and Develtere 1999). Regional monetary systems were also highly diverse starting in this period: the Republic of Venice from the thirteenth century onwards, for example, had two types of currencies for external commerce, the *ducat* (silver) and *zecchino* (gold), and two other currencies in less precious metals for local exchanges, the *nasoni* and *cavalotti* (Lietaer and Kennedy 2008). Centralizing money was conceived first by European kings who were attempting to limit feudal power, then by the Empires who sought tighter control of the colonies⁵³, and finally by nation-states. Beyond Europe, historic complementary monetary systems continue to exist and function in parallel to national currencies, including the *banjar* in Bali, used towards various community projects.

The social economy⁵⁴ emerged in modern form at the start of the period of industrialization. The Welsh social reformer Robert Owen is credited with founding the cooperative movement and initiating new forms of barter among factory workers. In 1832, Owen created a *Labour Exchange* where products made by cooperatives were traded based on the number of labour hours that went into each product. Starting in the eighteenth century and in Anglo-Saxon countries, “friendly societies” emerged as an early form of insurance whereby members would make regular contributions towards social services, such as health care or funeral rites. A long tradition of “reform economics” in France started in the first half of the nineteenth century, including the creation of new organizational structures such as cooperatives and mutual societies. At the end of the nineteenth century, laws were created in Europe to formalize such social organization types. Different religious efforts also contributed to the creation of social-based economies, such as social Christianity efforts that spread across the world in the colonial era (Defourny and Develtere 1999).

Interest in the social economy waned during the two World Wars, to be replaced by the growing role of the welfare state (Flahault, Noguès et al. 2011) and increased benefits for labour and women’s rights in the West. Two main tendencies evolved in parallel in the post-War period: market economies were seen as the primary vector for regulating labour, property and currencies, while at the same time non-market economies were dominated by the notion of State responsibility for social action through the redistribution of wealth (Laville 1994). Researchers note that it was the Reagan Thatcher era, its neo-liberal policies, and more generally a “crisis of values” prompted a return to the social economy in the 1980s and 1990s, but in new forms (Laville and Cattani 2006). An exchange system similar to that conceived by Owen emerged in British Columbia in the 1980s, under the label Local Exchange Trading Systems or LETS⁵⁵. In the same period and despite strong neo-liberal national policies, thousands of community-driven movements were taking root across the United States, in what was termed a “backyard revolution” (Boyte 1981)⁵⁶. For Laville and writing in the French context, this was also an era when “people had begun to

⁵³ In nineteenth century Ghana, British colonisers replaced more than fifty regional economic systems in the country with the first national currency, in an effort to centralize and control state revenues (Lietaer and Kennedy 2008).

⁵⁴ The solidarity-based economy is a more recent term, introduced in the latter part of the twentieth century.

⁵⁵ The first LETS was established in Comox Valley, Vancouver (Canada) in 1983 and has spread ever since to countries around the world. See Seyfang 1997 for a “social audit” of LETS in Diss, Norfolk, UK, which examines LETS not solely in terms of economic values, but also social values – to determine whether LETS achieves the objectives it sets out. Seyfang tempers enthusiasm at linking LETS directly to sustainable development objectives in her conclusion, as each system would need to be evaluated in practice, and not only in theory.

⁵⁶ Twenty years later, Robert Putnam will deplore the erosion of civil engagement in his book, *Bowling Alone* (Putnam 2000).

question the prominent and growing perspective that suggested that citizens could be equated with consumers, patients or taxpayers” (Laville 2003: 392). Hand in hand with neo-liberal policies was an acceleration of the global flow of ideas, people and money: “globalization” is seen as creating an additional impetus for alternative expressions and civil society networks, as exemplified by the growing popularity of the *World Social Forum* in Porto Alegre and its regional counterparts. What were primarily local ESS initiatives have begun to federate into regional and international networks of members. The *Réseau Intercontinental de Promotion de L'Économie Sociale Solidaire* (RIPESS) is currently mapping⁵⁷ ESS efforts around the world and connecting different groups together through their platform, in what is increasingly being seen as a social movement (Draperi 2011). In recent years, organizations involved in ESS have also moved towards including environmental principles in their founding statutes.

As various locally or regionally-driven solutions began to bear fruit, certain governments started to recognize – and perhaps in some cases instrumentalize – social and solidarity-based approaches. The French government initiated a State Secretariat of Civil and Solidarity-Based Economy in 2000, which in turn led to the creation of a similar Secretariat by the Brazilian government in 2003 (Laville 2003). At the same time, several European countries introduced new laws for social enterprises that include a hybrid mix of actors (e.g., employees, volunteers, local authorities and service users) to recognize the work of socially oriented cooperatives emerging in Southern Europe. In 2007, the first Asian Solidarity Economy Forum (ASEF) took place in Manila, the Philippines, with the active participation of delegates from the region, notably Japan. In the 2011 ASEF in Kuala Lumpur, several Malaysian Ministers were involved in the event. In 2009, the government of Luxemburg appointed a delegate Minister in charge of Solidarity-based Economy, under the jurisdiction of the Ministry of Economy. One reason for this political interest in ESS may be the realization that these forms of economic activities are leading to local development and job creation. According to Laville, community, personal and social services represented 30 percent of employment in France in 1990, 38 percent in Sweden and 32 percent in the United Kingdom (2003: 394), and are expected to grow in order to meet the needs of an aging population, an increasingly female workforce and changing lifestyles. Rather than rely on state redistribution, these social services are increasingly being provided by ESS activities.

Defining ESS: institutional, ideological and language issues

Activities that fall under the ESS umbrella can be defined by their organisational structures, within the context of different institutional and legal frameworks. Three main types of organisational structures⁵⁸ are generally included in the ESS definition: cooperatives, mutual enterprises, and organisations or associations that vary depending on their legal status in different countries (for example, the historic focus on charities in the UK, and non-for-profit organizations in the USA). What these entities have in common are their guiding principles, building on the theoretical concepts introduced earlier in this paper and rendered operational as follows (Defourny and Develtere 1999):

1. To work towards member, community or regional social benefits;

⁵⁷ On the RIPESS website, international ESS activities are presented on a map of the world that represents North America and Europe at the bottom of the chart, see the RIPESS SITE and the map: www.ripest.org and www.essglobal.info/fr/accueil.html.

⁵⁸ It is important to note that adopting these organizational statutes does not necessarily mean that an entity actually functions towards social aims. Beyond the label, a reading of empirical evidence would be necessary.

2. To be self-managed and self organized;
3. To involve democratic decision-making processes; and
4. To place people and labour above capital and revenue generation.

The first point differentiates this type of activity from activities that have the sole purpose of maximizing profits. The focus is rather on people, in providing some type of benefits to members, workers or society at large. This can lead to various other related principles, such as the redistribution of profits equally among members, the minimization of wage differences across employment categories, or the donation of profits to social causes. Self-management is also emphasized in ESS activities involving the engagement of citizens and community-members, and as opposed to governmental services offered by civil servants. Each member plays a participatory role in the democratic management of the program (the principle of “one person, one vote”).

The term “social and solidarity-based economy” has not gained as much traction in Anglo-Saxon countries as it has in French, Spanish and Portuguese-speaking countries. Some of this may have to do with language barriers, but historical differences on both sides of the Atlantic⁵⁹ have also contributed to a divergence in how this aspect of the “third sector” is defined and organized. There are ideological differences between how the two Continents have historically evolved, with more of a focus on individual freedom in the North American context, juxtaposed to the notion of fraternity in the French tradition. Neo-liberal policies can also said to have emanated from Anglo-Saxon countries, with the role of the welfare state considerably stronger in France today than in the United States. This may be one reason why the Johns Hopkins report *Defining the Nonprofit Sector* (Salamon and Anheier 1997) focused on providing a universal definition of the “third sector” as being composed exclusively of “non-profit” entities, thus excluding cooperatives and mutual groups that have been historically popular in Europe. European scholars have disputed this definition, arguing that the distinction between for-profit and non-for-profit is less relevant than the line between “capitalist organizations and social economic organizations, the latter focusing on generating collective wealth rather than a return on individual investment” (Evers and Laville 2004: 13), or a distinction between collective and individual benefits. The definition of a social economy and “third sector” is thus broader in Europe than what was included in this North-American approach (Laville 2011). Non-profits are not always governed with participative decision-making systems and do not redistribute profits to their members, which is one of the core activities of certain cooperatives and mutual societies in Europe⁶⁰ (Laville 2011).

If one of the main ambitions of ESS is to lead to a democratization of the economy, it then follows that the solutions proposed by such initiatives would be self-managed and organized, and relatively free from market or public sector control. One of the primary tools used for engaging in exchanges are national currencies, resulting in a global financial system where the value of money in an individual’s bank account is at the mercy of the global political and financial climate. What’s more, there is no way of harnessing the potential of accumulated wealth in one region to its expenditure in that same region. This is where complementary currencies are of interest, as they function not as a replacement or alternative to dominant national and capitalistic market systems, but rather as an

⁵⁹ The distinction, to be more precise, is between Great Britain and English-speaking North America on one hand, and French-Speaking Europe and Quebec on the other, with another variation in Spanish-speaking Europe and South America.

⁶⁰ There are also similarities between the non-profit sector in the United States and ESS activity elsewhere in that their management systems work independently from private and public-sector interests with their autonomous decision-making processes.

additional level of diversity in how people engage directly and in a participatory manner with production, distribution and consumption. While somewhat difficult to apprehend conceptually, one simple definition of complementary currencies is that they exist at the nexus of unsatisfied needs and under-utilised resources (Lietaer and Kennedy 2008). Concretely, these currencies function towards specific needs, such as brand loyalty in the case of airline mileage, or caring for the elderly in the Japanese case of *Fureai-Kippu* or Caring Relationship Tickets for helping seniors in the community. Building on the same two examples, the currencies also harness the potential of what can be considered an under-utilised product or service, the empty airplane seat or people's free time, respectively.

There is currently a great diversity of types of currencies around the world and in different languages⁶¹ – what some researchers have referred to as a Babylonian Tower of currencies (Rolf F.H. Schroeder 2011). By some estimates, one million people worldwide are engaged in complementary currency systems in over 4,000 associations in over forty countries (Blanc 2010). One hundred years after Owen's first experiments with local currencies, the Austrian village of Wörgl introduced notes designed to stimulate the economy by creating a negative incentive against the accumulation of the notes (what is known as 'demurrage'). The highly successful experiment lasted only a few months and was halted by the National Bank of Austria, which feared it would be replicated across the country to then challenge the national currency. In the last two decades, community and complementary currencies have flourished around the world, including in Austria, in what are known as *Systèmes d'échanges locaux* (SEL) or Local Exchange Trading Systems (LETS). In Asia, early experiments in complementary currencies saw the light in Japan in the 1970s: a volunteer labour bank allowed for inter-generational care, but began to decline in 2000 when a public insurance system was introduced for the elderly (Hirota 2011). Complementary currencies became quite popular again in Japan in 1999, following a television documentary that sharing the success of such initiatives around the world, from the Ithaca hours⁶² to the Austrian Wörgl.

Although there is no consensus on what defines a complementary or community currency, Blanc (2011) suggests that the broad label of "CCs" could be useful so long as it excludes all forms currencies that seek to capture the purchasing power of customers, such as airline mileage. For Blanc, one of the main objectives of these currencies is to resist globalization and to encourage the use of local income for local production and consumption; a second objective is to benefit local populations through a fairer distribution of wealth (as opposed to wealth accumulation); third, these currencies aim at transforming the nature of trade and solidifying social relations based on trust, proximity between producer and consumer, and the notion of producer as consumer (or 'prosumer') (Blanc 2010). Increasingly, the perspective being taken is not local but regional, with a handbook designed to guide those interested in stimulating regional economies in Europe, as a complement to the Euro (Lietaer and Kennedy 2008). CCs are therefore aligned with the four guiding principles for ESS activities outlined above, including commitments to members and a community, self-managed and democratic decision-making, as well as the primacy of people over capital.

Below, three examples of complementary currencies in Switzerland, Argentina and Japan will serve to illustrate whether such efforts can lead to more resilient local economies, in the long-term and at both local and regional scales, and in what way live up to the guiding principles of ESS in practice.

⁶¹ Researchers have established a bibliography and databank to centralize the growing literature on complementary currencies; see: <http://www.cc-literature.org>.

⁶² Founded in Ithaca, NY in 1991 and based on the creation of a local paper money, where an Ithaca hour equals 10 dollars or one hour of labour. For more information: Paul Glover website

Empirical studies

Complementary currencies: the Swiss WIR

The Swiss example of the WIR demonstrates the longevity of a credit system that was created close to eighty years ago, with existing empirical research on how this complementary currency relates to economic cycles in the country. The WIR business group cooperative was founded in 1934 in Zurich, motivated mainly by the economic recession and inspired by the doctrine of “free money” or *Freigeld* of the German-Argentine entrepreneur, Silvio Gesell⁶³. According to Studer (2006), Gesell’s theories were designed in reaction to the Argentine economic crises of the 1880s and became popular during the Great Depression era in German-speaking and Scandinavian countries – the idea being to create a local currency and actively encourage its circulation. Building on this popularity and inspired by the “free money” concept, several Swiss entrepreneurs came together to provide each other with credit, which was increasingly difficult to secure through the traditional banking system, and thus created the WIR system. Initially backed by collateral such as building deeds and later by member cash deposits, all of which were interest free, the WIR loans supplied a line of credit at very low interest rates. In 1954, Werner Zimmermann, one of the founders described the name of this effort in the following terms: “WIR is the first syllable of the word ‘Wirtschaftsring’ (business circle). WIR (German for ‘we’), unlike ‘Ich’ (German for ‘I’), means community. This contains the Swiss ideal: to hold together and, together as a community, protect the interests of the individual” (cited in WIR Magazin 1994).

What started out with ten participants grew to 1,000 account holders in 1935. In 1997, the number of participants had grown to 20,402 with a Swiss franc turnover of 196 million and a balance of 83 million; in 1993, the number of participants had grown to 76,618, with a turnover of 2.521 billion and balance of 1.028 billion (WIR Magazin 1994). Studer (2006) outlines three phases in the evolution of the WIR. In what he calls the pioneer phase, different experiments with the WIR ran their course between 1934 and 1952. It was during this phase that the members reaffirmed their commitment to supporting long-term entrepreneurial development in Switzerland. In the second phase and from 1952 to 1988, the WIR experienced near-constant growth, building on the first phase of experimentation. In the final phase outlined in Studer’s study and up to 1998 (the original date of publication of his work in German), there were several conceptual and structural modifications to the model, which lead to the creation of more diversified services. Today, the small-to-medium enterprises that participate in the WIR advertise their acceptance of this currency as a payment for goods and services, which gives them a competitive edge compared to larger businesses that require solely cash payment. Different types of products and services are exchanged through this system, with prices quoted in WIR units as in Swiss francs (though not redeemable). Today, the WIR bank provides accounting for WIR exchanges as well as ordinary banking services, such as mortgage loans and savings accounts, to complement its WIR transactions.

In a recent article quoting the bank’s spokesperson, “WIR has a stabilising effect on the normal monetary system by providing a complementary source of funding when liquidity dries up” (Allen 2012). In his detailed study of WIR activity in relation to economic cycles from 1948 to 2004, James Stodder (2009) concludes that WIR exchange has been strongly counter-cyclical within the Swiss economy. In his calculations, the WIR seemed more likely to be accepted when Swiss francs were in short supply; it therefore substitutes for Swiss francs when they are otherwise unavailable, and has an anti-deflationary effect on prices.

⁶³ According to Stodder (2009), John Maynard Keynes saw Gesell as an “unduly neglected prophet” and devoted a section of his General Theory to his monetary ideas.

Stodder concludes that such credit networks can play a stabilizing role in national monetary policy: “Our estimates suggest that WIR-Bank’s creation of purchasing power could become an instrument of more effective macroeconomic stabilization” (p. 93). Today, the WIR bank has entered the landscape of the overall Swiss banking system, yet it remains focused on small-to-medium enterprises and the development of a proximity-based economy. In this respect, it lives up to the first principle of ESS, to work towards member, community and regional social benefits, if social benefits can be understood as strengthening social relations between small-to-medium enterprises. In its current form, the WIR bank has merged with the market economy and can not be said to involve democratic decision-making processes, or to place people and labour above capital and revenue generation.

Complementary currencies: Trueque in Argentina

In Argentina and following the collapse of the country’s economy in the late 1990s, complementary currencies – such as the Argentino, the Patacon and the LECOP – were created to stimulate local economic activity and involved in 2002 ten percent of the country’s population (Blanc 2010). The case of Argentina is therefore of interest in studying how complementary currencies evolve in the aftermath of a national economic crisis, and how such systems were sustained for over a decade. According to Pearson, community currencies in Argentina can be traced back to 1985, when the province of Salta began to issue bonds for local circulation. By the end of 1991, 60 percent of circulation in Salta was based on this regional currency (Pearson 2003). Another local currency, the *Club de Trueque*⁶⁴ (CT), was created in 1995 in the Buenos Aires area, with a handful of participants that would meet regularly to trade goods they made themselves. In the national financial crises that began in the late 1990s and intensified in the early 2000s, such barter systems were replicated across the country.

According to Pearson (2003), the economic crisis touched the middle class as well as the least affluent populations, as personal bank deposits were frozen; barter systems became a way to exchange goods and services without cash transactions, offering an opportunity to supplement purchasing power. By 1996, there were some twenty CTs operating in the Buenos Aires area; in 1998, that number increased to 150 throughout the country, involving approximately 80-100,000 people in trading food, clothes, crafts, health care, education, among other products and services (ibid). The Crédito is one example of the many such currencies based on a barter system that emerged during that period. According to Blanc (2010), an estimated 2.5 million people used the Crédito between 2001 and 2003. Most groups began to accept each other’s local currencies and function in a national system called the *Red de Trueque*, or barter network.

Gomez and Helmsing have researched the link between local currency systems in the *Red de Trueque* and local economic development in Argentina based on extensive empirical research. Based on their analysis, the *Trueque* system in Argentina was welcoming 5,000 new participants per day at its peak and became victim to its own popularity. The distribution and forgery of credit vouchers was difficult to control. In addition, “there were too many second-hand articles on sale and too little food; too little production and too much speculation” (Gomez and Helmsing 2008: 2496), which eventually lead to a loss of appeal and collapse of the system. The local currency systems “closed by the hundreds after June 2002, so one year later the RT was reduced to 10% of what it once was” (ibid). According to Blanc (2010), one of the main reasons for the collapse was the growing

⁶⁴ The Spanish *trueque* translates to barter or trade.

distrust of the *trueque* system, but also the recovery of the national economy. The *trueque* has not disappeared, however; such systems existed before the financial crisis and continue to exist, showing that they are not merely a result of a crises but rather a complementary economy – based on solidarity and reciprocity – that functions as an alternative that is all the more valuable when a national economy collapses. According to Gomez and Helmsing, such a system “reduced the negative impact of economic restructuring. It did not help the poor and unemployed to de-link from the regular economy but to improve their employability and the skills of the local actors” (2008: 2507). For Powell (2002), as systems such as the *trueque* grow and evolve, their relation to the overall market is continuously brought into question. As with the example of the Swiss WIR, the *trueques* may have lost their focus on solidarity and democracy when the scale of activities became difficult to organize in a self-managed and democratic manner.

Complementary currencies in Japan: the example of the Eco Money network

Japan provides an interesting case study for social and solidarity-based economy, particularly in a period of economic no-growth – what western press outlets such as *The Economist* have referred to with the negative connotation of a “stagnation” or “lost decade”. Rather than maintain the idea that “Japanization is now everyone’s worst nightmare,” economics Norika Hama (2011) maintains that the country is on a path of mature economic development. In Japan today, there is considerable research and attention being placed on the development of “third sector”, which has grown as part of an overall move towards decentralisation: a shift from public to private (*kan-kara-min-e*) and from national to local (*kuni-kara-chihou-e*) is seen as the ‘two wheels of one vehicle’ in reforming the administrative system (the Committee for the Promotion of Decentralization 1996, cited in Maeda 2012: 344). As decentralization was carried out alongside privatisation, both the private sector and the third sector became involved in public services. With its ageing society and the evolution away from a welfare state, certain people may be relying on the third sector to address a range of social issues such as the need for care, education and employment.

At a regional and local level in Japan today, complementary monetary systems seem to be creating an impetus for new forms of production, distribution and consumption, some of which are based on social and environmental values. Japan has become an immense laboratory for different models of regional and complementary currencies. For Bernard Lietaer (2004) and based on interviews and research in Japan, the number of experiments with complementary currencies has exploded since 1995, in a country that boasts not only the most such activities, but also a high diversity in types of activities. While certain pioneering activities had already been in existence in the 1970s, the founding of Eco-Monies by Toshiharu Kato in the late 1990s marked the start of a profusion of complementary systems towards regional goals. As Director of Service Industries Division of the Ministry of Economics, Trade and Industry (METI) and in the 1990s, Kato spent three years studying two forms of high-tech development models in the United States: Route 128 (Boston area) and Silicon Valley (San Francisco area). He concluded that “regional learning clusters” could be created throughout Asia-Pacific based on the combination of high-density contacts among entrepreneurs and small corporations, alongside ecological, economic and community-driven initiatives (Okuno 2004: 106). Upon his return to Japan and according to Lietaer, “he pushed this regional development strategy to its logical end by introducing a new concept of regional currencies, which he called ‘eco-money’.” (2004: 10).

The Eco Money Network was founded in 1998 to support regions with the introduction of new currencies, all of which were experimental: from four initial projects, the experiment included ten projects in 1999; 25 models in 2003 were used by 55 different organizations across the country. The main roles of Eco Money projects are to enhance community integrity, foster public participation, create a sustainable economic environment, and maintain a viable natural environment (Okuno 2004). Practices from abroad, such as the Ithaca hours or LETS schemes were replicated across the country. In the Chiba prefecture, the “peanut” was introduced as a regional currency, managed by a non-profit organization called the Chiba Community Support Centre. One “peanut” is equal in value to one yen; one hour of work is equal in value to 1,000 peanuts, with all transactions recorded as “plus and minuses” on individual record sheets. In the example of how one citizen used this system, Okuno (2004) notes that he gained peanuts by helping someone build a web site and driving a neighbour to the hospital, and used his peanuts to buy English classes. In an example of how Eco-Money can work toward environmental aims, the web site dedicated to the 2005 World Exposition in Aichi, Japan, announced the launch of an “Expo Eco-Money Project” to promote “environmentally responsible behaviour, such as the reduction of shopping bag use or the use of public transport” (Japan Association 2012). Through an electronic device, Expo Eco-Money points could be earned for pro-environmental actions (bringing your own bag to the store, for example) that were then exchanged for services or products, or used to make donations to environmental projects. In another example and in the Yasu-Cho community in Shiga prefecture, community members came together to help protect local forests and raise environmental awareness. An *eco-yama* (eco-mountain) card was issued to encourage people to earn points by helping to maintain the forest, or to help develop local renewable energies (solar and biomass), with credits then useable in local stores and businesses.

Not all the complementary currencies being experimented in Japan can be considered community currencies with social and environmental aims, however. The city of Kan'onji, Kagawa, for example, began to advertise that it would accept the Kan'ei Tsuho, a coin that was once a legal currency in Japan (from 1636 to 1953). The assumption was that millions of these coins still exist throughout the country, and that this move would attract tourists to the city who would also spend Yen (Hirota 2011). According to Hirota, the challenge facing such experiments in Japan is the lack of communication between different groups organizing community currencies locally and regionally, as well as communication and sharing of best practices beyond Japan. Each activity would need to be analyzed on a case-by-case basis to determine if it lives up to the ESS principles of self-management and democratic decision-making processes. Several examples from Japan do seem to be promoting regional social benefits as well as a focus on strengthening social ties.

Discussion and conclusion: ESS and sustainable consumption: divergences and convergences

The social and solidarity-based economy (*économie sociale et solidaire*, ESS) finds its roots in the early period of Western industrialization and therefore precedes environmental awareness, as we know it today. In reaction to the dual trends of neo-liberalization and globalization, ESS has become a growing area of activity in the past two decades, what some researchers are calling a social movement. In a historical overview of this evolution, we note that institutional and ideological differences have led to different levels of acceptance of ESS on both sides of the Atlantic, and particularly between English speaking countries on one hand, and French, Spanish and Portuguese-speaking countries on the other. This paper does not attempt to provide a comprehensive overview of all ESS

activities in the world and while the “social and solidarity” label is more prominent in Latin countries, examples of such activities are just as prolific in North America, if under different names, and are increasing in Asia. One main distinction between Europe and Anglo-Saxon countries is the institutional frameworks under which such activities can operate.

Conceptually, ESS and sustainable consumption research share much in common. Both are based on a systemic understanding of human life. ESS often draws inspiration from environmental terminology: complementary currencies, for example, are seen as a move away from monolithic systems to system diversity – seen as being the foundation for a more resilient system. The link between economy, solidarity and democracy – or how people engage in economic activities, including consumption, in a more democratic manner and towards a shared prosperity – is a growing area of discussion in both ESS and sustainable consumption research circles. ESS has gone a step further, however, in distinguishing itself conceptually from the dominant and un-sustainable economic growth paradigm, particularly by making its social value systems explicit. As David Graeber points out in his study of an anthropological theory of value, “one can no longer even imagine that there could be a single standard of value by which to measure things” (Graeber 2001: xi), and yet neoliberals attempt to praise a global market which is in fact “the single greatest and most monolithic system of measurement event created, a totalizing system that would subordinate everything – every object, every piece of land, every human capacity or relationship – on the planet to a single standard of value” (ibid). The irony, as monetary expert Bernard Lietaer points out, is that the market economy functions as though it were value-neutral, yet money is far from neutral. Sustainable consumption policy-making continues to uphold the alleged neutrality of the monolithic market economy: the trend towards “green economies” is one example of how the current political discourse around “sustainability” is being framed as compatible with environmental aims, based on technological efficiency, with a focus on production systems, yet fully inscribed within the market economy, excluding solidarity between people and generations and the democratic participation of people above profit.

What we can learn from this brief overview for those interested in sustainable consumption transitions is that the solutions to joint financial, social and economic crises may be less about environmental management, and more about changing the societal norms and values on which our current economic systems are based. The question remains as to whether community-driven economic activities, based on both social and environmental values, can be scaled up to challenge the dominant un-sustainable macro-economic market economy. In the example of community or complementary currencies (CCs), we have seen how, when such efforts reach a critical scale, they either transform into hybrid activities that include the market economy (e.g., WIR banking), or lose their credibility and their democratic processes by becoming another means for financial speculation (e.g., Argentine *trueques*). Many of the small seeds of change may already be taking root (e.g., the diversity of CCs in Japan), yet how such effort might actually achieve environmental and social goals remains to be evaluated. In the 20th century, nation states and multi-national enterprises became the dominant actors; today, half the world’s population lives in cities and city-regions. Initiatives at the local level are therefore not only beautiful, they have the potential for being powerful as local activities will reach a significant percentage of tomorrow’s global population. To conclude with a statement on sustainable consumption by Richard Wilk, “What we need is a secular change in direction, the economic equivalent of climate change” (in Ekström and Glans 2011: 38). Local and regional social and solidarity-based economies certainly seem to be a step in the right direction towards more sustainable forms of consumption, and certain community currencies may be a most useful walking stick.

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Discussant contribution: Pathways for Change

Ruth Kaufmann-Hayoz

We have heard three quite different papers, all describing certain phenomena which could eventually contribute or pave part of the way to more sustainable consumption and production. I will go through the papers one by one and suggest questions to discuss.

The paper by Maria Csutora has highlighted some interesting aspects of the interrelations between income, ecological footprint and subjective well-being. Unlike many reports on this subject she did not relate wellbeing (in terms of happiness or life-satisfaction) to a nation's GDP but to the net household income or income per capita (in Hungary). She found that at low income levels there is a straightforward positive correlation between income and happiness. Beyond a certain income level, however, things get blurred and the correlation becomes insignificant. The same is true for the correlation between ecological footprint and life satisfaction. This indicates that beyond a certain income or footprint level subjective well-being is influenced by many other factors than the amount of money. Maria called this level "inflection point".

Discussion questions:

Would it make sense to set the "floor" of the environmental space as proposed by Joachim Spangenberg at the inflection point identified in Maria's study (either in terms of income or in terms of ecological footprint)?

Likewise, if an unconditional income is regarded as a reasonable measure to promote sustainability (as Christine Ax and Friedrich Hinterberger suggest in their paper): would Maria's inflection point help to argue for such a measure and for setting its height?

The second interesting finding in Maria's presentation was that "green" consumers are happier at all income levels than average or "brown" consumers.

Discussion questions:

How robust is this finding from Hungary and how do we interpret it? Are there other studies in other countries that report similar results? If the finding is robust, could it be a key point in sustainability communication?

The paper by Ralph Piotrowski and co-authors about the project InContext is quite different in focus. The project seems to be very integrative, it tries to encompass a large number of theoretical approaches in order to conduct case studies and action research at the community level. Although there would be a lot of discussion points regarding the theoretical part, I suggest to discuss two questions related to the case studies and the action research:

Discussion questions:

In what ways and according to what criteria are the "niches of alternative consumption" examples of more sustainable consumption (and production) patterns? Would it be desirable that they become mainstream? Why or why not?

If all communities would use the described “transition management methodology”, what would be the outcome? Lots of robust, resilient, happy local communities or an increase in global sustainability?

The third paper, by Marlyne Sahakian, on “social and solidarity based economy” is also focused on the local level. It highlights in particular the phenomena of community or complementary currencies.

Discussion questions:

The first question I propose for discussion is similar to one of the questions above: Do the described forms of economy and complementary currencies contribute to (global) sustainability? Would it be desirable from a sustainable development perspective to have more of these?

The second question was posed by Marlyne herself (p. 13 of her paper): “Can community-driven economic activities, based on both social and environmental values, be scaled up to challenge the dominant unsustainable macro-economic market-economy?” Or are they beneficial only at small scale? Will “scaling up” necessarily lead to either integration into the market economy or to their collapse?

Discussion Report: Pathways for Change

Julia Backhaus

Emerging general topics

Two strands of discussion – also alluded to by the session discussant – emerge as central to the exchange. One strand focuses on strategies for up-scaling change initiatives. The questions focus on whether and how localised and small-scale sustainability initiatives can grow to include more people or be transferred to other contexts. One strategy for up-scaling introduced for discussion involves creating environments where people can experience innovative ideas and experiment with alternative ways of living. Real life events, e.g. fairs, may be a possibility to trigger enthusiasm and even desire for change, similar to the effects of the World's Columbian Exposition in Chicago in 1893, where millions of people attended to experience a promising future first-hand. Online environments could fulfil a similar function for a much larger audience, allowing ideas and (mind) experiments to reach beyond the “already converted” and win over an increasing number of people for lifestyle changes.

Another question regarding the issue of up-scaling concerns the possible role of frontrunners: should they be praised as positive leaders for alternative, more sustainable ways of living? Workshop participants agreed that promoting frontrunners' and their ways of doing things would perhaps give the impression of prescribing certain lifestyles which may cause resistance rather than change among the majority of people. It is proposed that, instead, frontrunners can potentially offer inspiration and help to broaden societal dialogue by helping to build a vision of more sustainable lifestyles with a plurality of alternatives. Furthermore, learning from frontrunners about the many possibilities for change in a given community appears to be a more promising strategy than trying to implement external ideas for more sustainable need fulfilment. In that sense, frontrunners are important change agents rather than role models.

Stressing the importance of providing successful change initiatives psychological research attests that a small but united and vocal minority can potentially have a big influence on the majority.

Finally, it is questioned whether large up-scaling and frequent multiplication of local, small-scale initiatives is in fact needed. Due to the global trend of urbanisation and the increased importance of cities, a focus on localised, context-sensitive solutions may be a better strategy for fostering sustainable lifestyles relative to large-scale solutions.

The second strand of discussion is triggered by the question are local production and consumption networks (as addressed in two of the papers included in the session) truly sustainable and do they provide a way forward for global sustainable development. Workshop participants agree that this is a crucial yet difficult question to address and they concur that criteria, indicators and assessment methods need to improve and be employed more consistently. Designing change strategies requires getting checks and balances right and paying attention to accountability. However it is noted by representatives of Danish Standards that the International Organization of Standardization (ISO) is currently working on a standard for sustainable communities.

Main discussion points on the paper by M. Csutora

The inflexion or cut-off point identified in Maria Csutora's paper was people's personal level of happiness or life satisfaction decoupled from their ecological footprint. This was an issue highlighted by the discussant Ruth Kaufmann-Hayoz. The question relates to whether this point can be used as a tool for communication about sustainable consumption and to determine a limit of a justifiable footprint. In response, Maria Csutora explains that the main aim of the paper is to explore and trace the existence of such a cut-off point in two data sets, an international survey and a national survey among Hungarian citizens.

Another concern which is debated relates to the distinction between green and brown consumers and the claim that green consumers are happier than brown consumers across all income levels. Encouragingly, this finding shows that people who care about the environment are happier. Unfortunately, however, this does not mean in turn that their ecological footprint is smaller – an issue already addressed in an earlier publication by Maria Csutora, dealing with the behaviour-impact gap (BIG) problem.

One participant suggests a couple of possible additions to the cluster analysis briefly mentioned at the end of the paper. For future research and action strategies for sustainable consumption it would be interesting to learn more about the characteristics of the different clusters, in particular, the cluster which included people with a high level of happiness and a low ecological footprint.

Main discussion points on the paper by R. Piotrowaski, J. Quist, A. von Raggamby, F. Rauschmayer, J. Wittmayer, T. Bauler

A challenging question posed to the present InContext consortium members concerns the unit of analysis and the model of rationality framing the project. The project team outline that much of their internal discussions have revolved around these issues. On the one hand, the unit of analysis is the individual, his/her personal needs and capabilities to meet these needs. On the other hand, infrastructures and practices have to be included in the analysis. Therefore, the project combines transition theories with theories of individual needs. However, linking the two theories remains a challenge.

The question whether or not InContext makes normative claims about sustainable lifestyles triggers an interesting debate. One member of the InContext consortium argues that there is no normativity involved in helping people to understand their needs and to provide support for meeting these needs more sustainably. According to the discussant Ruth Kaufmann-Hayoz, this very statement evokes a normative claim about sustainable lifestyles and the question remains which criteria should be used to establish if one strategy for need fulfilment is more sustainable than the other. To her, such a claim was reminiscent of Local Agenda 21 processes which assert to be valuable experiments on the route towards global sustainability. In response the InContext consortium explain that their project is very different from Agenda 21 processes as it does not primarily focus on the improvement of infrastructures, but on helping people to connect to their needs. This in itself is a challenge because it is claimed that it is unusual for most people to open up emotionally in public. As a result of the fact that learning about needs may, illustrate that some people prefer to contribute to other people's well-being rather than to environmental sustainability, the InContext project cannot avoid addressing normative issues.

The project team itself raises the problem about how their research findings and practical experiences in pilot projects could be put to best use. Originally, the plan was to develop recommendations for policy makers regarding the need to stimulate drivers and overcome barriers to change. However, findings so far suggest that a categorisation in terms of drivers and barriers is inappropriate. Therefore, policy recommendations will probably focus on fostering experimentation on the local level. In addition, pilot projects will be chosen in such a way that they will outlive the InContext project itself.

Main discussion points on the paper by M.D. Sahakian

The main comment regarding complementary currencies concern the question whether this instrument can help communities to contract, i.e. reduce consumption levels to amounts within planetary boundaries, or only to converge, i.e. foster social cohesion and localised consumption. Hungarian research seems to suggest the latter. Sahakian elaborated that complementary currencies can be directed at achieving a variety of goals, such as local development and employment as well as the promotion of pro-environmental behaviours. She stressed again that monitoring the impact of complementary currencies is crucial to safeguarding desired developments.

Additional comments (not discussed further)

When the group discuss strategies for up-scaling local initiatives, concern is raised that characteristics of initiatives may get lost in the process, in particular and dangerously those rendering it sustainable.

During the discussion regarding “real life experiments” that allow people to try out and experience alternative lifestyles, e.g. at fairs or as part of action research, one important point remains neglected in the further debate: although these instances may be playful interventions, experiments or pilot studies for researchers, they can create expectations, images and visions among participants. The general debate on what behaviours are truly sustainable and how behaviours are embedded in existing infrastructures briefly cite the specific example of recycling. Questions dealt with include: What is the more sustainable practice, recycling as much as possible, or waste incineration? How can a shift from throwing all waste into one incinerator to manageable separation at the household level be achieved? How can the amount of household waste be drastically reduced? Commentaries note that recycling can be problematic as often, it only involves down-cycling and removes the emphasis from more desirable waste management options including waste prevention and minimisation. For example, an over-emphasis on recycling policies may appear to suggest that buying plastic-wrapped products is not an environmentally harmful activity.

ANNEX

First Trans-Atlantic SCORAI Workshop, Tuesday May 1, 2012, Bregenz, Austria

« Sustainable Consumption During Times of Crisis »

Program

- | | |
|-------------|--|
| 8:00-9:00 | Registration (<i>please bring exact change for the 25 euro fee</i>) |
| 9:00-9:30 | Opening and Welcome
Willi Sieber, The Austrian Institute of Ecology
Philip Vergragt, Tellus Institute and Clark University
Sylvia Lorek, Sustainable Europe Research Institute |
| 9:30-10:45 | SESSION 1: Growth vs. Degrowth
Chair: Philip Vergragt, Tellus Institute and Clark University
Discussant: Felix Rauschmayer, Helmholtz Centre for Env't Research, UFZ
Note taker: Tullia Jack, University of Melbourne <ul style="list-style-type: none"> • Christoph Gran, Necessary condition for a post-growth turn: diversity in economics • Michal Sedlacko <i>et al.</i>, Towards a systemic understanding of sustainable consumption and economic growth: lessons from different consumption areas • Agnes Zsoka and Gyula Zilahy, Sustainable consumption in central and eastern Europe: a survey |
| 10:45-11:15 | Coffee and tea break |
| 11:15-12:30 | SESSION 2: Beyond growth: exploring the alternatives
Chair: Maurie J. Cohen, New Jersey Institute of Technology
Discussant: Tom Bauler, University of Brussels
Note taker: Christoph Gran, University of Oldenburg <ul style="list-style-type: none"> • Christine Ax and Friedrich Hinterberger: Healthy, wealthy and wise? The future of health and social politics after economic growth • Steve McCauley: Craft economies in Japan: The re-emergence of alternate economies in a no-growth context • Harald Rohrer and Michael Ornetzeder: Socio-technical configurations for green growth |
| 12:30-13:30 | Lunch break |

13:30-14:45 **SESSION 3: From austerity to transformation: macro policies/strategies**

Chair: Sylvia Lorek, Sustainable Europe Research Institute

Discussant: Antonietta Di Giulio, IKAÖ, University of Bern

Note taker: Marlyne Sahakian, University of Lausanne

- Maurie J. Cohen: Austerity, Sustainable Consumption, and Post-Consumerism
- Michael Redclift: Austerity and economic crisis
- Joachim Spangenberg: Institutional Change for Strong Sustainable Consumption

Coffee and tea break

14:45-15:15

15:15-17:00 **SESSION 4: Pathways for change**

Chair: Gerd Scholl, Institute for Ecological Economy Research

Discussant: Ruth Kaufmann-Hayoz, IKAÖ, University of Bern

Note taker: Julia Backhaus, Maastricht University

- Maria Csutora, Happy sustainability as a lifestyle-Beyond the Easterlin paradox
- Anneke von Raggamby *et al.*, Pathways to sustainable in times of crisis; contributions form the EU action research project 'InContext'
- Marlyne Sahakian, Social and solidarity-based economy, what opportunities for sustainable consumption in times of crisis and beyond?

17:00-17:30 **Closing Session:**

- Summary and discussion
- SCORAI Europe next steps

18:00 ***ERSCP reception (for registered participants)***

Workshop format

SCORAI workshops are designed to maximize discussions and debates. Space is limited to 40 participants, including authors, and will be filled by invitation only, on a first-come-first-serve basis. All participants are encouraged to read the papers in advance, which will be distributed two weeks prior to the event. In each panel, authors will be asked to briefly introduce their key points; discussants assigned to each panel will lead the debate, with participants also engaging in the discussions and capturing summaries, which will be presented in a special session within the ERSCP.

SCORAI within the ERSCP

SCORAI will also be hosting a panel session within ERSCP under the working title “Sustainable consumption during times of crisis”, organized by Philip Vergragt, Tellus-Institute, SCORAI USA Executive Committee. A summary of workshop findings will be shared in this session, with time allocated to discussing future SCORAI activities in Europe. Select workshop participants will also act as presenters for this session.

On behalf of the organizing team,

Sylvia Lorek, Sustainable Europe Research Institute

Maurie Cohen, New Jersey Institute of Technology

Gerd Scholl, Institute for Ecological Economy Research

Willi Sieber, The Austrian Institute of Ecology

Marlyne Sahakian, IPTEH, The University of Lausanne

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Doris Fuchs, University of Münster

Sylvia Lorek, Sustainable Europe Research Institute

Gerd Scholl, Institute for Ecological Economy Research

Arnold Tukker, TNO

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SCORAI USA Executive Committee

Jeffrey Barber, Integrative Strategies Forum

Halina Brown, Clark University

Maurie Cohen, New Jersey Institute of Technology

John Stutz, Tellus Institute

Philip Vergragt, Tellus Institute & Clark University

First Trans-Atlantic SCORAI Workshop**Tuesday May 1, 2012, Bregenz, Austria****Workshop Participants**

(By first name)

Adina Dumitru, LOCAW Project, University of
Corunna

Ágnes Zsóka, Corvinus University of
Budapest,

Aija Freimane, Art Academy of Latvia

Andre Martinuzzi, Vienna University of
Economics and Business

Anneke von Raggamby, Ecologic Institute
Germany

Antonietta Di Giulio, Universität Bern, IKAÖ

Arnold Tukker, TNO Delft

Christoph Gran, University of Oldenburg

Cristina Rocha, LNEG-Sustainable Production
and Consumption Research Unit

David Camocho, LNEG-Sustainable
Production and Consumption Research Unit

Edina Vadovics, GreenDependent Institute

Felix Rauschmayer, Helmholtz Centre for
Env't Research, UFZ

Gerd Scholl, IOEW

Gyula Zilahy, Corvinus University of
Budapest

Halina Brown, Clark University

Harald Rohrer, Univ. of Klapenfurt

Jaco Quist, TU Delft

Joachim Spangenberg, SERI

Julia Backhaus, Maastricht University

Kim Christiansen, Danish Standards

Kristóf Vadovics, GreenDependent Institute

Luuk Wullink, FH Vorarlberg Exchange
Student Netherlands

Mads Bo Andersen, Danish Standards

Maria Csutora, Corvinus University of
Budapest

Marlyne Sahakian, University of Lausanne

Martin Schweighofer, The Austrian Institute
of Ecology / Zeppelin University

Maurie J. Cohen, New Jersey Institute of
Technology, NJIT

Michael Ornetzeder, Austrian Institute of TA
Michal Sedlacko, WU Vienna

Philip Vergragt, Tellus Institute, Boston and
Clark University

Ralph Piotrowski, Ecologie Institute Germany

Reine Karlsson, Lund University Lighting
Initiative

Ricardo Garcia Mira, LOCAW Project,
University of Corunna

Roland Alton, Univ. of Applied Sciences,

Vorarlberg Ruth Kaufmann-Hayoz,

Universität Bern, IKAÖ Shane Fudge,

University of Surrey

Simon Milton, GreenDependent Institute and
Corvinus University of Budapest

Stephen McCauley, George P. Marsh Institute,
Clark University

Sylvia Lorek, Sustainable Europe Research
Institute, Tobias Welz, World Resources

Forum

Tom Bauler, Université Libre de Bruxelles

Tullia Jack, University of Melbourne

Walter Wehrmeyer, Centre for
Environmental Strategy, University of Surrey

Willi Sieber, The Austrian Institute of
Ecology,



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