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## Sustainability transitions in the developing world: Challenges of socio-technical transformations unfolding in contexts of poverty

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## ABSTRACT

The transitions to sustainability approach has proved to be useful for academics, policy makers and practitioners to understand and promote socio-technical transformations, often aiming at climate change alternatives in European countries. However, little attention has been paid to the limitations of using frameworks such as the Multi-level perspective and the Strategic Niche Management approach in the developing world. Here, countries exhibit a mixture of well- and ill-functioning institutions, in a context of market imperfection, clientelist and social exclusive communities, patriarchal households and patrimonial and/or marketised states. In order to explore such limitations, we have used an institutional framework documented in the development studies literature, which describes three types of institutional settings: ‘welfare’, ‘informal security’ and ‘insecurity’. This institutional analysis shows that (1) the context for innovation in developing countries is a loose scenario where the concepts of ‘pockets’ or ‘layers’ can be useful; (2) the characteristics of the institutional setting shape in several ways the quality of the niche structuration processes that create and unfold. Our rationale and illustrations call for bringing the poverty alleviation agenda into sustainability transitions studies in developing countries. We propose areas of further reflection attempting to inspire future research pathways.

## 1. Introduction

The transitions to sustainability approach has proved to be useful for academics, policy makers and practitioners to understand and promote socio-technical transformations that allow more sustainable ways of production and consumption (Grin et al., 2010; Markard et al., 2012; Smith et al., 2010). This approach has spread widely, with abundant examples from practice, mainly in European countries, in areas such as energy, transportation and food, often aiming at climate change alternatives. These transformations intend to change socio-technical systems of production and consumption into greener and more inclusive ones, through deep structural changes which involve diverse degrees of cooperation and conflict among all actors involved (Newig et al., 2007; Shove and Walker, 2007; Smith and Stirling, 2007). Despite increasing attention to the politics of these transformations in the transitions literature (Avelino et al., 2016; Geels, 2014; Hoffman, 2013), a closer look at the questions *which transformation?, for whom?, and by whom?* (Scoones et al., 2015) is still needed in order to understand the kind of sustainability these transformations bring about.

These questions are particularly relevant in the developing world,

where countries exhibit a mixture of well- and ill-functioning institutions, in a context of market imperfection, clientelist and social exclusive communities, patriarchal households and patrimonial and/or marketised states (Bevan, 2004a; Wood and Gough, 2006). The existence of ill-functioning institutions is the main feature that characterises what we call ‘developing countries’ in this paper. This ‘illness’ consists of the fact that both formal and informal institutions in the developing world are contested and personalised at various extents, undermining the well-being of many and strengthening the privileges of a few, and therefore, reproducing patterns of social exclusion.

Most sustainability transitions scholars have implicitly focused on the environmental sustainability of production-consumption systems, while overlooking their ‘socio-institutional’ sustainability (Romijn et al., 2010:335). The socio-institutional dimension of sustainability refers to the ability of societies to tackle the ‘illness’ mentioned above, i.e. to counteract processes of poverty reproduction and capability deprivation (Sen, 2000). Sustainability policy and practice in the developing world needs to include eradicating poverty as a focus (UN, 2012, 2015). In fact, some have argued that ‘sustainability sits at the nexus of poverty, the natural environment and innovation’

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(Khavul and Bruton, 2013:287) and others that ‘a just transition would consist of a dual commitment to human well-being (with respect to income, education and health) and sustainability (with respect to decarbonisation, resource efficiency and ecosystem restoration)’ (Swilling et al., 2016:650).

In this paper we intend to uncover patterns of poverty reproduction that transitions frameworks have so far overlooked, in order to include sensitivity to poverty alleviation within sustainability transitions analyses. We understand poverty as a multidimensional phenomenon that causes capability deprivation and undermines people’s well-being (Bebbington, 1999; Sen, 1981, 2000). We aim at highlighting some elements which connect the transitions to sustainability approach to some fundamental concepts related to poverty alleviation and well-being. Poverty alleviation refers to the expansion of human capabilities for all, i.e. ‘the ability of human beings to lead lives they have reason to value and to enhance the substantive choices they have’ (Sen, 1997:1959), which can only be realised in the context of well-functioning institutions committed to social security (Nussbaum, 2000; Sen 1982). Specifically, in this paper we examine the question *to what extent the conceptual elements of the sustainability transitions theory embrace the reality and complexity of exclusive socio-technical systems in poverty contexts, i.e. systems that strengthen the privileges of a few while undermining the well-being of many?*

While the paper is mainly theoretical, we use cases that have been discussed in the transitions literature in order to illustrate our argument.

The paper is structured as follows. Section 2 explores notions of landscape and regime in poverty contexts. This exploration builds on the Institutional Responsibility Matrix (IRM) (Wood and Gough, 2006), which pictures ‘the institutional landscape within which people have to pursue their livelihoods and well-being objectives’. Section 3 illustrates the poverty reproduction challenges that niche structuration processes deal with in the developing world. Finally, Section 4 discusses the implications of our conceptual contribution for a research agenda on sustainability transitions in developing countries.

## 2. Transitions in developing countries: contextualising notions of landscape and regime

Developing countries exhibit a mixture of well- and ill-functioning institutions, in a context of market imperfection, clientelist and social exclusive communities, patriarchal households and patrimonial and/or marketized states (Bevan, 2004a; Wood and Gough, 2006). In this context, both formal and informal institutions are contested (i.e. exhibit problems of legitimacy) and personalised (i.e. in the hands of elitist groups) at various extents, undermining the well-being of many and strengthening the privileges of a few (reproducing patterns of social exclusion). This institutional scenario differs from the one in European countries, where the transitions to sustainability has widely spread, both in theory and in practice. In the following sections we make use of the Institutional Responsibility Matrix suggested by development scholars, in order to explain in which ways the institutional scenario differs in different regions of the world. Then, we will highlight the implications of these differences for approaching socio-technical landscapes and regimes in the developing world.

### 2.1. Institutional responsibility matrix

In Wood and Gough’s view (2006), even though poverty eradication is a universal goal, ‘one size fits all’ policy solutions to poverty eradication do not make sense. They call for context-specific means to achieve it, because in a hostile political economy where inequality and arbitrary exercises of power prevail, the extent to which people (individually and collectively) enact their capabilities depends on the extent to which local institutions are able to guarantee social security (Nussbaum, 2000; Sen 1982; Wood, 2003).

As we will explain below, both state and non-state institutions in the developing world fail to provide social security at various degrees, reproducing informal social security or insecurity. This way of characterising institutions has led Wood and Gough (2006) to suggest three types of institutional settings: ‘welfare’, ‘informal security’ and ‘insecurity’.

This typification is derived from a theoretical framework that comprises four components: 1) The institutional conditions, which include the character of markets, legitimacy of the state, societal integration, culture and values and the position of the country in the global system. 2) The institutional responsibility matrix (IRM),<sup>1</sup> which describes

the institutional landscape within which people have to pursue their livelihoods and well-being objectives, referring to the role of government, community (informal as well as organized, such as NGOs and Community Based Organizations), private sector market activity and the household, in mitigating insecurity and well-being, alongside the role of matching international actors and processes. (p. 1701)

3) The welfare situation of the population, measured by, for example, the Human Development Index. 4) The pattern of stratification and mobilisation, which refers to the existing distribution of power in a society and the range of societal inequalities. These four components are interrelated and shape the dynamics of each other.

The authors argue that both formal and informal institutions in developing countries are contested and personalised at various extents, so that ‘people have to engage in wider strategies of security provision, risk avoidance and uncertainty management’ (p. 1697). These strategies usually prioritise survival and security in the present, continuously postponing long-term sustained well-being, i.e. the ‘Faustian bargain’ (Wood, 2003). In contrast, in welfare settings people rely on legitimated states and regulated labour and financial markets that provide for all citizens minimum conditions for reproduction.

In informal and insecurity settings, the role of the state, the market, the community and the household (IRM components) is always ambiguous. Therefore, individuals and communities develop a portfolio of strategies and livelihoods, in order to face insecurity and uncertainty. On the one hand, in ‘informal security’ settings people rely heavily on community and family relationships to pursue their livelihoods and meet their well-being objectives, which results in problematic inclusion or adverse incorporation, because these relationships are usually hierarchical and asymmetrical, reproducing social structuration via patron-client relations. On the other hand, in ‘insecurity’ settings, local warlords and their clients block the reproduction and emergence of relatively stable informal mechanisms that mitigate insecurity for all (Wood and Gough, 2006: 1699)

Wood and Gough (2006) acknowledge that this classification is not confined to national boundaries and that different parts of the population of one single country might experience different institutional settings, which might also change over time.<sup>2</sup>

### 2.2. Understanding socio-technical landscapes and regimes in developing countries

Transition studies have widely used the ‘Multi-level Perspective’ as a framework for understanding major shifts in socio-technical systems (Geels, 2002; Smith et al., 2010). According to this perspective, changes

<sup>1</sup> This matrix shows the permeability between state, market, community and household institutions and its manifestations at both the domestic and the supranational level. The purpose of highlighting such permeability is to make clear that the state cannot disentangle itself from deep social and political structures and function to compensate for them (Wood and Gough, 2006:1702–1703; Wood and Gough, 2006; Wood and Gough, 2006:1702–1703).

<sup>2</sup> For instance, in the case of (sudden) change in the ruling government.

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