Crisis in the habitat of the economic growth monster

Emil Urhammer
Department of Development and Planning, Aalborg University Copenhagen, Denmark

On The Horizon, Special Issue: Language and Economics, Volume 22, Issue 4, September 2014
Crisis in the habitat of the economic growth monster

Abstract
This article is inspired by empirical philosophy and provides an analysis of economic growth as a monster that circulates within collectives. Using this approach, I illustrate how economic growth has participated in shaping institutions and language, thus having necessitated its own circulation to such an extent that it has become the most prioritised economic policy objective, whereas urgent issues regarding living conditions on Earth are either ignored or treated as secondary priorities. Further, I argue that noble attempts to contest economic growth contribute to the circulation of the monster by articulating new translations. Therefore, to transcend the reign of the monster, I invoke an empirical philosophical plea for ecologisation in the form of a language that allows for a multiplicity of voices and values in decision-making.

Keywords: economic growth, monster, circulation, translation, ecologisation

Introduction
The Earth is changing: a growing ecological crisis comprising overwhelming problems, such as climate change, the loss of biodiversity and pollution herald the age of the Anthropocene (Crutzen 2005, Rockström et al. 2009). At the same time, many countries still face economic difficulties in the aftermath of the 2008 financial crisis. This situation places economic growth at the centre of a controversy. On one hand, mainstream economists and politicians prescribe further economic growth to restore struggling economies. On the other hand, a growing chorus of voices argues that economic growth is in a process of transgressing fundamental ecological limits and that we must free the Earth from economic growth before it is too late (Jackson 2009, Simms & Johnson 2010, Dietz & O’Neill 2013).

At the centre of the controversy stands the GDP, the calculative technology that quantifies economic growth. According to Fioramonti (2013), GDP is the world’s most powerful number due to its ability to determine the success of governments and the progress and the international status of nation-states. However, economic growth is not merely a number that aggregates economic transactions; it assumes multiple shapes and appears in many places. Thus, economic growth appears in the literature as a production process (Mankiw 1992), on the Internet as an entity with human virtues such as health and strength (Kumar 2013) and in political discourse as a powerful propaganda tool (Fioramonti 2013).

The multi-shaped and multi-sited existence of economic growth appeals to the use of Latour’s notion of monster: an entity that circulates in collectives and shapes them by its presence (Latour 1992). Hence, in this article, economic growth is conceptualised as a monster, whose existence depends on circulation, the purpose of the article being to identify facilitators of circulation and to highlight indicative examples of how this circulation shapes our common world and political decisions.
To interpret economic growth as a monster, the terms collective and translation are essential. In Latour’s work, the term collective replaces the concept of Society, a human domain that is distinguishable from Nature. Instead, a collective is a messy ecology that comprises both humans and non-humans (Blok & Elgaard 2011, Latour 2013). In this sense, a collective is an assemblage of diverse elements, such as humans, technologies, plants, symbols, animals and scientific disciplines. This makes our common world a multiplicity of collectives that is inhabited by humans and non-humans (Latour 2013). It is also in these habitats that we find the economic growth monster.

When a monster is circulating in a collective, it means that the monster is constantly passed on from one agent to the next in various forms (Blok & Elgaard 2011, Latour 2013). At one instant, economic growth is a number in a spreadsheet; later, this number becomes a dot in a graph, and later again, is verbally uttered in a news broadcast. Often, circulation changes the appearance of that which is circulated. This change happens when a multitude of economic transactions is transformed into a single number, when a column of numbers is turned into a graph and when this graph is later interpreted in a sentence such as “the economy is growing”. This transformation of appearance can be termed translation and is central to the existence of a monster.

This mode of existence can be compared to the emergence of a viral hit, a YouTube video, for instance. At first, the video is merely a video, but as soon as Internet users begin to pass it on to each other, and it goes viral, it changes from a video into a hit. Suddenly, it does not only exist in its YouTube habitat: it crosses borders to new sites and changes appearances. At one instant, it is a verbal account in a conversation; at another instant, it is a story in a newspaper that later becomes the subject of a heated discussion. As I will argue in the following, economic growth maintains its status as a monster “hit”, not least due to a similar type of circulation.

In relation to the rising ecological crisis, economic growth is, at least, a trifold problem. First, evidence clearly indicates that global economic growth is closely correlated to increased global resource use, carbon emissions and pollution (Wackernagel & Rees 1996, Krausmann et al. 2009, Ewing et al. 2010). Second, the imperative for continued economic growth is often used as the main argument for not addressing these issues. Third, the pursuit of economic growth fosters the legitimisation of continued environmentally harmful activities such as oil drilling, land grabbing and the expansion of infrastructure for cars. The motivation for this study is thus to generate a better understanding of how economic growth has become the ultimate trump that can reject proposals for addressing ecological issues of extreme urgency.

**Empirical philosophy**

---

1 Here, I refer to the rejection of such proposals as eco-taxes and environmental regulation, using the argument that such measures will make businesses less competitive and, in turn, harm economic growth.
It is not expedient to try to frame Latour’s work in a singular fashion, and his approach has several different labels. However, for practical reasons, I refer to it here as *empirical philosophy*, a term Latour himself has used to describe his methodology. In empirical philosophy, monsters can be studied by tracing their circulation in sequences of translations, where translation can be defined simplistically as the process by which an entity transforms from one appearance into another (Latour 1992, Callon 1996, Blok & Elgaard 2011). Thus, translation, as used in this approach, bears many similarities with linguistic translation, where words are translated between languages. Within linguistics, the issue of the conservation of meaning during the act of translation is important (Chandler 1994). However, to empirical philosophy, this issue is not as important because translation does not concern how to change from one representation of meaning to another; each translation creates a new entity with a life of its own. Thus, the GDP is not a mere representation of an objective reality, but is a being in its own right. This beingness is also evident in the graph that can be constructed based on a series of measurements of the GDP or the statement “the economy is growing”. These three entities are closely associated, but they should not be considered merely as representations of the same objective phenomenon. However, the interconnectedness and the circulation of these entities perform, collaboratively, the economic growth monster.

Despite the dissimilarity between empirical philosophy and linguistics, the empirical philosophical notion of translation is related to the concept of language. Although an empirical philosophical translation does not entail transporting a specific meaning from one domain of representation to another, translation can often be regarded as a transformation from one semiotic form to another. A row of numbers has a different semiotic quality than does a graph composed of dots; the statement “the economy is growing” assumes yet a third mode of appearance. In this manner, the notion of discourse also figures into this analysis because numerous translations of economic growth are discursive and occur in inscriptions and verbal utterances.

Finally, I would like to emphasise that ecology is a core issue for empirical philosophy. This is evident in the articulation of *ecologisation* as the solution to the ecological crisis of our age. According to Latour (1992, 2013), this crisis arises from the modern division of the world into domains, such as Nature, Society and Economy. Interpreting Latour, these domains are harmful because they misrepresent the messy world in which we live and conceal the fact that humans and non-humans constantly connect in multiple indivisible ecologies. This misrepresentation hinders recognition of the consequences of our current mode of living, in which legitimate members of our collectives\(^2\) are systematically excluded from participation in democratic processes and are thus effectively silenced. This leads to exploitation and destruction of that which is considered external to Society and Economy. Empirical philosophy can therefore be considered to be a quest for ecologisation, where

\(^2\) The term "members of our collectives" must be understood in the widest possible sense and includes entities such as landscapes, non-human species and homeless people.
Ecologisation means the constitution of human-non-human ecologies and the recognition of multiple excluded or silenced members of our collectives (Latour 2013).

**Economics**

Exploring economics using empirical philosophy implies that we must reject the objective existence of the economy as a phenomenon that economists observe and measure and that exists regardless of measurement and description. However, adopting an empirical philosophical approach also means that we must dispense with the idea of the economy as a purely human construction that only exists in the vocabulary of economists. Instead, the economy is a collective construction that is created by means of an interplay of multiple human and non-human agents.

This interpretation is closely related to similar approaches that emphasise the performative aspects of economics (MacKenzie 2006, Callon 2007). The performative understanding of economics is exemplified by Callon’s statement, “no economy without economics” (Callon 1998), which implies that the economy is not a phenomenon that economists merely observe and try to represent; rather, it is an assemblage of diverse elements that create a totality in which theories and statements about this totality are fully absorbed (Callon 2007). However, the performativity approach to economics has thus far been primarily concerned with the construction of markets, not with macroeconomic constructs such as economic growth. Thus, this article intends to contribute to the performativity literature by analysing economic growth and more generally, to economics literature, by introducing an empirical philosophical perspective on the issue.

**Empirical approach**

The empirical approach of this article combines analysis of scholarship and media, interviews and informal conversations and observations at events such as seminars and conversations. Rather than analysing a clearly bounded set of data, I have examined many interrelated sources. In this respect, my approach could be called a multi-sited ethnographic study conducted in the stream of my life. I do not refer to a specific country, but to tendencies observable simultaneously in rich and less rich countries. However, the main focus of the article is Western industrialised countries, though the growth monster roams well beyond their borders.

**Ecology of circulation**

As my work on this article has progressed, I have gradually become able to sketch the contours of an ecology of circulation, namely, the activities and technologies of a series of agencies. The first such agency I would like to mention is national statistical offices, which possess the necessary infrastructure to collect data and the technological procedures to calculate the GDP. When data are processed, and the latest GDP figure is inscribed into spreadsheets and other transportable formats, the GDP figure is easily passed on to other agencies. Some of the first agencies to take notice of the latest economic growth number are departments in the treasury and other ministries. At these sites, civil servants are continuously updating databases with the most recent numbers from the national statistical office, GDP being
the most prominent number. In these departments, the numbers are used for different purposes and are passed on to other agencies either in translated form or as they were received. Some of the new receivers count instead ministers, presidents and other parliamentary politicians. Again, the GDP number is used for new purposes, for instance, to support an argument at a negotiation table or make a statement at a press conference.

The latest growth figure soon appears in various news media stories and can be found all over the ecology of circulation, translated into many different appearances, such as statements from business leaders, blog posts or debates on public radio. Because this process constantly recurs, the economic growth monster is kept present and alive. The main observation in this case is that there are well-designed procedures that cut across such agencies as national statistical offices, ministries and media and facilitate the circulation of the economic growth monster. However, despite the incomplete and relatively linear description provided here, it is important that circulation not be understood as a process with a specific beginning or end. Circulation is messy and impossible to map in an orderly fashion. National statistical offices are, nonetheless, a good place to start the description because they repeatedly create the most recent GDP figure.

**Shaping of collectives**

Having now indicated some elements of an ecology of circulation, it is necessary to address another important aspect of the economic growth monster: its ability to shape the collectives within which it circulates. To clarify this ability, it is helpful to recall that economic growth has not always been integrated into public administration; it was institutionalised\(^3\) by the help of factors such as the GDP and the promotion of national accounting by organisations such as the UN (Miller 1986, Fioramonti 2013). Thus, the calculation and the circulation of economic growth have gradually become integrated into the activities of state agencies to an extent that they rely entirely on it to assess their own success and for decision-making (Fioramonti 2013). In this way, economic growth has become integral to governmental decision-making: a compass that governments use for navigation. To maintain this compass function, economic growth must constantly be circulated. This dependency even extends into the future in the sense that not only is the present growth figure circulated, but future economic growth, as it is forecasted by multiple agencies, is also circulated in numerous versions (Reichmann 2013).

This dependency on navigation based on economic growth and the wider economic discourse that promotes it, has further necessitated the presence of economic expertise in public administration (Cobb et al. 1995). Economists spawned the monster, so who better to consult regarding its wellbeing? In this respect, the circulation of economic growth has shaped public administration by increasing the dependency on economic expertise, in turn necessitating continued circulation due to a maintained concern about economic growth in many departments of the administration. However, not only does public

---

\(^3\) By institutionalisation I mean the incorporation of certain norms or rules in various practices.
administration navigate its actions and policies according to present and future economic growth, but the decisions of businesses and private investors are also influenced by future growth expectations. Thus, again, the integration of economic growth in decision-making makes continued circulation necessary. The basic observation of this section is that shaping and circulation are closely connected. Circulation shapes the collective, and this shaping necessitates further circulation.

**Language and discourse**

Yet, shaping does not end here. According to Cobb et al. (1995), economic growth as measured by the GDP has become the very language of America’s economic reportage and debate. Along these lines, it makes sense to say that economic growth has influenced our language and made new metaphors possible. When listening to a debate or reading an article about economic growth, metaphorical skills are required to comprehend that a sentence such as “brighter times are ahead of us” means “we expect economic growth in the future” and that “the economy is healthy and getting stronger” means “the economy is growing”. These examples indicate a widespread propensity to associate economic growth with terms that are generally perceived as positive, while decline is associated with terms that are perceived as negative. This tendency is also evident in descriptions of economic growth that use words such as health and strength, while decline is often described in terms of sickness and weakness (Calmes & Appelbaum 2011, Goodman 2011, Kumar 2013). This shaping of language necessitates continued measurement of GDP, for how else would we know whether the economy is sick or healthy, or whether brighter or darker times lie ahead?

Economic growth is also present in semiotic discourse. A researcher from a think tank reported, based on his observation of governmental departments that he had seen banners on the walls promoting economic growth and, according to him, economic growth is engrained in these departments to such an extent that it extends beyond theoretical equations to a general discourse promoting economic growth as an ultimate good and the solution to all our problems. Additionally, Seaford observes “[...] that in practice GDP does tend to be treated rather like a single welfare function” (Seaford 2013:27), an observation also supported by Fioramonti, who confirms the widespread use of economic growth as a proxy for wellbeing (Fioramonti 2013). Thus, the economic growth discourse has shaped the ability to imagine what wellbeing is by reducing it to a monetary phenomenon. To use Fioramonti’s formulation, this shaping is a form of domination, or discursive power (Haugaard 2003), which can also be detected in the ability to determine what wealth and valuable contributions to society entail, namely increased GDP, as well as that which contributes to this increase, regardless of social and environmental consequences (Fioramonti 2013).

**Measurement**

According to Fioramonti, measurement is fundamental to our way of understanding the world. Hence, a multitude of measurements has been

---

4 The term semiotic discourse is used to emphasise that discourse is more than verbal and textual, it also comprises a large range of signs, such as images, sounds and postures.
institutionalised in our daily activities (Fioramonti & Bell 2014). This institutionalisation is also the case for the measurement of economic growth, which is now so fundamentally built into agencies of public administration that abandoning it would be equivalent to a captain throwing the GPS overboard in high seas.

GDP has become the ultimate measure of progress, which means that “no government or society is really able to think of progress outside of GDP” (Fioramonti & Bell 2014). Thus, GDP immensely influences parliamentary politics and affects the outcome of referendums. The magnitude of these influences implies the ability of measurement to determine our decisions, and in the case of GDP, the ability to reduce humans and non-humans to instruments and commodities serving its own maximisation (Fioramonti 2013).

State instruments
Another important mechanism necessitating circulation is the connectedness of GDP to other accounting entities and state instruments, such as the national budget and taxation. As Cobb et al. (1995) explain, this connectedness is centuries old and is rooted in attempts to measure economic growth to facilitate tax collection. In our present epoch, this technological dependency is so precisely manufactured that if GDP declines, then tax revenues rapidly decrease, consequently pressurising the budget. Thus, GDP influences governments’ economic latitude and makes GDP a top priority for public administration. This influence necessitates circulation and explains why economic growth forecasts are integrated into public budgeting (Larch & Salto 2005), as well as why administrators are eager to be kept informed of the most recent GDP prognoses.

Having attempted to describe some dynamics of circulation and the shaping of collectives and language, I will spend the next section discussing the issue of contestation.

Contestation
Although economic growth and its proponents seem to occupy a nearly hegemonic position, there exists a well-established, but scattered choir of voices expressing the devastating effects of further economic growth. Compared to the army of growth protagonists, this ensemble of voices seems small, yet it is sufficiently substantial to make economic growth a controversial issue.

An important dimension of contestation is the GDP’s inappropriateness, which can be incompletely summarised as the exclusion and the neutralisation of data. The exclusion of data implies, among other things, that the state of ecosystems, the condition of natural resource stocks and the value of unpaid work are not part of the GDP calculations. The neutralisation of data refers to the lack of distinction between positive and negative contributions to the GDP (Cobb et al. 1995, Røpke 1997). This shortcoming allows harmful events, such as oil spills, murders and accidents, to contribute positively to the GDP because spill clean-up, murder investigations and rescue work generate income that is considered a positive contribution.
Criticism of the GDP is just one of many areas of economic growth contestation. According to Friman (2002), limits to growth have been an area of contestation since the classical economists; after the advent of neoclassical economics, these limits were rarely expressed. However since the middle of the twentieth century, limits to growth have again become an issue, not least due to mounting evidence of environmental havoc, which many scholars explain as the result of economic expansion (Friman 2002).

The main observation here is that economic growth is not a monster without a habitat: it inhabits a human-non-human ecology, while numerous entities in this habitat come together to protest and impose limits. Thus, endangered species, ecosystems and the climate form ranks with new indicators, models and activists to constrain the monster. This limits-to-growth assemblage is not maintained by a single organisation, program or strategy, but various spokespersons have expressed what could be termed core points of contestation. For the sake of simplicity, these can be divided into three main points. The first regards the economy as a biophysical process, the growth of which requires increasing energy use and materials and begets increasing waste outputs (Dietz & O’Neill 2013). Economic growth thus has severe consequences for the Earth’s ecology and is in a process of transgressing vital boundaries securing the living conditions on Earth (Rockström et al. 2009). The second point states that economic growth is actually not the panacea that provides wealth and wellbeing to all. Despite economic growth, poverty remains pervasive, inequality is growing, and beyond a certain, relatively low, level of GDP per capita, there appears to be no correlation between an increased GDP and wellbeing (Jackson 2009, Dietz & O’Neill 2013). The third point argues that the growth rates of Western economies have been steadily declining for decades and that, due to falling productivity, it is questionable whether the high growth rates of the past will return (Chancel et al. 2013). In sum, these points offer sufficient reason for choosing another path and starting to compose stable economies independent of economic growth as soon as possible (Jackson 2009, Dietz & O’Neill 2013).

Nonetheless, it is important to emphasise that these contestations do not slow the circulation; in fact, they encourage it by producing new translations. Hence, even though these translations make the monster far less lovable, they expand its existence. Attempts to surmount this problem by making something else circulate can be found in the so-called Beyond GDP indicators, which are alternative progress indicators intended to replace the GDP (Seaford 2013). These indicators have not, so far, been successful in doing so. In the quest for finding an answer, Seaford has sought boundaries for the institutionalisation of the Beyond GDP indicators. Reviewing Seaford’s results reveals that these indicators basically lack a well-constructed ecology for circulation. Among many examples of lack, Seaford describes how data for calculating these indicators is often insufficient or lacking, how there is no popular narrative to support them and how they are disconnected from the work that is performed in ministries, organisations and businesses. Furthermore, Seaford observes that these alternative measures do not fit a widely accepted economic model, that there is no widespread expertise capable of handling the indicators and that there is no clear idea about which
Beyond GDP indicators to pursue (Seaford 2013). This collective uncertainty regarding the viability and the use of Beyond GDP indicators explains the lack of circulation of these indicators and also deepens the understanding of the economic growth monster, for which all of these facilitators are in place. The main task for the promoters of Beyond GDP indicators is thus to determine how to change the ecology of circulation in favour of indicators that consider ecosystems, wellbeing and natural resources when calculating the progress of nation-states. How this consideration could be accomplished in greater detail is beyond the scope of this article, but in the next section, I will elaborate a bit more on approaches to fighting the economic growth monster.

**Ecologisation**

An important aim of this article is to explain how economic growth has become a pervasive policy objective able to trump ecological concerns. Examples of this ability are numerous and can be found in the rejection of proposals such as higher taxes on pollution, stricter environmental regulation and regulation of international trade and in the necessitation of so-called development, such as new highways, free trade and oil fields. The first proposals are rejected by the argument that they would harm economic growth, while the latter are recommended to secure it. In my view, the ability of economic growth to influence decisions regarding these issues lies in an entanglement of institutions, state instruments and a widespread economic growth discourse. A range of public institutions, the tax system and the national budget have all become dependent on economic growth, and this dependency is constantly reinforced by the discursive reproduction of economic growth as an ultimate necessity. Therefore, as long as economic growth remains the ultimate political objective, anything that is framed as a threat to that objective will be rejected. This makes it nearly impossible to imagine proper solutions to the ecological crisis by means of conventional policy-making. Thus, if one believes in conventional policy-making as an important agency for solving the ecological crisis, it is necessary to determine how to reduce the power of the economic growth monster and the discourse promoting it.

The economic growth discourse can be considered to be part of an activity, which Latour has termed *economisation* (Latour 2013). An important element of economisation is a discursive practice that claims to capture values using the language of economics. The use of this language implies that only that which can be given a price and exchanged in a market has value and can be taken into account. Everything else is external and must be internalised, i.e., given a price, before it can be taken into consideration. This discourse conceptualises Economy and Nature as two separate domains, and entities belonging to Nature can only be acknowledged if they are internalised and thus become part of the economic domain. In empirical philosophy, this type of reasoning can be seen to be a part of a greater misconception of the world in which we live, a misconception that provides the basis for the current ecological crisis, the solution to which is a move toward ecologisation (Latour 2013).

---

5 By institution I mean a set of norms or rules enacted through various practices.
In the context of the present article, a move toward ecologisation could be the promotion of a language that allows the presence of multiple voices and the expression of values that are currently excluded or oppressed by the economic growth monster. In its role as excluder and oppressor, this monster becomes a passage point for values and voices. If a certain concern or value can be phrased in the economising language of economic growth, it can be part of the discussion. If not, it is excluded. This means that value articulations that are compatible with economic growth can enter the discourse of decision-making, while those that are not are silenced. According to Medina (2004), the solution to this type of problem is a linguistic transformation that requires a multitude of radical changes. One way to start such a cascade of changes could be the explicit dismissal of the economising framing of political issues and an insistence on speaking an inclusive language that articulates the beauty of landscapes, the rights of non-human beings and justice for marginalised people without the use of monetary valuation (Monbiot 2014). Second, the discipline of economics and its calculative technologies, such as GDP, that dominate vital ecologies of circulation should continually be challenged and replaced by other disciplines and measures that are more open to multiple values and voices. Third, it is necessary to facilitate the collection and circulation of data that speak on behalf of excluded or misrepresented members of our collectives or, if possible, to invite these members to speak on their own behalf. Finally, the new inclusive language, the alternative measures and the multitude of voices and values must be incorporated into the institutions of public decision-making. If all these changes are made successfully, there is hope that they would lead to a weakening of the economic growth monster and to the empowerment of excluded voices and values to address the rising ecological crisis of our age.

Conclusion
This article is inspired by empirical philosophy and offers a new perspective on economic growth to extend the explanation of how this monster has become so powerful. My explanation builds on an entanglement of institutions, state instruments and discourse that facilitates easy circulation and makes economic growth a nearly omnipresent concern in certain collectives. I also try to exemplify how this monster has shaped institutions, instruments and language and thereby has necessitated its own presence.

I am aware that economic growth is not the only obstacle to solving the multiple crises today. Nonetheless, it epitomises the current mode of economisation and constantly appears as the main argument for overruling ecological concerns. As such, economic growth has become a main trope in a technocratic language that suppresses other languages and rejects all values that are not monetary. In this way, economic growth has become a monster necessary to attack.

An important feature of economisation is the tendency to separate ecology and economy into two separate realms, such that ecology is reduced to a realm of control and exploitation. This divide is, according to Latour (2013), the fundamental source of the rising ecological crisis of our age, and until we understand that there is no economy-ecology divide and that humans and non-humans inhabit the same ecology, there is bleak hope that we will
overcome the overwhelming problems of our age. In the context of the present article, an answer to these problems is the promotion of a new inclusive language that empowers the voices and values of silenced members of our collectives.

Acknowledgments
I wish to thank two anonymous reviewers for their valuable comments on an earlier version of this article. I also wish to thank Inge Røpke, Andreas Birkbak, Torben Elgaard Jensen and Dan O’Neill for useful comments and references. The research was conducted with support from The Velux Foundation.

References
Cobb, C., Halstead, T. & Rowe, J. 1995, "If the GDP is up, why is America down?", The Atlantic Monthly, vol. 276, no. 4, pp. 59.
Crutzen, P.J. 2005, "Human impact on climate has made this the Anthropocene age.", New Perspectives Quarterly, vol. 22, no. 2, pp. 14-16.


Rockström, J., Steffen, W., Noone, K., Persson, A., Chapin, F.S., Lambin, E.F., Lenton, T.M., Scheffer, M., Folke, C., Schellnhuber, H.J., Nykvist, B., de Wit, C., Hughes, T., van, d.L., Rodhe, H., Sörlin, S., Snyder, P.K.,


Seaford, C. 2013, Report on results on action research: barriers to the use of alternative ('beyond GDP') indicators in policy making and how they are being overcome and can be overcome, nef (new economics foundation), London.

Simms, A. & Johnson, V. 2010, Growth isn't possible, why we need a new economic direction, new economics foundation, London.