

Transition as discourse and the issues of interventionism, justice and innovation

René Audet¹

Visiting Professor, ECONOVING International Chair in Eco-Innovation, REEDS International Centre for Research in Ecological Economics, Eco-Innovation and Tool Development for Sustainability, University of Versailles Saint Quentin-en-Yvelines, France.

Professor, Department of Strategy and Social and Environmental Responsibility, Québec University at Montréal, Canada.

A discourse on ‘green’, ‘low-carbon’, ‘just’ or ‘sustainability’ transition is emerging in global policymaking, civil society and social scientific research. This article proposes an analysis of the current discursive framing of transition by drawing on heterogeneous discursive sources. Eleven discursive statements on transition together form two main discursive frames. Firstly, the radical transition frame identifies the people and civil society as the true drivers of transition and wish for deep bottom-up structural changes that would undermine the current market economy. Secondly, the technocratic transition frame calls for a new kind of state-driven incentive interventionism that would better fit the needs of business actors and unlock investments in green and low-carbon economy. The article highlights the respective aspects of these frames, and interprets their conflicting dynamic as a conventional feature of global environmental discourse. It also emphasizes the fact that the radical and technocratic frames are still fluctuant and, to a certain point blurred – which means that the signification of transition is not completely settled.

Keywords: transition, discourse, green economy, low-carbon economy, sustainability.

Introduction

Referring to the idea of transition is becoming an common feature of political discourse on global environmental issues². In official international agreements and institutional documents, transition has recently come to occupy a place next to other broad principles such as sustainability or responsibility. The term occurs in the text of the 2010 Cancun Agreements associated with the idea of an expected ‘paradigm shift towards building a low-carbon society’ (UN 2011, para 10). Closer in time, the ‘zero draft’ prepared for the Rio+20 Summit contains four mentions of a ‘transition to green economy’ or ‘to sustainable development’ (UNCSD, 2012). The phenomenon is now quite noticeable in many spheres: from the publication of the Stern Report on the economics of climate change in 2006 (Stern, 2006), through the rise of academic networks dedicated to ‘transition research’ (STRN, 2011), and to the growing movement of ‘Transition Towns’ (Scott-Cato and Hillier, 2010; Hopkins, 2008), a discourse on transition has emerged. The fact that it appears in international environmental policy documents also signals that this notion is now a topic for global policy making. However, the diverse epithets of this transition (to a green economy, to a low-carbon economy, to sustainability, etc.) show that considerable uncertainty remains regarding the goal and path of this ‘paradigm shift’.

To put it in more sociological terms, the discursive framing of transition is currently happening in global environmental politics, and this process is at a state where contradictory representations and competing claims are the norm rather than the exception. This article thus

¹ Email: audet.rene@uqam.ca

² In this paper, the word ‘transition’ does not relate to ‘transition to market economy’ of ex-soviet republics, but rather to ‘transition to a green, just, sustainable or a low-carbon economy’.

proposes to outline the discursive framing of transition and the potential conflicts that it sustains.

Scholarly literature on transition (or its plural form, ‘transitions’) is rapidly emerging (van den Bergh *et al.*, 2011). At least three closely intertwined tracks of analysis have so far emerged: sustainability transition, transition management and transition reflexive governance (Grin *et al.*, 2010). The sustainability transition approach provides a multidisciplinary examination of historical and contemporary socio-technical transitions – it looks at the distinct levels of institutions, social structures and agency in order to identify various possible patterns of radical transformation towards sustainability (Geels, 2010; Geels and Schot, 2007). From the transition management point of view, the previous multi-level framework serves as a theoretical background for experimenting niche innovation management according to a specific methodology that has proven to be successful in many cases in the Netherlands and the neighbouring countries (Rotmans and Loorbach, 2009; Loorbach and Rotmans, 2010). As for transition reflexive governance, which is also associated with the other two tracks in the Sustainability Transition Research Network, it focuses on procedural approaches to transition and sustainability challenges in the context of complexity and uncertainty (Voß *et al.*, 2006). Recently, in a less theoretically developed perspective, transition has also been described as the object for a desirable ‘new social contract’ (Pereira, 2012).

None of the previous approaches have looked at transition as discourse. Studying transition as discourse starts with observing which actors – in society or in global politics – are the bearers of this idea. It aims at revealing where do these actors envision to leading the world, and how do they hope to achieve the transition? This is why understanding the on-going construction of the transition discourse is of crucial importance for global environmental policy. In sum, studying transition as discourse is a matter of foreseeing the many ways through which ideas about transition could become drivers for policymaking.

This paper unfolds in four parts. It firstly defines discourse analysis as an approach that assesses both the socially constructed aspects of discourse and its deterministic aspects. This duality vouches the importance of studying transition as discourse while it is still in a process of being constructed. The second part details the meaning and the method for studying such a discursively and materially heterogeneous object. This method produced eleven discursive statements on transition that are afterward described in the third part. Lastly, the discursive statements are reassembled in order to show the existence of two competing framings of transition: the radical transition and the technocratic transition. The state of their stability, conflictuality, and their over crossing aspects are also envisaged.

1. The discursive framing of transition

Discourse can be defined as communication practices that consist of producing and disseminating a given meaning to reality. Theoretical approaches to discourse analysis are numerous. In sociology and political sciences, discourse analysis is often considered to be a constructivist approach (Phillips and Hardy 2002), which does not only mean that discourse is itself a social construct – a set of meanings and interpretation of reality negotiated and crystallised through social interactions and conflicts – but also that discourse contributes to the social construction of reality through processes of ‘framing’ and institutionalisation (Hajer, 1995). In cognitive sciences, discursive frames are seen as being conditioning factors of individual action as they are found to be organically determined by brain functions (Lakoff, 2010). In critical approaches, discourse is conceptualised as a set of cultural and symbolic structures that materialise in texts, and in specialised practices, and which consequently have constraining effects on individuals and social actors (Foucault, 1969). In the same line of thought, post-structuralist approaches tend to consider discourse as serving social reproduction and justifying domination (Blühdorn, 2007; Blühdorn and Welsh, 2007). Thus,

as for all social theory (Giddens, 1984), views on discourse analysis are embedded in the agency-structure bipolarity: some will look at agency processes participating in the construction of discourse; others will look at the constraining effects of institutionalised discourse.

However, between these two ideal-typical poles (agency-constructivism vs structural-determinism) a variety of nuanced approaches are possible. This paper draws on the approach of ‘discursive frames’, which are shared coherent sets of meanings and interpretations of reality. According to Lakoff (2010, p. 71), ‘frames include semantic roles, relations between roles, and relations to other frames’. In environmental social sciences, the frame analysis approach have been widely used to show how initially conflicting claims on a certain topic have come to converge toward more ‘stable patterns of experiencing and perceiving events in the world which structure social reality’ (Eder, 1996, p. 166). These stable patterns contribute to ‘the social construction of nature’ by the way social actors manipulate them and integrate them in discursive statements. Frames can thus be thought of as resources. It is in this sense that Foucault (1969, p. 166) describes discourse: ‘a good that poses [...] the issue of power; a good that is, by nature, the object of struggle, and of political struggle’³. In social and political conflict, discursive frames might go through a process of translation and assemblage that ends-up with broader ‘symbolic packaging’ and ‘masterframes’ that stabilise and come to dominate the discourse (Eder, 1996).

While the conflict dynamics of discursive struggles suggest an agency-oriented approach in discourse analysis, what is at stake in those struggles is precisely the issue of structural determinism: the apprehended persistence of dominant frames. This is so because dominant frames will become institutionalised and hence exercise constraint over individual action and will. Again, Lakoff (2010, p. 77): ‘frames can become reified – made real – in institutions, industries, and cultural practices. Once reified, they don’t disappear until the institutions, the industries, and cultural practices disappear. That is a very slow process’. Hence the importance often given to social actors with powerful means of communication, such as the medias, who contribute to the framing of environmental issues like nuclear energy (Gamson and Modigliani, 1989) or climate change (Boykoff, 2010). If discourse can shape social representation of reality in a certain manner – by putting more emphasis over one issue than the other, over one actor, over one type of policy, etc. – then the future of global environmental policy is at stake in the discourse on transition (Adger *et al.*, 2001).

2. Analysing discourse in textual heterogeneity

Emerging notions in global environmental policy will arguably go through a process of framing and social construction. It has been the case with sustainable development, which was explicitly designed to allow for multiple actors to identify with (Gendron, 2012; Zaccai, 2012). But the emergence of the notion of transition seems to follow a particular path. Whereas sustainable development was designed from a rather centralised process (the Brundtland Commission), ‘transition’ springs from multiple discursive sources at the same time. It has heterogeneous origins and there is no one single definition from the start.

This is what ‘analysing discourse in textual heterogeneity’ means: in the current state of the transition discourse, the textual material extracted in order to build a body of text had to come from diverse actors and take different forms. Textual heterogeneity thus implies methodological decisions, and because discourse analysis is strongly interpretive and reflexive, a high level of transparency regarding these methodological decisions is crucial (Phillips and Hardy, 2002; Duchastel, 1993). Such decisions are most obvious at three levels:

³ Author’s translation from French.

the constitution of the body of text, the construction of the coding categories and the manipulation of these categories to re-construct the discourse and describe dominant frames.

2.1 The body of texts

The body of texts gathered for this research includes policy reports and position papers from six organizations with a global scope (Table 1). The organizations and the texts were chosen on the basis of their relevance to this study (organizations with a global perspective) and their explicit use of the word ‘transition’ (in the title or subtitle of reports or papers). The documents’ variation in length was of course inevitable since they were all written separately, with different authors, aims and guidelines. In order to bring more uniformity in each document, length criteria were established at 2800 to 3300 words per document. The sections of text that would likely be read by policy-makers, such as executive summaries, recommendations, and introductory and conclusive sections, were favoured over more sector-focused analyses, such as case studies, because the goal of this study was to grasp the meaning given to the idea of transition in the broader context of global policy-making.

Table 1. The body of text.

	Document title	Sections analysed	Word count
IEA	<i>The economics of transition in the power sector</i> , 2010.	Introduction (p. 5-7), Section 5 (p. 25-26), and Conclusion (p. 27-28).	2851
NEF	<i>The Great Transition</i> , 2009.	Executive Summary (p. 3-8), Conclusion without bullets (p. 94-98).	3016
OECD	<i>Transition to a Low-carbon Economy. Public Goals and Corporate Practices</i> , 2010.	Executive summary (p. 15-18), Introduction (without last section ‘About this Report’) (p. 19-21).	3190
STRN	<i>A mission statement and research agenda for the Sustainability Transitions Research Network</i> , 2010	Sections 1 and introduction to section 2 (p. 2-5), first two paragraphs of subsections 2.1, 2.2, 2.3, 2.4, 2.5; Conclusion.	2890
UNEP	<i>Towards a Green Economy. Pathways to Sustainable Development and Poverty Eradication. A Synthesis for Policy Makers</i> , 2011	Introduction (p. 1-5).	2893
TUAC /ITUC	<i>A Just Transition: A Fair Pathway to Protect the Climate</i> , 2010 & <i>Trade unions and climate change. Equity, justice and solidarity in the fight against climate change</i> , 2008.	Flyer 2010 (complete). Statement 2008 (p. 1-6).	3316
Total word count: 18156			

The inherent heterogeneous nature of the emerging transition discourse and the relative rareness of policy texts and reports on the topic should be seen as central features of the transition as discourse. Justifying the choice of these documents is, in the meantime, a good way to describe this heterogeneity.

The International Energy Agency (IEA) information paper *The economics of transition in the power sector* (IEA, 2010) was prepared for the Climate Change Unit of IEA in 2009 by William Blyth, associate fellow at Oxford Energy Associates. It consists of a path setting analysis for the transition in the power sector in the context of climate change mitigation action in both the public and private sectors.

The Report *The Great Transition* (NEF, 2009) was written and published by the UK-based leftist ‘Do-and-Tank’ New Economic Foundation (NEF). The NEF deliberately echoed Karl Polanyi’s classic (2001) *The Great Transformation* in this attempt to think how ‘things could turn out right by 2050’ (NEF, 2009, p. 7) through a scale of change comparable to the rise of the providential state in the mid-20th century described by the famous historian.

The Organisation for Economic Co-operation and Development (OECD) published the report *Transition to a Low-carbon Economy. Public Goals and Corporate Practices* in 2010, following a ‘joint project with its Investment Committee and Environment Policy Committee, to explore how to design and implement effective public policy that would harness private sector investment to mitigate climate change’ (OECD, 2010, p. 3). It is based on a review of the recent literature, policies and practices, and interviews with various actors. While it does not contain any explicit recommendations for policy-makers, it outlines good practices and policy strategies for the ‘transition to a low-carbon economy’.

The inclusion in the body of text of the manifest of the Sustainability Transition Research Network (STRN), entitled *A mission statement and research agenda for the Sustainability Transitions Research Network*, may raise scruples from the academic community because it implies considering science as a discourse. This might merit deeper justification than what can be offered here. Let’s just say that sociology of science has often considered science as a form of discourse (Latour, 2004). And since the STRN and the transition management approach have evolved in a close relationship with policy-making, notably in the Netherlands and Belgium (Loorbach and Rotmans, 2010), it is doubtlessly policy relevant. In this document, the STRN lays out its main research avenues, including general hypotheses and views on society, policy and the economy, as they are objects of transitions.

In the run-up to the 2012 Rio+20 Earth Summit, the United Nations Environmental Programme (UNEP) released the report *Towards a Green Economy. Pathways to Sustainable Development and Poverty Eradication* (UNEP, 2011). This piece broadly tackles issues of environmental and economic change, as well as equity and poverty issues. While the preposition ‘towards’ in the title only signals the idea of transition, the word ‘transition’ itself appears repeatedly in the report.

The idea of a ‘Just Transition’ was nurtured in the collaboration among international trade union bodies such as the Trade Union Advisory Committee to the OECD (TUAC) and the International Trade Union Confederation (ITUC), in the context of lobbying in the climate negotiations. Because no single report on just transition exist yet, the actual body of text includes the 2010 flyer *A Just Transition: A Fair Pathway to Protect the Climate*, and sections from the 2008 report *Trade unions and climate change. Equity, justice & solidarity in the fight against climate change*, which contains long developments on the idea of a just transition.

2.2 The coding categories

Coding refers to the operation by which the analyst assigns categories to textual units. These units can be words, sentences, paragraphs, texts or other parts of text. In order to gain access to a meaningful level of textual materiality – and with the aim of reconstructing the main frames of the transition discourse – the sentence was utilised as the primary unit of analysis for the next steps. Thus, the coding consisted of assigning categories to all sentences included in the body of text. Categories are proprieties found by the analyst in the textual units. In the actual methodology, categories were thematic: each sentenced were assigned the relevant thematic categories such as ‘public policy’, ‘business actors’, ‘green economy’, and so on⁴.

⁴

The entire coding process, as well as the manipulation of the data, was done using the software *Atlas.ti*.

The coding and the creation of categories followed an ‘open coding’ strategy, inspired by the grounded theory method developed by Glaser and Strauss (1967) (although this paper has no pretention at grounded theorisation). The open coding methodology implied here meant that the categories were created on an as needed basis, without any predetermined categories being imposed on the text. In the context of textual heterogeneity, this is a real challenge because different documents may use very different terms and insist on new ideas. As a result, open coding can lead to the multiplication of categories and the weakening of their usefulness. In order to ensure the cohesion, structure, sufficiency and relevance of the categories progressively developed in the coding process, I have applied a method for ‘sequential inter-text validation of coding’ especially developed for textual heterogeneity⁵.

2.3 Re-constructing the transition discourse

Coding a body of text means fragmenting it in as many textual units as possible (in this case, in 618 sentences). Afterwards, making sense of this raw material demands that it be put back in context by using rigorous methods to classify, target, select and regroup the most important quotes according to research objectives (in this case, simply uncovering the main discursive frames of transition). Starting from mere statistical data on the number of textual units and the occurrences of each category, this research has built on a co-occurrence index in order to target the most important topics and their relations to other topics. Such index is useful because, ‘terms, stems, and concepts that co-occur more frequently tend to be related’ (Garcia, 2005). To gather information about the relations between categories and the ideas they represent is thus a good way to ‘reconstruct’ the principal statements of transition as discourse. Here, the role of the analyst is, by using tools such as the co-occurrence index, to formulate and interpret the most significant statements, and to link them to one another by taking into account their competing or convergent nature and their enunciation context. The next section delivers the result of this methodology.

3. The statements of transition as discourse

Discursive statements are strategic ways of speaking of a topic in a context of conflict over their definition, or ‘framing’. It is in fact the nature of discourse to display struggles and conflicts among actors (Foucault, 1969). In the present case, the discursive statements and the discursive frames they form are policy relevant, which makes the issue of power even more acute. For these same reasons, some actors can dwell on overlapping or contradictory statements as they make their niche in the discursive space. In the context of discursive heterogeneity described above, this is even more likely. This is why the following statements might sometime appear as conflicting against one another, and sometime as being coherent and aligned. Nevertheless, the eleven statements described below can be associated with two quite different frames: the radical transition and the technocratic transition.

3.1 Transition is radical by nature

Transition is a broader process than mere technological improvement – it is about deep radical, and fundamental social transformation. The NEF (2009, p. 94), for example, describes a ‘great’ transition that will affect ‘the way we live our lives’. The ‘radical transition’

⁵ In a heterogeneous body of text, the coding categories should evolve by being continuously redefined according to their traction (or lack of traction) in each text. This implies that the texts are being coded as much simultaneously as possible. The coding is done in an inter-textual manner because short segments of different texts are coded sequentially, by shifting from one text to the other, and because the entire system of categories is re-evaluated at each round. This provides more opportunities to modify categories (by renaming, merging, dividing, deleting, etc.) and helps to structure the coding (by creating families and arborescence) in a more reflexive and iterative way. Above all, it contributes in constructing a system that is fit to analysing heterogeneous texts.

generally translates in statement on structural transformation throughout social institutions such as welfare, politics, the economy and the human-nature relationship. While the NEF is the main proponent of such radical transformation, other organisations also mention such needed profound changes. In a less militant tone, the STRN's discourse revolves around the necessity for 'radical niche innovation' and the need for 'deep-structural changes in key areas of human activity, including our transport, energy, agri-food, housing, housing, manufacturing, leisure and other systems' (STRN 2010, p. 4). In both cases, this radicality implies a preference for bottom-up processes of social transformation that would initiate from social actors themselves – social movements, citizens, frontrunners, etc. Such processes would trigger multiple possible development paths. Diversity is thus valued as a source of sustainable innovation, be it technological or, more broadly, social. Transition is, in this sense, 'an open-ended journey' (STRN 2010, p. 5), but one that has to rely upon bottom-up, radical change because actual economic, productivist, and political structures are considered as lock-in factors.

3.2 Transition is (multi) sectoral by nature

The ecological crisis is a core justification for transition. But this is not so because of any philosophical idea about the intrinsic value of nature. The ecological justification for transition rather highlights the value of natural resources and ecosystem services for continued economic prosperity and livelihood survival. Seeing transition through such an anthropocentric perspective results with a 'sectoralized' idea on how to cope with climate change, loss of biodiversity, depletion of natural resources, etc.

Climate change and its economic consequences are – implicitly or explicitly – at the centre of preoccupations. Of course, international negotiations on climate change and national climate regulations were very much mediated (Boycott, 2010). This gave birth to a discursive background where political, economic and technical issues have been very much discussed. Transition to a low carbon economy, taking climate change as a premise, is therefore a strong influence in transition as discourse, and it tends to 'sectoralise' the issue of global transformation partly by framing it as a matter of energy production, distribution and consumption. Technological improvements in the energy sector occupy an enormous ground in the transition discourse, and those improvements are constantly linked with policy relevant recommendation, such as the shared idea to switch from 'brown' energy subsidies to 'green' energy subsidies (to use the UNEP's words). Transition thus appears as a multi-sectoral macroeconomic change that has to be globally coordinated.

Most environmental problems are tackled in transition as discourse. But as they are all treated as sectoral problems and linked to sectoral policies, they are also more or less framed as developed countries issues or developing countries issues. Incidentally, this differentiation echoes the climate change perspective on north-south relationships.

3.3 Transition is globally differentiated by nature

The resonance of the UNFCCC principle of 'common but differentiated responsibilities and respective capacities' (CDRC) in the transition discourse is not surprising, given that the low carbon economy debate is strongly rooted in the climate negotiations (Roberts and Parks, 2007). The trade unions' transition discourse is exemplary in the way it manipulates the principle of CDRC: mitigating global warming should basically proceed by fairly distributing the burden of emission reductions, according to levels of development.

It is nonetheless interesting to note that, in transition as discourse, this principle applies to a broader range of issues than merely mitigating global warming. While issues of emissions reductions and energy transition are largely associated with the responsibility of developed countries, ecological challenges such as sustainable agriculture, forestry and water

are mainly thought of as developing countries stints, because they are seen as encountering development opportunities. Hence the UNEP (2011, p. 3) idea that: ‘Sustainable forestry and ecological friendly farming methods help conserve soil fertility and water resources in general, and especially for subsistence farming, upon which depend the livelihood of almost 1.3 billion people’. Water, forestry, agriculture and fisheries appear as a set of issues that are related to poverty and livelihood development, and are thus concerning the global south more than the global north, while matters of investment and technology development are mostly handled as northern challenges.

3.4 Transition consists of overcoming lock-ins through eco-innovation

Whether it is framed as radical or as sectoral, the transition process appears as an opportunity, and not as a constraint. At a very general level of enunciation, transition equals creating space for needed eco-innovation that would ‘seed transformation to greener economies’ (STRN 2010, p. 5). The radical-sectoral distinction, however, again materialises in a radical vs reformist framing of eco-innovation.

Radical eco-innovation (as explained above) consists in technologies and practices, originating from social actors rather than firms and centralised organisations, and which will trigger deep structural transformation in a bottom-up fashion. The principle of such radical innovation is to overcome current structural lock-ins throughout society. Lock-ins are ‘related to vested interests, low costs, established beliefs, sunk investments, favourable institutions’ (STRN 2010, p. 6), that any eco-innovation will inevitably face. While innovative social actors can surely, but not without difficulty, unlock certain social structures and practices, radical innovation can especially unlock – or at least reveal – power relations in society.

The core of institutional discourse on transition (i.e. UNEP, IEA, ITUC and OECD) is rather part of a reformist frame. For firms, the combination of innovation opportunities and the fact that business is ‘a key vector of innovation and solutions’ (OECD 2010, p. 15) makes it strategic to engage in transition because it will open new opportunities. For workers, the expected economic development deriving from large-scale eco-innovation might also create green jobs (ITUC 2008, p. 6). According to the UNEP (2011, p. 5), the transition ‘can generate positive outcomes for increased wealth, growth in economic output, decent employment, and reduced poverty’. According to this reformist framing of eco-innovation, major economic and political actors are able to overcome the current structural lock-ins if they work strategically to reform the actual ‘brown’ model of growth.

In the case of infrastructure such as the energy production and distribution complex, for example, lock-ins should be removed through policy intervention. This is so because from the investor’s point of view, any eco-innovation that would deviate from the system rules is considered as a risk, and ‘the cost on the first company to develop a generation project in a particular location creates a very large first-mover disadvantage’ (IEA 2010, p. 25). This type of reasoning could also be true to lock-ins in other sectors. But whereas, in the power sector, some technological devices (such as smart grids) are seen as promising eco-innovation, in no one sector is technology ever thought of as the bottom line. Rather, proper economic policies should be the main tools for promoting of transition. Following from this assumption is a series of other statements regarding the role of the market, business actors and the state.

3.5 Transition necessitates new models for pricing and valuing

‘Putting a price on carbon’ has been the motive behind the construction of the carbon market as it is supposed to lead to optimal economic decisions for mitigating climate change (Newell and Paterson, 2010). IEA and OECD are exemplary of this argument when they affirm that the price of carbon could trigger investments in green and low-carbon technologies. But the discourse on the price of carbon and other natural objects and resources also extends in a

discourse about the value of nature that is more philosophic. The NEF, for example, makes of increasing ‘environmental and social value’ the goal of the Great Transition. Behind this idea lies a set of assumptions on the value of natural goods and ecosystem services. In the words of UNEP (2011, p. 5), protecting the environment is a matter of stopping ‘the depreciation of natural capital’. The value that is considered in these claims is rather a utility value than an exchange value, and this is what needs to be taken into account to give sense to the idea of transition: green accounting and the shift to a new valuation of nature can ‘pave the way for measuring a green economy transition at the macroeconomic level.’ (UNEP, 2011, p. 5).

But those broad claims about the value of natural capital and ecosystem services need to be linked with the notion of price (exchange value) if they are to be considered by the market. Translating value into price can be done in different ways, the carbon market being the flagship example. And at all events, the state always has a central role for this process. In a more radical framing the NEF (NEF, 2009, p. 7) calls for ‘a shift from taxing “goods” such as work, to taxing environmental and social “bads” such as pollution, consumption and short-term speculation’. But in the main discursive trend on value and price, the state has to operate through more positive incentives rather than burdening economic actors with environmental taxes.

3.6 Business cannot be the driver of transition

Together with governments, private economic actors are seen as the central players for transition in the IEA, OECD and UNEP reports – they are the one who need to ‘engage’ in the transition. But not all companies are equals when it comes to engaging with the transition. There are leaders and laggards. The leaders are those who are ‘extending low-carbon strategies beyond the company’s borders [and that are managing] emissions in the supply chain and throughout the life-cycle of products’ (OECD, 2010, p. 16). They also anticipate policy development by taking part in eco-standardisation networks such as the UN Global Compact’s ‘Caring for Climate’. Leaders respond to the climate crisis, while laggards only respond to policy pressure and, above all, to economic incentives. And thus, ‘for the vast majority of firms, shifting towards renewable energies, reorganising operations to minimise emissions or using less carbon-intensive inputs are steps which require stronger government incentives and signals’ (OECD, 2010, p. 18).

Lack of engagement has also a lot to do with the fact that companies conceive green investments in terms of risks. According to the OECD, ‘depending on the size, sector and location of the company, [investment] may be costlier and have a longer return on investment’ (OECD, 2010, p. 16). In this context of risk investors will require a larger return on investment, than for less risky investments. Other factors contribute to lock-ins in which business actors and investors are stuck. For example, when new technologies are expected to become accessible, companies tend to ‘delay investment in new plants if there is a prospect to learn about developing trends in other parts of the system’ (IEA, 2010, p. 26). And thus, ‘While the increase in business action to address climate change is encouraging, much more needs to be done to fully mobilize business contributions toward a low-carbon economy.’ (OECD, 2010, p. 16) This is why policy is central to transition. Policy would amend macroeconomic models by introducing new variables such as a price on carbon and by providing more predictability.

3.7 The state is the driver of transition

Although the role for private actors is important, transition is a process that must be initiated through new policy models and governmental intervention. The role of governments is to ‘set the rules of the game’ (NEF, 2009, p. 98; OECD, 2010, p. 21), and make them clearer and stronger, so to act as the real driver of transition. Transition as discourse thus brings back state

interventionism in the global agenda by allocating specific roles to major actors: the state will drive, the business will respond. For OECD, IEA and UNEP in particular, the new ‘game’ will be about introducing incentive policies and ‘fine-tuning’ the policy framework in order to strengthen the incentivising effect of governmental action.

Framed as a logical outcome of the new models for valuing and the given incapacity of the private sector to lead the transition, the return of state interventionism is necessary in order ‘to change the perverse market incentives that drive this capital misallocation and ignore social and environmental externalities’ (UNEP, 2011, p. 2), and because economic models are admittedly incapable to predict the transition. Therefore, the state has to create a new interventionist ‘backdrop’ for transition – that is one which consists in setting the right incentives to business and all kinds of ‘specific enabling conditions’ (UNEP, 2011, p. 2) to facilitate the involvement of the private sector.

3.8 Transition needs a new incentive interventionism

As implicitly defined in the IEA, the OECD and the UNEP reports, incentive interventionism for transition is a set of policies implemented at the national level that would help firms and businesses to shift from fossil to renewable energy – from brown to green economy – by providing incentives and encouragements of all sorts.

The rationale behind strong incentives relates to the lock-ins in economic and investment practices described above. It aims at modifying the calculation and management of risk by business actors: ‘Policy mechanisms that are designed to stimulate investment in new capital stock will therefore need to provide greater incentives in order to overcome these effects of risk and the tendency to keep old plants running longer’ (IEA, 2010, p. 27). Stricter environmental standards, for example, could make old power plants refurbishment more costly than building new ones relying on renewable energy. Fiscal and monetary rewards could ‘designed to stimulate investment in new capital stock [which will determine] the rate of transition to a low-carbon energy system’ (IEA, 2010, p. 27). Incentive interventionism is thus about constraining companies to move faster to green technologies and compensating them ‘for higher costs of low-carbon technologies, but also for the risks associated with such a transition’ (IEA, 2010, p. 27).

Because the logic of incentive interventionism is very much drawn by the mobilisation of capital to fund transition, the state is also regarded as the initiator of a shift in investment patterns: ‘green public procurement’, ‘targeted public expenditures’, and ‘public investments [are regarded] as enablers for bringing about changes in patterns of private investment’ (UNEP, 2011, p. 2). But developing new strands of investment is not sufficient if the old ‘brown’ type of public subsidies do not vanish. Governments are thus expected to ‘correct’ market failures ‘by reducing or eliminating environmentally harmful or perverse subsidies’ (UNEP, 2011, p. 3).

Incentive interventionism thus means creating more policy and more regulation, and also aiming at harmonising them among countries in order to ‘provide greater predictability, transparency, and security when making long-term capital allocation decisions, such as in infrastructures’ (OECD, 2010, p. 21). In all cases, governmental action is the identified ‘kick-start’ of transition.

3.9 Transition needs a side effects interventionism

Although the UNEP’s report and the trade unions’ discourse are largely branded with concerns for social issues such as poverty eradication, green job and human rights, these issues are generally under-considered in the framing of the incentive interventionism. This is related to the fact that the underlying logic of transition as discourse comprises a social paradox: it puts social development and environmental protection at the forefront of the

justification for transition, but it frames these goals as expected fallouts of a mainly economic transformation triggered by incentivising public policy.

The UNEP, for example, is quite clear: ‘UNEP defines a green economy as one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities’ (UNEP, 2011, p. 2). In the same way that social problems and resources depletion resulted from market failures in the brown economy, society and natural resources will indirectly benefit from the green economy, which is one that creates growth ‘while enhancing stocks of renewable resources, reducing environmental risks, and rebuilding our capacity to generate future prosperity’ (UNEP, 2011, p. 5). The Trade unions, when framing the necessary mitigation of climate change, go in the same direction: transition and investments in low-carbon technology will create new ‘green jobs’ and thus insure welfare outcomes for the workers. Social benefits, in these cases, are secondary outcomes of a basically economic transition. The Trade unions, however, go one step further and also foresee negative side effects of transition, which will need to be taken care of by governmental action.

Impacts of the transition process on society and the employment market are difficult for foresee. But in the context of adaptation and mitigation measures, as deposed industrial sectors and technologies will vanish, there will be job lost. For the trade unions, the state will thus have to deal with the side effects of transition on employment, households and industries, by implementing ‘accompanying measures for all other productive sectors that will have to adapt to the constraints arising from a low-carbon economy’ (ITUC, 2008, p. 4). For transition to be ‘just’, it needs to be supported by social protection schemes such as ‘social security including social insurance and public employment guarantee schemes, job creating public works programmes for the unemployed and working poor, income maintenance, and job placement services, among other’ (TUAC/ITUC, 2010, flyer).

3.10 The people are the drivers of transition

The preceding few statements together form a coherent frame that can be tagged as technocratic. But transition as discourse does not revolves around a unique frame. The other more radical framing of transition described above identifies alternative drivers and roles for social and political actors. Along with the trade unions – and to some extent the UNEP – the NEF and the STRN discourse are giving a greater importance to the people, the individuals, and civil society. But while the trade unions see these actors as vulnerable actors that must be protected from the side effects of transition, the NEF and the STRN give them the potential role of being frontrunners and innovators.

The focus of transition research is for ‘substantial changes in social networks and in the development of practices, routines, capabilities, preferences and interests of various social groups’ (STRN, 2010, p. 5). This rather local level of innovation is seen as a more proper ground to radical change.

With a much more activist tone, the constant use of the pronouns ‘we’, ‘our’, and ‘us’ by the NEF has the effect of framing the transition as a process oriented towards the people and the individuals, rather than the business and global policy. For the NEF, the transition must be the result of a collective work led by locally managed processes of transformation. Social movements, civil society actors and individuals are the drivers of transition. In fact, their well being is also the object of transition: ‘By sharing our resources more equally, by building better communities and a better society and by safeguarding the natural environment, we can focus on the things that really matter and achieve genuine and lasting progress with higher levels of well being. Taken together this would amount to what we have termed the Great Transition’ (NEF, 2009, p. 5). Because ‘More equal societies are happier societies’ (NEF, 2009, p. 5), the economic benefits of transition will be the effect of higher social well-

being – which is the opposite relationship than the one promoted by technocratic view, in which social benefits are resulting from economic green growth.

3.11 Transition is a complex process

Complexity is also at the heart of transition. But there is again two takes on complexity. For the technocratic view, complexity emerges from the sectors to be ‘greened’ or ‘de-carbonised’. It is answered by yet more technocratic solutions: reporting and monitoring. For the OECD, the IEA and the UNEP, monitoring is an essential feature of governance in a context of complexity for reasons of efficiency. Emissions accounting and reporting, for example, will be helpful for companies as it increases capacity to manage their emissions, but moreover to policy-makers who shall make the whole incentive interventionism more credible. Thus, international harmonisation of reporting and verifying protocols might be necessary in order to ‘identify and use appropriate indicators at both a macroeconomic and a sectoral level’ (UNEP, 2011, p. 5). Technocratic involvement in monitoring transition is consequently regarded as an appropriate response to complexity.

For the more radical view, complexity is rather something inherent to any social transformation. The STRN frames the transition as a social scientific issue and as a research object. As such it is the discourses that provides the most elaborate idea of what complexity means for transitioning to a sustainable world. Transition is a process that is co-evolutionary and interactive, involving multiple actors, sectors, technologies and multiple levels of governance; it is non linear and incomprehensible through simple causality relations; it is characterised by plausible draw-backs and resistance from ‘mutually reinforcing processes [called] a socio-technical regime’ (STRN, 2010, p. 4). This is why ‘The core problem regarding sustainability transitions is how green innovations and sustainable practices (in behaviour and policy) struggle against existing systems or regimes.’ (STRN, 2010, p. 5) These complex relationships demand for a better ‘understanding of the dynamics of transitions in order to inform policy and practitioners appropriately [...]’ (STRN, 2010, p. 2). Transitions cannot be controlled, but the STRN nevertheless provides the idea that they can be ‘steered’, ‘influenced’, and in a certain sense, managed by the use of appropriate tools at the appropriate levels.

4. The radical and technocratic framing of transition

The whole transition as discourse duality is revealed by the distinction between linear thinking and complexity perspective (Table 1). While the radical transition frame expects open, non-linear structural transformation through diversified, local and social innovation, the technocratic transition frame stays confident in top-down solutions such as re-defining the notion of value, creating incentives for green business, green investment, and reporting and monitoring. Although transition as discourse certainly does introduce new statements in the global environmental discourse, this duality is a common feature of discursive conflict dynamics. In their political ecology of global environmental discourse, Adger *et al.* (2001) observe the existence of a dominant ‘managerial discourse’ based on a technocratic, policy oriented approach, and an opposing ‘populist discourse’ building on local actors as victims of the latter. To some extent, these two discourses (or frames) seem to extend in transition as discourse. But there are differences.

The issue of victims is not very salient in radical transition as discourse – it rather bears the mark of a more positive and optimistic engagement towards transition. This ‘radical’ discourse on transition entails features of what classical sociologist Karl Mannheim (1936) called ‘utopia’ as a contrast to ‘ideology’. According to him, utopia is a state of mind oriented to a social and political order that does not exist in the present, but is expected or desired for the future. In this sense, the ‘radical transition’ as discourse is utopian: it calls for the

empowerment of the people and civil society – the perceived true drivers of transition – and wish for deep structural changes that would undermine the current market economy. Transition, here, is not a policy-driven process, although governments are expected to fund new sustainable infrastructures where and when appropriate. The state, in fact, has to be ‘enabling’ for social movements, practitioners and frontrunners. Hence the importance for understanding ‘which societal change is susceptible to purposeful governance intervention’ (STRN, 2010, p. 8).

Being mostly carried out by international organisations and agencies such as the UNEP, the IEA, the OECD, and, to some extent, the trade unions, the technocratic transition discourse is a rather conventional view on a rather new topic. It is, in the sense of Mannheim’s definition (1936), closer to ideological discourse as it does not question current power relations and social order. Neither does the technocratic transition frame profoundly differ from the main ‘liberal environmentalism’ norms – state sovereignty, common but differentiated responsibility, liberal market philosophy, and the use of market mechanisms – institutionalised in global environmental governance following the 1992 Earth Summit (Bernstein, 2002). Promoting a new kind of incentive interventionism to fit the needs of business actors, and sectoralising issues according to their economic importance for the global north and the global south is also clearly in line with the ‘managerial discourse’ described by Adger *et al.* (2001). However, global organisations prove to be aware of the sensitiveness of any global transition process that would appear to be controlled by a central organisation, and be perceived as ‘a developed-world imposition to restrain development and perpetuate poverty in developing countries’ (UNEP, 2011, p. 3).

Table 2. The radical and technocratic transition frames

Topics	The radical transition frame	The technocratic transition frame
Transition process	Transition is a radical, complex, bottom-up process of structural transformation.	Transition happens through innovation and investment in key sectors. It can be managed and monitored from a policy standpoint.
Status of value	Creating social and environmental value for society is the goal of transition. Economic and ecological ‘bads’ should be taxed.	The value of natural resources and ecosystem services needs to be internalised in prices in order to give better market signals.
Main drivers of transition	The people, civil society actors and small entrepreneurs are the drivers of transition. They are the radical eco-innovator and real frontrunners.	Because of diverse lock-ins, business actors need to be shown the way by the state, which is the core driver of transition.
Policy model	The state should enable local innovations; promote community development and tax detrimental activities.	A new incentive interventionism should foster green investment with fiscal and monetary rewards and vanish brown subsidies. The state should also set a side-effect interventionism for impacted sectors.
North-South responsibilities	The developed states should transfer money to the global south and let developing states undertake endogenous development.	Differentiated responsibility in terms of sectors to prioritise. The global north should focus on energy, while the global south should focus on resources.
Social benefits	Transition is about making a better, greener society. Social actors are both the drivers and the direct beneficiaries.	Poverty eradication and green jobs are outcomes of the new policy interventionism and the expected green growth.

In sum, generally, the two frames are in opposition regarding the drivers of transition and the possibility (or impossibility) to direct it in a top-down fashion. But regarding certain topics, the difference between the two frames is blurred. For example, both tendencies call for a form of ‘enabling state’ that would, on the one side, help catalysing civil society’s efforts

for eco-innovation and transition, and, on the other side, give the direction to major economic actors. Both these frames of the role of the state resonate with Giddens' idea of an 'ensuring state' (2009) that would act as a facilitator for social innovators and as reckoner for the progress made in order to ensure 'political convergence' towards transition. Giddens' ensuring state would also aim for economic convergence by promoting strategic advantages and opportunities for corporate strategies and technologies that result in mitigating climate change. Thus, in transition discourse as in Giddens proposal, 'enabling' is relevant for both social and economic actors.

Another blurred aspect of the radical-technocratic distinction is the fact that some actors are astride both frames. While the trade unions affirm that 'just transition is a tool the trade union movement shares with the international community' (TUAC/ITUC, 2010, flyer), they also care much for endogenous development, for human rights, and for communities as capable actors. On the other side, the STRN is very much in line with the NEF on the topics of radical transformation, the importance of local actors and the overall complexity of transition, but it still promotes transitions as sectoral processes, in a similar fashion than the technocratic frame.

The social construction of transition is clearly not yet completely crystallised, and so there is room for new players and refining of statements and frames. There are still heterogeneous pathways and destinations for transition.

Conclusion

Transition as discourse does not mean that transition is 'just about discourse'. On the contrary, it means that the ongoing framing of transition will expectedly bring transformation in global environmental policymaking. This paper has outlined eleven statements and two main discursive framing of transition: one that is more radical in the (structural) scope and (social) object of the proposed transformation, and one that is more concerned with technocratic management of natural resources and economic growth through a new interventionist incentivising policy model. Of course, the technocratic frame currently has much more traction in global environmental policymaking as it emanates from authoritative international organisations and agencies that are promoters of the institutionalised liberal environmentalism compromise (Bernstein, 2002). However, the radical counter-discourse cannot be discarded too fast from future policy impact, as it is plausible that it will federate civil society organisations and sprout new practices at more local levels, such as 'transition towns' (Scott-Cato and Hillier, 2010; Hopkins, 2008). The feeding of a formal scientific contribution on transition research might as well strengthen and legitimise the idea of a radical transition. Environmental discourse framing have changed before and it will change again.

References

- Adger, W.N. *et al.*, 2001. Advancing a Political Ecology of Global Environmental Discourse. *Development and Change*, 32, 681-715.
- Bernstein, S., 2002. Liberal Environmentalism and Global Environmental Governance. *Global Environmental Politics*, 2 (3), 1-16.
- Blühdorn, I., 2007. Sustaining the Unsustainable: Symbolic Politics and the Politics of Simulation. *Environmental Politics*, 16 (2), 251-275.
- Blühdorn, I. and Welsh, I., 2007. Eco-politics beyond the Paradigm of Sustainability: A Conceptual Framework and Research Agenda. *Environmental Politics*, 16 (2), 185-205.

Boykoff, M.T., 2010. *Who Speaks for the Climate. Making Sense of Media reporting on Climate Change*. Cambridge University Press.

Duchastel, J., 1993. Discours et informatique : des objets sociologiques? [Are Discourse and Computers Sociological Objects?]. *Sociologie et sociétés*, 25 (2), 157-170.

Eder, K., 1996. *The Social Construction of Nature. A Sociology of Ecological Enlightenment*. London: Sage Publication.

Foucault, M., 1969. *L'archéologie du savoir* [The Archaeology of Knowledge]. Paris: Gallimard.

Gamson, W.A. and Modigliani, A., 1989. Media Discourse and Public Opinion on Nuclear Power: A Constructionist Approach. *American Journal of Sociology*, 95 (1), 1-37.

Garcia, E., 2005. Keywords Co-Occurrence and Semantic Connectivity. *Mi Islta* [online], Available from: <http://www.miislita.com/semantics/c-index-1.html> [Accessed 23 April 2012]

Geels, F.W. and Schot, J., 2007. Typology of sociotechnical transition pathways. *Research Policy*, 36, 399-417.

Geels, F.W., 2010. Ontologies, socio-technical transitions (to sustainability), and the multi-level perspective. *Research Policy*, 39, 495-510.

Gendron, C., 2012. *Ecological Modernisation and Business Leaders. Regulation Theory and Sustainable Development*. London: Routledge.

Giddens, A., 1984. *The Constitution of Society: Outline of the Theory of Structuration*, Cambridge: Polity.

Giddens, A., 2009. *The Politics of Climate Change*. Cambridge: Polity.

Glaser, B.G. and Strauss, A.L., 1967. *Discovery of Grounded Theory. Strategies for Qualitative Research*, Sociology Press.

Hajer, M., 1995. *The Politics of Environmental Discourse: Ecological Modernization and the Policy Process*. Oxford: Duke University Press.

Hopkins, R., 2008. *The Transition Handbook: From Oil Dependency to Local Resilience*, Totnes (UK): Green Books.

International Energy Agency (IEA), 2010. *The economics of transition in the power sector*. OECD/IEA Publication [online]. Available from http://www.iea.org/publications/free_new_Desc.asp?PUBS_ID=2209 [Accessed 29 February 2012].

International Trade Union Confederation (ITUC), 2008. *Trade unions and climate change. Equity, justice and solidarity in the fight against climate change* [online]. Available from:

<http://www.ituc-csi.org/trade-unions-and-climate-change.6030.html> [Accessed February 29, 2012].

Lakoff, G., 2010. Why it Matters How we Frame the Environment. *Environmental Communication: A Journal of Nature and Culture*, 4 (1), 70-81.

Latour, Bruno, 2004, *Politics of Nature – How to bring Sciences into Democracy*, Harvard University Press.

Loorbach, D. and Rotmans, J., 2010. The practice of transition management: Examples and lessons from four distinct cases. *Futures*, 32, 237-246.

Mannheim, K., 1936. *Ideology and Utopia*. London: Routledge.

New Economic Foundation (NEF), 2009. *The Great Transition*. NEF Publication [online]. Available from: <http://www.neweconomics.org/publications/great-transition> Accessed February 29, 2012.

Newell, P. and Paterson, M., 2010. *Climate Capitalism. Global Warming and the Transformation of the Global Economy*. Cambridge University Press.

Organisation for Economic Co-operation and Development (OECD), 2010. *Transition to a Low-carbon Economy. Public Goals and Corporate Practices*. OECD Publication.

Pereira, T., 2012. The transition to a sustainable society: a new social contract. *Environment, Development and Sustainability*, 14 (2), 273-281.

Phillips, N. and Hardy, C., 2002. *Discourse Analysis. Investigating Processes of Social Construction*. London: Sage Publication.

Polanyi, K., 2001 *The great transformation: The political and economic origins of our time*, Boston: Beacon Press.

Roberts, J.T. and Parks, B.C., 2007. *A Climate of Injustice. Global Inequality, North-South Politics and Climate Policy*. Cambridge (MA): MIT Press.

Rotmans, J. and Loorbach, D., 2009. Complexity and Transition Management. *Journal of Industrial Ecology*, 13 (2), 184-196.

Scott-Cato, M. and Hillier, J., 2010. How could we study climate-related social innovation? Applying Deleuzian philosophy to Transition Towns. *Environmental Politics*, 19 (6), 869-887.

Stern, N., 2006. *Stern Review on the Economics of Climate Change*. Office of Climate Change [online]. Available from: http://webarchive.nationalarchives.gov.uk/http://www.hm-treasury.gov.uk/sternreview_index.htm [Accessed 30 March 2012].

Sustainability Transition research Network (STRN), 2010. *A mission statement and research agenda for the Sustainability Transitions Research Network* [online]. Available from: <http://www.transitionsnetwork.org/> [Accessed 29 February 2012].

Trade Union Advisory Committee and International Trade Union Confederation (TUAC/ITUC), 2010. *A Just Transition: A Fair Pathway to Protect the Climate* [online]. Available from: <http://www.ituc-csi.org/what-s-just-transition.html> [Accessed 29 February 2012].

United Nations (UN), 2011, *United Nations Framework Convention on Climate Change* [online]. Available from: http://unfccc.int/essential_background/convention/items/2627.php [Accessed April 24, 2012].

United Nations Conference on Sustainable development Rio+20 (UNCSD), 2012. *The Future We Want – Zero draft of the outcome document* [online]. Available from: <http://www.uncsd2012.org/rio20/mgzerodraft.html> [Accessed on April 24, 2012].

United Nations Environmental Programme (UNEP), 2011. *Towards a Green Economy. Pathways to Sustainable Development and Poverty Eradication. A Synthesis for Policy Makers*, UNEP Publication [online]. Available from: http://hqweb.unep.org/publications/contents/pub_details_search.asp?ID=4188 [Accessed 29 February 2012].

van den Bergh, J.C.J.M., Truffer, B. and Kallis, G., 2011. Environmental innovation and societal transitions: Introduction and overview. *Environmental Innovation and Societal Transitions*, 1, 1-23.

Voß, J.-P., Bauknecht, D. and Kemp, R., 2006. *Reflexive Governance of Sustainable Development*. Edward Elgar.

Zaccai, E., 2012. Over two decades in pursuit of sustainable development: Influence, transformations, limits. *Environmental Development*, (1), 79-90.