Theories of Migration in and from Rural Sub-Saharan Africa:

Review and Critique of Current Literature

Stephan Hochleithner Andreas Exner





WORKING PAPER NO 14 2018

Contents

Abstract	4
Preface	5
About the Authors	6
Introduction	7
Typology of migration theories	9
Distinction by basic premises	9
Distinction by object of research	12
Neo-Malthusian versus context-sensitive political ecology perspectives.	13
Specific theoretical propositions	15
Neoclassical migration theory and the new economics of labor migration	15
Segmented labor-market theory	17
Social capital theory and cumulative causation approach	17
Push-pull models of migration	18
Mobility Transition	18
Integrative statistical analyses	22
Institutions	23
Imaginaries	23
Environment-migration nexus	26
Environment-migration-conflict nexus	30
EXCURSUS Rural-urban migration	33
Conclusion	34
References	35

Abstract

This working paper presents an overview of the global literature on migration with a focus on rural areas. It discusses the general structure of the field of migration studies and outlines a typology of approaches found within this literature. Three basic dimensions of difference can be identified in migration research: first, concerning the basic premises of social science; second, regarding the object of migration research; and third, focusing on the opposition between neo-Malthusian versus context-sensitive political-ecology perspectives. One of the best researched theorems to date appears to be the 'mobility transition' approach, pointing at long-term structural changes in migration. The working paper also pays attention to a currently prominent environment-migration-conflict nexus, which, however, so far features rather inconclusive research.

Preface

The mandate of the Swedish International Centre for Local Democracy (ICLD) is to contribute to poverty reduction by promoting local democracy in low and middle-income countries. In order to fulfil this mandate, we offer decentralized cooperation through our municipal partnership programme, capacity building through our international training programmes and exchange of knowledge through our Knowledge Centre. ICLD documents and publishes key lessons learned from our ongoing activities, initiates and funds relevant research and engages in scholarly networks and organizes conferences and workshops. We also maintain a publications series. This working paper, "Theories of Migration in and from Rural Sub-Saharan Africa: Review and Critique of current literature", by Stephan Hochleithner and Andreas Exner, is part of a series of four review papers that provide background for the research project "Political Representation under a Changing Sky", financed by ICLD. This project aims to understand the multiple causes for climate-related migration from the Sahel towards Europe and the role of local political representation by local government in facilitating or moderating this migration.

This working paper presents an overview of the global literature on migration with a focus on rural areas. Different theories on migration are examined. An interesting finding is the large amount of evidence confirming the 'mobility transition theorem' that concludes that more development brings higher emigration and that most migrants originate from middle income countries. Thus, the paper highlights the need to avoid simple explanations.

I hope this study provides the reader with an increased understanding of the role of local government in analyses of emigration and development that can enlighten our efforts to build a more inclusive and fair world. In this way, we hope to contribute to increase knowledge to achieve the sustainable development goals.

Visby, Sweden, September 2018

Christer Åkesson

Acting Secretary General, ICLD

About the Authors

Stephan Hochleithner

Dr.sc.nat. in Geography, University of Zurich, Switzerland; Mag.phil. in Social Anthropology, University of Vienna, Austria. Currently Post-Doc Researcher at the Dept. of ESPM, University of California, Berkeley, USA, and Affiliate Researcher at the Dept. of Geography, University of Zurich, Switzerland. Research interests: development; access to resources; global history; the crossroads of material and social realms; social and cultural dimensions of agriculture; forced displacement, mobility and migration; social theory building; carefully combining qualitative and quantitative methods.



Andreas Exner

Studies in Political Science (PhD cand.) and Ecology (Mag.), affiliated with the Department of Political Science, University of Vienna, currently Schasching-fellow at the Catholic Social Academy of Austria (KSÖ) investigating solidarity economies and social ecological transformation, working moreover in research projects at the Institute of Multi-Level Governance and Development, Vienna University of Economics and Business, Austria (on edible cities) and the Institute for Psychology of the University of Innsbruck, Austria (on democratic organization and urban development). Research interests: political ecology, social ecological transformation, international relations, resources, Africa, urban studies, mobility and migration; combining political economy with discourse analysis and anthropology, and qualitative with quantitative approaches in critical mixed method approaches, in view of policy relevance in trans- and inter-disciplinary perspective; specific interest in epistemology and methodology.



Introduction

This working paper is part of a series of three that resulted from extensive research on (theoretical) framings and empirical studies of migration and local government with a focus on the West African Sahel (see for the other two parts Hochleithner and Exner 2018a and 2018b). The overview presented in the working paper series provides background for the "Political Representation under a Changing Sky" research project of the International Center for Local Democracy (ICLD).

This project aims to understand the multiple causes for climate-related migration from the Sahel towards Europe and the role of local political representation by local government in facilitating or moderating this migration. The project examines the roles of local governments—particularly their function of representation—in generating, mediating and reducing the current trend in which rural people are migrating out of areas in Sub-Saharan Africa in regions where climate change is viewed as a driver of outmigration.

The project seeks to identify means to make policy and practical responses to climate change supportive of local democracy -to make these responses emancipatory- and therefore a transformative force for equity, justice, and security for those deciding their future in place or abroad. The field research for this project is conducted in the Tambacounda Region of Senegal and in the Dantiandou and Say Districts of Niger, where out-migration is prevalent and where the consequences of this migration are often dire: many migrants die in route to Europe or simply disappear, leaving their communities and families with less labour, a great loss from having invested in the migration of their children, and with the grief of loss. Their decision to migrate is multi-dimensional, as this review implies and as the preliminary field research is already indicating.

This working paper provides an overview of the global literature on migration with a deliberate focus on rural areas and the migration of rural population groups. We discuss the general structure of the field of migration studies before outlining a typology of approaches found within this literature. Three basic dimensions of difference can be identified in migration research: first,

concerning the basic premises of social science, i.e., methodological individualism versus macro-structural or anthropological approaches, and methodological nationalism versus approaches that de-naturalize national borders and contextualize these trans-nationally; second, regarding the object of migration research and how it is conceived; and third, focusing on the opposition between neo-Malthusian versus context-sensitive political-ecology perspectives on the possible connection between environmental change and migration.

Theories of migration are of varying scope, ranging from broad theories or frameworks (e.g., Lee 1966; Molho 1986) to more modest claims of mid-range theorizations, single theorems or the development of contextualized concepts. Some authors explicitly warn against "grand theories" while voicing concerns about undertheorized research in migration studies (e.g. Van Hear 2010; Castles 2010; Bakewell 2010; Bakewell and Jónsson 2013). De Haas (2010b) criticizes an abandonment of attempts to theorize migration caused by the daunting complexity and diversity of migration processes. Theories of migration follow different paradigms, located within several disciplines and at their intersections. Although migration studies as a defined and self-identified field of research are well-established, a considerable number of studies of the phenomenon of migration do not relate to broader migration theories. This appears to be either due to methodological and theoretical considerations or to a lack of knowledge of or interest in such theories, which seems partly attributable to differences in overarching scientific paradigms and disciplinary perspectives on migration.

^{1.} The research for this project is being conducted by Dr. Papa Faye, Executive Secretary of CADRE (Centre d'Action pour le Développement et la Recherche en Afrique – CADRE) in Dakar, Senegal; Professor Jesse Ribot, University of Illinois, Urbana-Champaign; and Professor Matthew Turner, University of Wisconsin, Madison. See for details: https://icld.se/en/article/climate-or-economic-migration-local-democracy-and-vulnerability-reduction-in-africa:-political-representation-under-a-changing-sky

More narrowly defined, the field of migration studies has a long tradition reaching back to the 19th century (Lee 1966; Piguet 2013) and has since then diversified into a number of approaches that mainly differ with respect to methods and focus. Most notably, the field has evolved differently in regard to internal and international migration (King and Skeldon 2010; see also, e.g., Czaika 2012), which is criticized by Glick Schiller and Salazar (2013) as testifying to methodological nationalism being shaped by national political agendas (cf. e.g. Beauchemin 2015). However, the case study of Wouterse and van den Berg (2011) suggests that internal and international migration (or, as their case demonstrates: continental and inter-continental migration) might indeed be driven by different factors. Czaika (2015) proposes to theorize short-term bilateral migration differently from long-term international migration. Refugee studies have partly taken a course separate from general migration research (Castles 2010; Piguet 2013).

The perspective of migration studies has been comple mented in more recent years by mobility studies (Salazar 2011; Glick Schiller and Salazar 2013; Sheller 2016; Faulconbridge and Hui 2016). Related to this type of studies, Glick Schiller and Salazar (2013) argue for a regimes-of-mobility-approach that investigates the relation between mobility and stasis in a global space of inequalities. In their view, regimes of mobility should be understood as being linked to the dynamics of capital accumulation and imbued by meaning as shaped by and expressed in imaginaries. Debates on a possible dialogue between migration and mobility studies are ongoing (Hui 2016). Since the 1990s, migration in and from the Global South has increasingly been linked with climate change in particular, and environmental change more broadly. Overall, this strand of research is often only loosely related to migration theories; rather than being located within migration theories that have been developed earlier, it is characterized by debates between the disciplines of anthropology in general or political ecology in particular which reflect societal structures as well as agency, and neo-Malthusian perspectives which follow deterministic models.

Grand migration theories in a more narrow sense, which do mostly only peripherally or even not at all reflect the debates on a possible environment-migration nexus, have been reviewed from different disciplinary, methodological, and theoretical angles for instance by Todaro (1976), Molho (1986), Massey et al. (1993), Stahl (1995), Ghatak et al. (1996), de Haan (1999), Arango (2000), Castles (2007, 2010), de Haas (2010b), King and Skeldon (2010), Hatton (2014), Bodvarsson et al. (2015) and Massey (2015a, b). Lucas (2015) and Obeng-Odoom (2016, 2017) contain reviews of theories on migration with specific reference to Africa, while de Haan (1999) and Hanson (2010) present theories of migration in developing countries. Kuhn (2015) specifically reviews theories of internal migration, while Ferrie and Hatton (2015) focus upon international migration trends over the last two centuries. Castles (2013) provides an overview of what he calls drivers of global migration, informed by political economy and sociology. Raleigh (2011) gives a review of the literature on conflict-driven migration, while Hugo (2008) and Hunter et al. (2015) provide outlooks on different approaches to the environmental dimensions of human migration

In the following, the most important theoretical approaches are outlined along with their basic propositions. We put special emphasis on research supporting the theorem called 'mobility transition', for it appears to be one of the best researched insights in migration research to date: the theorem points at long-term structural changes in migration, which include an inverted development-migration nexus, pointing at higher emigration rates correlating with successful development initiatives. Subsequently, we extensively discuss a potential, currently quite prominent environment-migration-conflict nexus, pointing towards inconclusive evidence, and highlighting the crucial role of institutions, culture, and political economy with regard to the environmental dimension of human migration.

Typology of migration theories

Rather than referring to one of the particular classifications of theoretical approaches towards explaining and understanding migration, which are provided by these reviews, a typology of three main assumptions of certain paradigms that guide research on migration will be proposed in this section: (1) Distinction by basic premises; (2) Distinction by object of research; (3) Neo-Malthusian versus context-sensitive political ecology perspectives. Subsequently, general findings or hypotheses, which are suggested by particular theories or approaches, will be presented, followed by an appraisal with reference to case studies of emigration from the Western Sahel. Even if research is under-theorized or lacks explicit reference to certain theories of migration - a circumstance that has been criticized regarding a number of case studies that were conducted in the region - approaches are often related to broader policy, media, and scholarly discourses, which at least implicitly shape empirical research to varying degrees.

Distinction by basic premises

A first typological distinction can be made with regard to basic premises of social science applied to questions of migration. Many theories of migration follow methodological individualism (for a brief critical discussion, see Ransan-Cooper 2016), which posits that migration can be explained by referring to individual conscious motivations and decisions. Within this presumption, motivations and decision-making might be conceived with varying degrees of formal rigor. The most formalized modelling is characteristic for the older neoclassical economics and the more recent new economics of labour migration. Both these approaches depart from the assumption that rational choice is a universal principle of human behaviour. Various extensions and modifications of initial, more simple models have included informational deficiencies, bounded rationality, psychological factors, imperfect markets, differential utilities of income streams, household constraints on individual decision-making, and further factors (Molho 1986; Stahl 1995).

Although the so called neoclassical approach to migration and the new economics of labour migration are often seen as opposed to each other, they might rather be understood as variations within a common theoretical framework, which is neoclassical economics *tout court* (Stahl 1995; Massey 2015a). Moreover, methodological individualism might be coupled with a recognition or analysis of broader structural conditions and dynamics. In this view, the separation between (neoclassical) microlevel decision models and macro-structural frameworks (Massey 2015a) is less fundamental as it might often be seen (Stahl 1995).

Among the macro-structural frameworks, segmented labour-market theory and world-systems theory are two prominent ways of conceptualizing changes in international relations and labour markets which might drive and shape migration (Massey 2015a). Likewise, the focus on social capital and the theorem of cumulative causation (which Massey 2015a distinguishes from the neoclassical approach), or the theorem of the migration transition might not be regarded as fundamentally opposed to neoclassical economic modelling (Stahl 1995; Clemens 2014a), although it is seen as contradicting the neoclassical approach by others (e.g. IMI 2012). In fact, the neoclassical model can accommodate for a broad variety of factors - ranging from the economic to the psychological – that might be integrated into modelling equations without questioning the basic premise of methodological individualism and rational choice (in terms of utility maximization applying the logics of a cost-benefit calculus). Thus, Massey (2015b) states that symbolic gratification as a migration driver might be explained by utility maximization, but also by sociological theories of cultural capital. Likewise, social connections as motivation, such as family reunification, might be theorized as utility maximization, but mostly have been treated under the rubric of social capital. Threat evasion, as another example, might as well be theorized as a strategy of utility maximization (see Reuveny 2007 for an illustration), but, according to Massey (2015b), this appears to be inadequate, for the prime driver in this regard is not rational cost-benefit calculation (see also Naudé 2008; cf. a similar argument concerning migration due to environmental stress by Wrathall and Suckall 2016).

In short, the macro-structural approaches of segmented labour-market and world-systems theory conceptualize phenomena beyond the reach of conventional neoclassical economics, although this distinction is neither always fully clear nor uncontroversial. Thus, Robert Brenner has criticized world-systems theorist Immanuel Wallerstein – possibly overstretching his argument – for adhering to neoclassical (and classical) economic views (Brenner 1977), while economists have rejected the proposition that the sociological view on segmented labour markets contradicts the neoclassical approach in its principle (Lang and Dickens 1987).

The assumption that theories, frameworks, or theorems mentioned above are part of a wider paradigm is reflected by the attempt of Massey (2015a, b) to integrate them in a generalized approach to explain migration, although it has also been criticized as eclectic and incoherent (Castles 2010; Bakewell 2010). The framework that is probably mentioned most frequently in the literature on migration as serving such an integration is cantered upon the notion of push and pull factors. Drawing on this framework, Massey (2015a, b) employs the push-pull-terminology to distinguish between neoclassical economics and the new economics of labour migration, which he understands as focusing on push factors, and segmented labour-market theory, which, Massey argues, emphasizes pull factors.

Initially proposed by Lee (1966) to derive testable hypotheses from a general perspective to understand migration, the push-pull-framework partly has become a substitute for more elaborate theories on migration. Thus, it is seen in a rather instrumental way from a neoclassical perspective (Molho 1986), where it is used to solve data aggregation issues, while it is a frequent component of policy briefs, and donor reports, as well as in deterministic neo-Malthusian arguments. However, approaches shaped by the conceptualization of push and pull factors are not necessarily simplistic or deterministic. Black et al. (2011b), for example, note a similarity of their framework to the push-pull model suggested by Lee (1966) in an attempt to better capture the complexities of migration decisions influenced by environmental factors. They suggest an analytical framework accounting for various drivers covering economic, social, political, demographic and environmental dimensions. These are thought to interact and to be mediated through agency that is conceptualized as decision-making. In fact, the framework outlined by Lee (1966) shares the assumption of rational individual decision-making oriented towards utility maximization (shaped or influenced by various further factors, most importantly by distance) with neoclassical economics. It can thus be categorized as a so-called gravity model (Molho 1986). The main difference between the classic push-pull-approach and the neoclassical theory of migration is the level of formalization and mathematisation of migration models (cf. e.g. de Haas 2010b). It should be noted, that Lee (1966) already refers to cumulative causation and to what later has been called social capital and mentions environmental factors in passing. Although the push-pull-approach recognizes the importance of perceptions by the individuals (Lee 1966), it assumes them to ultimately be the passive objects of external forces.

With regard to a typology based on social science premises, the strongest methodological and theoretical distinction separates the approaches mentioned above from anthropological, post-structuralist, cultural and anthropological sociology, and cultural studies research on migration. The latter emphasize meaning, culture, identity and lived experience, including emotions as crucial dimensions of migration, and any approach that attempts to understand connected phenomena (see e.g. Nyamnjoh 2013; Ransan-Cooper 2016). Research from these disciplines also often stresses power relations as being an indispensable element to analyse when studying migration. This emphasis particularly characterizes political ecology approaches (see e.g. Wrathall et al. 2014). Within the range of this paradigm, which might in a broad sense be called anthropological, certain factors, emphasized by theories informed by methodological individualism, are investigated as dimensions of migration. They gain a different meaning, however, by being put into the context of culture and societal relations, by acknowledging different, overlapping, or contradictory and shifting societal or context-specific rationalities and temporalities, which might shape migration decisions (see e.g. Timera 2001; Piguet et al. 2010; and to some extent also Diara Doka et al. 2014).

In her study on seasonal migration of Fulani in the Sahel (Northern Burkina Faso), Hampshire (2002), for example, acknowledges economic motives in migration while emphasizing that economic models of migration do not explain the phenomenon under investigation in her study. First, rural outmigration is not driven by poverty. Rather than coping with livelihood failure, Fulani tend to use migration to optimize livelihood security. Outmigration is usually performed by the wealthiest households. Only in situations of absolute destitution, poorer households engage in labour migration. Moreover, the social legitimacy of migration and thus of using social networks crucially depends on identity along the dimensions of generation, gender, and ethnicity. Finally, since labour migration among the Fulani studied has begun in 1973 as a response to drought, its meaning has been constantly renegotiated along changes in identities and ideologies (Hampshire 2002).

Although not eschewing migration motivations that might be voiced by respondents, they usually are not understood as providing a full or necessarily correct picture of the conditions that shape migration. In fact, the notion of causality fundamentally differs - or is put into question - from anthropological approaches emphasizing cultural routines, unconscious determinants of behaviour, and the situated knowledges that are produced by researchers. The alternative notion of multi-causality, which sometimes appears in anthropological or anthropologically informed literature on migration (e.g. Mayer 2016), does not merely represent an increase in complexity. One might rather say that multi-causality counteracts the way methodological individualism conceives of causality modelled after cause-and-effect relations. In methodological individualism, relations of cause and effect correspond to separate couplings of variables, which can in principle be quantified, and which are thought to determine migration independently from each other. Though their joint effect might be complex and difficult to model, as Neoclassical Economics acknowledges, social reality is thought of as being ultimately composed of distinct cause-and-effect relations. This implies a universalist claim, which is usually not reflected against the backdrop of the social position of the researcher. The latter thereby already influences the categories that are constructed and scientific problems that are defined at the outset, and moreover might shape the methods employed, how the research process is conducted, and how findings are interpreted (e.g. McCorkeland Myers 2003). A circumstance more often accounted for in multi-causality approaches.

Anthropologically oriented or enriched approaches to migration do not contradict the use of statistics. However, as Eklund et al. (2016) emphasize, in view of such an approach, "field experience and contextual knowledge is essential to interpret statistics in a nuanced way" (Eklund et al. 2016: 149; see also Romankiewicz and Doevenspeck 2015). Moreover, anthropologically informed or guided approaches might not neglect calculative aspects of behaviour associated with the subjectivity of a homo oeconomicus. But the meaning and importance of such aspects is put to empirical scrutiny through participant observation and self-reflective engagement with study subjects (Ransan-Cooper 2016).

In this way, and drawing on a praxeological approach, Ransan-Cooper (2016) argued that migration to the city from a rural area in the Philippines, undergoing environmental change and suffering from neglect of agriculture, was pursued and perceived as attractive although it did not increase household wealth over time. Focused investigation of the migration decision-making process demonstrated that mobility decisions were in general not guided by assessing and prioritizing relative risks. "Rather, respondents iteratively evaluated whether mobility could be negotiated to fit with pragmatic family arrangements, values, emotions and ideas about the self in that particular moment and over the experience of mobility", Ransan-Cooper (2016: 141) states, and concludes that attempts to curtail migration would thus meet resistance as long as alternatives to satisfy aspirations for personal transformation and increased livelihood security are not in reach.

Bakewell (2010) sees the structure-agency debate at the centre of migration theory building. Drawing support from Massey et al. (1998) and opting for a Critical Realist reading of structure and agency, he identifies four conditions that a "satisfactory" theory of migration has to fulfil.

Most crucially, "it must take account of the structural forces promoting emigration in areas of origin and enabling immigration in destinations, the motivations, goals and aspirations of the people who migrate, and the social and economic structures that connect areas of inward and outward migration. These can be mapped onto Archer's morphogenetic cycle of structural condition (structural forces shaping emigration and immigration), social interaction (of those who migrate), and structural elaboration (evolution of networks and migration systems). The puzzle for research is to unpack that cycle to understand both its elements and the causal mechanisms that drive it" (Bakewell 2010: 1703).

Social structures, under this perspective, are not simply involved when using terms like labour markets, migrant networks, etc. Following the Critical Realism of Margaret S. Archer, structures are named those types of interactions that generate emergent properties. "The 'litmus test' for emergence is that an entity has the 'generative capacity' to modify the power of its constituents in fundamental ways and to exercise causal influences sui generis", as Bakewell states (Bakewell 2010: 1703). Rejecting methodological individualism, Bakewell thus proposes an approach that is able to bridge macroand micro-levels together with agentic dimensions as well as large scale patterns of social interactions. This approach emphasizes self-reflexivity, mixed methods, and a process of iteration between abstraction and empirics in research.

Distinction by object of research

Another distinction between different theoretical approaches to migration concerns the relation to the object of research. Many studies depart from problems identified by policy-makers (of the Global North), which often circle around the control of migration. Going even further, migration studies appear to be highly politicized in general, which might cause a policy bias in research. This bias might lead to approaches inves-

tigating migration as isolated from general societal change, to which the compartmentalized condition of academic disciplines contributes (Castles 2010). This can also be observed for the subfield of the environment-migration nexus (Nicholson 2014).

In partial correspondence with the policy bias, a strong Global North bias in migration research and theory has been noted by Castles (2010), Bakewell and Jónsson (2013), Nyamnjoh (2013), Mavungha et al. (2016) and Matereke (2016), or a Eurocentric bias more specifically (Vollmer et al. 2015). Accordingly, many studies on migration have been characterized by methodological nationalism (Wimmer and Glick Schiller 2003) and concomitant categorizations of internal and international migrants (King and Skeldon 2010; Glick Schiller and Salazar 2013), although it might well be that these types of migrants indeed show different characteristics (see e.g. Wouterse and van den Berg 2011 on Burkina Faso). In general, a sedentary bias is visible in some migration research, which corresponds with a view that frames migration as trouble a priori (Bakewell 2008; Glick Schiller and Salazar 2013; Nyamnjoh 2013).

This also affects the use of the terms migration, and tourism or mobility, where the former conveys the notion of trouble to be remedied, while the latter are characterized by rather positive attributions (Castles 2010, 2017; Salazar 2011). Not least, anthropology has for a long time being shaped by an opposition between the hailed mobility of the Western researcher and the imagined immobility of anthropology's "frozen subjects" (Nyamnjoh 2013: 655), giving the impression "that Africans are mobile only when things go wrong or others so desire that they ordinarily would stay grounded, were it not for rapid population growth, economic stagnation, poverty, unemployment, conflicts and ecological disasters" (Nyamnjoh 2013: 659; see also Bredeloup 2013b).

Investigating the interlocking of power, discourse, and science, Ransan-Cooper et al. (2015) have identified different framings of the social figure of the environmental migrant that entail a range of varying political, ideological and practical beliefs that correspond to biases. Framings were found to be associated with certain interests and normative assumptions that differ in their power to put forward their preferred solutions to alleged problems (depending on resources they can command), supporting the diagnosis of a strong Global North bias in migration research as noted above. In addition to these biases and possibly cross-cutting them, a gender-based bias has been identified in migration research, overly focusing on male migration, thereupon neglecting the decisive, active role of women - whether they participate in the actual movement or not. Under this perspective, the theory of migration as part of households' survival strategies has likewise been criticized for its assumption of households as homogeneous social units that are engaged in consensual decision-making, that can be clearly delimited from other social linkages, and the implicit portrayal of those "left-behind" as being without agency (Mondain and Diagne 2013).

Neo-Malthusian versus context-sensitive political ecology perspectives.

Another typological dimension refers to the degree of inclusion of environmental factors into migration research. Earlier migration theories reflected on the possible relevance of environmental factors. Because of the long abiding disjunction between social and natural sciences, and within the frame of modernization theories proclaiming the increasing irrelevance of nature for human society, early migration studies largely disconnected from considerations of the environment and of environmental change. Investigations of an environment-migration nexus thus departed from outside of contemporary migration studies (Piguet 2013), which has led to a decoupling of perspectives (Gioli et al. 2016).

In literature dealing with meta-analysis of research on the environment-migration nexus, a maximalist, neo-Malthusian strand claiming environmental change to be a single direct cause for migration movements, is often distinguished from a minimalist, context-sensitive approach, stressing multi-causality and the societal mediation of environmental conditions (Piguet et al. 2010; Jónsson 2010; Piguet 2013; Hunter et al. 2015; Hunter and Nawrotzki 2016). Neo-Malthusian accounts of migration lost relevance after the 1970s, but have seen a revival especially among natural scientists in the context of climate change. However, the Intergovernmental Panel on Climate Change (IPCC), after initially endorsing such views, now lays emphasis on vulnerability and adaptation (Tacoli 2009).

In a somewhat similar way, neo-Malthusian explanations of famine in the Sahel focusing on the notion of overpopulation and overuse of resources in relation with so called carrying capacity were dominant in the 1970s, but have been complemented with or replaced by climate (Herrmann and Hutchinson 2005; see also McKune and Silva 2013). Nevertheless, population is criticized as being reinstitutionalised in a neo-Malthusian perspective in climate change discourses (Bailey 2010), while Mayer (2016) gives an example for the use of climate change as a discursive means to justify doubtful government policies in Mongolia. Such changes in framings of problems and of corresponding agents are not only the outcome of a linear and progressive accumulation of scientific knowledge, but are also influenced by (and used in) power struggles (see Bailey 2010 for related considerations concerning population discourse). They are likely to have a strong political impact, not least shaping research agendas (which in turn influence political debates in the media as well as in different institutions).

This situation requires constant self-reflection. Ransan-Cooper et al. (2015) thus argue that "with the plethora of frames now available, it is perhaps increasingly difficult, if indeed it was ever possible, to categorise environmental migrants neatly" (Ransan-Cooper et al. 2015: 113). In fact, as Mayer (2016) notes, migration is always determined by multiple causes, for which reason "[a] scribing a specific cause to migration, such as through the concept of 'climate migration', participates consequently to a political exercise – a play of shade and light where attention is focused on the responsibilities

of certain actors, rather than others" (Ransan-Cooper et al. 2015: 234).

In comparison with these basic typological dimensions of migration studies, the methods of empirical research appear to be less decisive, although certain paradigms favour specific methods and use these in particular ways. Thus, apart from Carling (2014) claiming that "positivist" survey methods and "social constructivist" ethnographies should be combined to improve the understanding of migration (see in a similar way Romankiewicz and Doevenspeck 2015; and Ransan-Cooper 2016), several other scholars integrate the analysis of mass data with sociological theorization reflecting a rather anthropological approach (e.g. de Haas 2010b).

Concluding this section, three basic dimensions of difference can be identified in migration research: (1) relating to the basic premises of social science, i.e., methodological individualism versus macro-structural or anthropological approaches, and methodological nationalism versus approaches that de-naturalize national borders and contextualize these trans-nationally; (2) regarding the object of migration research and how it is conceived; and (3) the opposition between neo-Malthusian versus context-sensitive political ecology perspectives on the possible connection between environmental change and migration. In the following section, the discussion of migration theories will be continued to briefly highlight the more specific assumptions, hypotheses, findings, and limitations of some prominent approaches to migration.

Specific theoretical propositions

Neoclassical migration theory and the new economics of labor migration

The basic proposition of neoclassical migration theory are geographical differences in supply and demand of labour. This macroeconomic approach is complemented by the microeconomic theory of decision-making, which assumes that people move to wherever expected net monetary returns on their human capital are highest (Todaro 1976). The new economics of labour migration (Stark 1991) criticizes the assumption that individuals are conducting cost-benefit calculations, for the decision-making units are considered to be households or communities rather than individuals. Furthermore, not only income is maximized, but also risk minimized and status maximized. Under this perspective, income is not understood as a homogeneous good. New income resources might thus be beneficial to families even if they do not increase total income. Finally, it is not only absolute gains that matter, but also relative deprivation. Income is not assumed to have a constant effect on utility (see for an overview of these two approaches Massey 2015a).

Although models of migration developed by older neoclassical economics and the new economics of labour migration accommodate for several factors of potential relevance for a mechanistic modelling of migration, these models in general lack the necessary data. Instead of employing such theoretically consistent and causally explicit models, push-pull models thus often find application in research for practical reasons (Molho 1986). Konseiga (2006) reports a lack of studies in this paradigm that directly estimate the determinants of international migration (contrary to a well-developed literature on the domestic level). This, he states, is especially true for West Africa. In general, these economic theories make untestable or particular assumptions concerning individual or household decision-making that might or might not apply in social reality. Furthermore, they are unable to capture and understand societal structure, power relations, and cultural mediations and constructions. Although some hypotheses concerning the conditions of migration merit scrutiny and have partly been shown to explain certain migration phenomena (depending on how explanation is understood) the particular modelling approach appears rather doubtful, especially if coupled with universalist claims. Inconsistent with the premises of neoclassical theory, neoclassically inspired or oriented attempts to analyse migration ultimately must refer to macro-structural or sociological theories to provide context for their microfocus (e.g. Stahl 1995).



De Haas (2010b) summarizes the main criticisms of what he calls the neoclassical approach (that actually would include the new economics of labour migration) on empirical grounds: Real migration movements cannot be explained since these do in general not follow the steepest gradients in income (or opportunity differentials), often increase with decreasing wage differentials, and show fundamental structural shifts beyond incremental change. Neoclassical economics shares with push-pull models a functionalist approach to social theory with the implication of the existence of social equilibria for migration, thus disregarding or misconceiving structure and agency. Corresponding gravity models do not properly account for real migration, because these do not conform to flows of water, and because migrants are not passive atoms maximizing utilities or being propelled around by push and pull factors. Moreover, such models posit sedentarity as natural, which stands in contrast to empirical evidence (de Haas 2010b).

The inherent assumptions of neoclassical and new economics of labour migration theories also influence or inform many attempts to investigate the environment-migration nexus. As far as these attempts operate within the neo-Malthusian deterministic approach, they are weak in methodological self-reflection. In correspondence with methodological individualism, such studies might primarily use survey data to identify migration causes and the role of the environment therein (see as an instructive example Afifi 2011), following a push-pull framework (Jónsson 2010). In addition to considerable conceptual and methodological problems within the literature on the environment-migration nexus impeding the interpretation of results, the particular nature of survey data leads Jónsson (2010) to question the reliability and validity of respective findings. Besides severely limited field stays and respondent samples that Jónsson (2010) criticizes in some of these studies, a more general criticism concerns the structuring of possible utterances by the answer options offered in questionnaires. By asking about individual motivations, structural conditions of "development" and "under-development" will not be mentioned by respondents. Gendered responses are a potential further bias. In general, official discourses might rather inform answers than any original analytical reflection of one's migration experience. However, research cannot expect migrants to analyse their experiences and behaviour instead of the researcher (Jónsson 2010).

In a similar manner, Neumann and Hermans (2017) highlight that motivations of migration might be distorted by ex post facto rationalizations (as for example by Boyer and Monkaila 2010; Cissé 2012; Bauchemin et. al. 2013; cf. Findley 1994; Quiminal 2006). Moreover, the common approach is to assume that migrants are aware of their motivations, which might be erroneous, and that they are willing and able to express motivations, which cannot be assumed beforehand (Neumann and Hermans 2017). Carling and Åkesson (2009) point out that migration aspirations are often elusive and transient. A study on farmers' migration in a region in southern Burkina Faso by Sanfo et al. (2016) exemplifies the very limited insights that might be gained by survey data, especially when they are poorly contextualized.

In fact, the results reported by Sanfo et al. (2016) can hardly be interpreted for lack of context information.

Black et al. (2011b) note that migrants rarely mention environmental factors as motivation, even when questionnaires present the option (see for similar observations Findley 1994; Afifi 2011; Lilleør and Van den Broek 2011; cf. Wrathall and Suckall 2016). Notwithstanding the methodological problems of surveys, asking subjects about perceptions that might be relevant for migration has been suggested as an important avenue for research on a possible environment-migration nexus because it is perceptions of the environment, not objective measures, that might have an influence on migration (Mertz et al. 2010; 2009; Eklund et al. 2016; see also Ransan-Cooper 2016). However, classical caveats concerning data gathering through surveys related to trust (Faulkingham and Thorbahn 1975; Tanon and Sow 2013), manipulation (cf. Mertz et al. 2012) and cultural taboos (Tanon and Sow 2013) might apply at least in certain cases. For instance, it required Faulkingham and Thorbahn (1975) to live for a full year among their study subjects to be able to gather reliable demographic data.

Likewise, Tanon and Sow (2013) stress the crucial importance of native anthropology from an emic perspective to gather insights into migration otherwise inaccessible in their study on youth migration in Mauretania. Despite a very limited field stay, Hall (2016) illustrates that a reflexive approach to survey answers – if coupled with further information – still might yield important results beyond taking such answers at face value and disregarding contextual meanings. Riosmena (2016) highlights the methodological problems implied in using survey data in migration research, but emphasizes that to date ethnosurvey data in particular are indispensable for comparative research on migration.

Segmented labor-market theory

Segmented labour-market theory differs from the neoclassical approach and the new economics of labour migration primarily by the unit of analysis. It is not micro-level decisions that determine migration as push factors, but rather a structural pull that is argued to be intrinsic to industrial societies (Massey 2015a). The first factor of this pull is structural inflation due to status-related motives to work and the unavoidable existence of a bottom level of labour positions, which is thus filled by migrant labour. The second factor is related to a bifurcation of the labour market into stable capital-intensive and unstable labour-intensive sections, the latter demanding migrant labour. The third factor of the structural pull on migrant labour is the development of ethnic enclaves that trade discipline in initial stages of careers for later status improvement. They likewise depend on migrant labour.

World-systems theory argues that migration results from the penetration of non-capitalist societies by capital. Displacements and dislocations are thereby seen as the prime drivers of migration. Likewise, a strong structural demand for migrant labour in (urban) centres is posited to affect migration, as are ideological and cultural links between centres and peripheries (for a recent application of world-systems theory see Cross 2013). Political economy and sociological approaches such as the segmented labour-market or world-systems theories appear to capture certain structural conditions that are important to explain migration. However, the world-system approach might be criticized to neglect agency and overstretch the explanatory power of the concept of imperialism.

Social capital theory and cumulative causation approach

Social capital theory highlights the importance of migrant networks, as well as of migrant institutions such as for-profit enterprises providing underground services. Though widely shared in the migration literature, Bredeloup (2013a) questions the general relevance of social networks in migration due to ongoing processes of individualization. On the other hand, Mondain and Diagne (2013) emphasize the role of "those left behind".

Based on a study of Senegalese migration from a small town with high prevalence of (male) emigration to Italy, they argue that without investigating (female) non-migrants, the processes of migration can hardly be adequately understood.

In the cumulative causation approach, migration changes aspirations that induce further migration. Cumulative causation refers to processes that incite, shape and reproduce migration while motives and perspectives of migrants are shifting. These dynamics have been captured by the notions of "culture of migration" (Massey et al. 1993) or "migration ideology" (Carling and Åkesson 2009). These notions have been found fruitful to elucidate the role and agency of non-migrants in migration in a case study conducted by Mondain and Diagne (2013) in Senegal, but have also been seen more critical, based on research in farmers' communities in Mali (Gaibazzi 2013). Though both Mondain and Diagne (2013) and Gaibazzi (2013) highlight "sedentarity" in relation with migration, they draw different conceptual conclusions, with Gaibazzi arguing to reorient migration research towards the mobility paradigm and the concept of regimes of mobility, and to go beyond imaginaries by taking practices into consideration.

The rather sociological approaches to conditions of migration, via social capital and cumulative causation, appear to be largely accepted as cornerstones of conceptualizing migration within scholarly literature (but see the caveats expressed by Bredeloup 2013a and Gaibazzi 2013; cf. Hooghe et al. 2008). De Haas (2010a) expanded the social capital and cumulative causation approach towards migration systems dynamics in order to theorize not only the formation but also the breakdown of migration systems, which frequently fail to develop after initial, more limited migration, as de Haas (2010a) argues. This attempt bears some resemblance to outlines of a general systems theory approach to ruralurban migration proposed by Mabogunje (1970), who distinguishes it from a push-pull framework and highlights the importance of individuals' expectations and aspirations.

Push-pull models of migration

A number of approaches has rejected the push-pull-framework (for examples of investigations guided by this framework see Schoorl et al. 2000; or Mastrorillo et al. 2016; for a review of arguments against push-pull-approaches see e.g. Romankiewicz and Doevenspeck 2015; for a defence of push-pull-frameworks in heuristic terms see Massey et al. 1993; and Hooghe et al. 2008). Possibly most prominently, the works of de Haas (2007; 2008; 2010b), Castles (2010), Salazar (2011), and Glick Schiller and Salazar (2013) feature arguments for embedding migration in a study of the general societal development and transformation that goes beyond the identification of so called push and pull factors.

The push-pull-framework has been criticized by de Haas (2010b) as a static and merely descriptive, post hoc model lumping together various so-called migration determinants at different levels of aggregation in a fairly arbitrary manner without specifying their relative weight. De Haas (2010b) furthermore identifies a tendency towards the classical ecological fallacy by confounding macro-level determinants with individual migration motives and a misconception of causality, leading scholars to disregard interactions between different factors influencing livelihoods in favour of mono-causal assumptions of so called root causes of migration. While de Haas (2007; 2008; 2010b) emphasizes the increase of South-North migration due to economic development in the South, Castles (2010) highlights the complementary transformation of labour markets in the Global North and the deterioration of economic and social conditions in the Global South in the context of neoliberalism. Nyamnjoh (2013) criticizes the push-pull-framework, "as there is abundant evidence that many Africans move out of their free will, and in tune with prevalent philosophies of being and becoming that provide for flexible mobility and flexible identities" (Nyamnjoh 2013: 659f.).

Glick Schiller and Salazar (2013) introduce the concept of regimes of mobility to counteract the normalization of both migration and stasis (cf. also Matereke 2016). They emphasize that regimes of mobility shall be constantly theorized as "relationships of unequal power

within which relative stasis and different forms of mobility are constructed and negotiated", by "defining movement and stasis within social and economic relationships rather than in relation with geographic borders", thus facilitating "a scholarship that is neither confined by nor ignores nation and territory" (Glick Schiller and Salazar 2013: 12). Regimes of mobility integrate multiple scales, which are not conceived of as separate levels of analysis, but "are part of mutually constituting institutional and personal networks of unequal power within which people both with and without migrant histories live their lives" (Glick Schiller 2015: 2276). Analytically, one core concept of this approach is that of the transnational social field as a network of networks, through which methodological nationalism shall be transcended (Glick Schiller and Salazar 2015).

Mobility Transition

The theorem of mobility transition, denoting long-term structural changes in migration (which de Haas 2010b distinguishes from the notion of the migration hump referring to short-term migration hikes), alternatively called the migration transition or the emigration life cycle, is one of the best confirmed results of research on international migration. Already stated by Zelinsky (1971), Massey (1988), and others, it is now being supported by several recent and detailed cross-national statistical analyses with plausible theoretical explanations (see e.g. de Haas 2007; Hatton and Williamson 2009; UNDP 2009; Hatton 2010; Clemens 2014a; b), as well as by longitudinal national case studies (e.g. on Turkey: Korfal and Sert 2015), and panel data (Dustmann and Okatenko 2014). However, the theorem has remained marginal in both policy debates (de Haas 2007; Clemens 2014a; b; see UNDP 2009 for a similar assessment) and a significant share of scholarly migration research.

In particular, many debates of the environment-migration nexus tend towards a simplistic view of migration caused by a decrease in livelihoods and exacerbated by conflict as a result of environmental deterioration. But contrary to the common expectation that economic development in the Global South will reduce emigration to the North, cross-national and longitudinal data clearly show an inverted U-shape between average national income levels and emigration. This finding demands even more consideration because of the recently improved quality of international databases on long-term migration trends, which allows closer investigations of the theorem of the mobility transition than before. From income levels like in Niger or Ethiopia

of PPP income per capita of roughly 600 USD to levels like in Albania or Colombia of roughly 7,500 USD, the emigrant numbers are positively correlated with rising income, and the magnitude of this correlation is substantial. At higher levels of income, this pattern reverses. The correlations with net emigration flows are similar. However, not even the very richest countries show systematically lower emigration rates than the poorest countries. Moreover, the inverted U became more pronounced since the 1960s. These findings on the migration-development nexus hold true if proxies other than average national income are used for measuring "development" (Clemens 2014a; b).

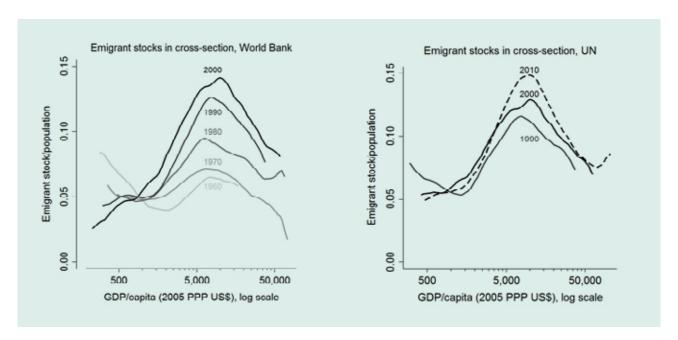


Figure 1 (reprint from Clemens 2014a): Cross-section nonparametric regressions of emigrant stocks on real income per capita, 1960–2010. Lines show Nadaraya-Watson kernel- weighted local mean, Epanechnikov kernel, bandwidth 0.5 natural log points. Emigrant stocks are the number of people born in each country residing outside that country, divided by national population. Observations are country-years. In World Bank data, N is 106 for 1960, 140 for 1970, 140 for 1980), 164 for 1990, and 164 for 2000. Macau and Brunei omitted. In UN data, N is 155 in 1990–2010 (Source: Clemens 2014a).

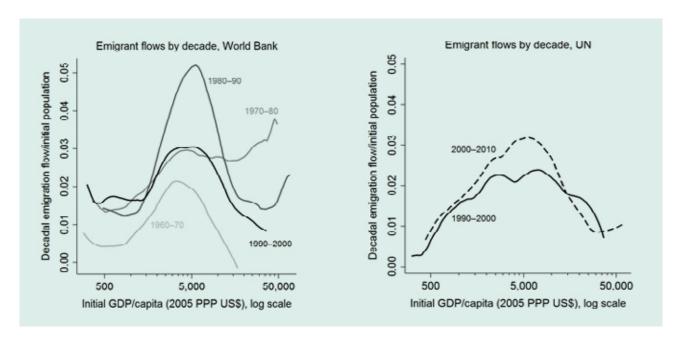


Figure 2 (reprint from Clemens 2014a): Nonparametric regressions of decadal emigrant flows on initial real income per capita, 1960–2010. Lines are Nadaraya-Watson kernel-weighted local mean, Epanechnikov kernel, bandwidth 0.5 natural log points. Emigrant flow is the decadal change in the number people born in each country who reside outside it, divided by decade-initial national population. The flow rate is thus per decade, not per annum. 'Initial' GDP/capita means in the first year of each decade. Observations are countrydecades. In World Bank data, N is 106 for 1960–70, 140 for 1970–80, 140 for 1980–90, 164 for 1990–2000. Macau and Brunei omitted. In UN data, N is 155 for both periods (Source: Clemens 2014a).

While from an economics point of view, theoretical explanations for the empirical pattern include demographic transition, credit constraints, information asymmetry, structural change, and worker dislocation, as well as inequality and immigration barriers abroad (Clemens 2014a, b), approaches with a rather sociological leaning emphasize the combined dynamics of aspirations and capabilities as part of societal transformations characteristic for economic development (de Haas 2007). Clemens (2014a; b) discusses evidence that suggests that the migration transition is not confined to macro-data. However, micro-level analyses usually do not dispose of longitudinal data necessary to test the theorem. The importance of aspirations might partly be linked to status inconsistency effects (Lee et al. 2009; for the broader psychological approach behind this theorem see e.g. Hornung 1980) based on rising educational degrees or loss of former economic positions (Smith 2006; de Haas 2010b).

Likewise, relative deprivation, along multiple dimensions both individually and collectively as related to perceived internal (domestic) and international standards, appears to account for a considerable share of migration aspirations (Czaika 2012; Czaika and de Haas 2012). In a case study of an Indonesian sample group, Czaika and Vothknecht (2014) find that the migration experience in itself (beyond economic benefits) increases migration aspirations, which they interpret as a "hedonic treadmill". Czaika and de Haas (2012) criticize the view that only economic factors are considered relevant for migration aspirations and decisions. They instead introduce the notion of (perceived) opportunity differentials, covering a wide range of different benefits to which migration does respond. In correspondence with the theorem of the mobility transition, however, a reduction in opportunity differentials does not necessarily lead to a reduction in migration.

International relative deprivation (with specific reference groups for comparison, i.e., bilateral relative deprivation) is found to increase migration, as does somewhat paradoxically - social inequality within destination countries. In contrast, absolute deprivation reduces migration by trend. Internal relative deprivation in origin countries has a comparatively small and ambiguous effect on emigration. Moreover, Czaika and de Haas (2012) find that colonial ties still strongly shape migration flows, and that larger destination countries receive more migrants than smaller countries. Geographical proximity between origin and destination countries likewise corresponds to significantly higher migration (Czaika and de Haas 2012).

The approach of Castles (2013) - though presented as a comprehensive framework to understand "drivers" of global migration – is notable for not referring to the theorem at all (see also Castles 2014). Rather than connecting international migration to the capabilities-aspirations-framework suggested by de Haas (2007) and Carling (2014), and despite some overlaps with de Haas' criticism of economistic explanations of migration and the undertheorisation of migration research, Castles understands migration primarily "as a result of the human insecurity that arises through global inequality" (Castles 2013: 136) in the context of neoliberal transformations in both "developed" and "developing" countries. Although Castles (2010) shares the concern of de Haas (2007; 2010b) about lack of theorization in migration research and the neglect of agency, and likewise proposes to understand migration in the context of broader societal changes and transformations, his account might be seen with a critical eye considering de Haas' assessment of gravity models connected to equilibrium thinking: "Although empirical tests of 'gravity models' routinely confirm that opportunity differentials are positively correlated to migration, this is hardly surprising. In many ways, such gravity tests seem to state the obvious and cannot come to grips with the non-random, patterned, and geographically clustered nature of realworld migration, with most migration not occurring along the steepest opportunity gradients and where wage convergence often coincides with increasing migration" (de Haas 2010b: 5; emphasis in the original).

Similar to Castles (2013), the recent study by WFP (2017) emphasizes poverty and conflict as the prime determinants of migration to Europe instead of the conditions that shape mobility transitions. A statistical analysis of migration data from 1990 to 2015 reported by WFP (2017), shows that current levels of negative net migration are substantially influenced by past migration. Economic growth is one of the main factors that offset negative net migration in origin countries, according to WFP (2017). Undernourishment, population pressure and the incidence of armed conflict are characteristic for countries that experienced negative net emigration. Refugees are not economic migrants, and the level of past undernourishment influences the outflow of refugees. The study follows the methodology of Naudé (2008) for migration determinants in Sub-Saharan Africa, but targeting a global set of countries. Any reference to de Haas or other proponents of the theorem of the migration transition is missing in WFP (2017). However, the relevance of mobility transitions is expressed indirectly by the fact that, according to the study, most migrants originate from middle income countries.

In contrast, Naudé (2008), in his study on Sub-Saharan Africa, reports no evidence for a migration transition - contrary to de Haas (2008), Shimeles (2010) and Flahaux and de Haas (2016), who also focus on Africa. How ever, Naudé (2008) delivers a rather complex statistical analysis, while de Haas (2008) develops a largely qualitative argument, Shimeles (2010) publishes simple correlations (without indicating significances), and Flahaux and de Haas (2016) use quantitative data to illustrate their qualitative argument rather than conducting an analysis of inferential statistics. The divergence within this literature relating to a possible mobility transition in Sub-Saharan Africa might at least be partly explained by the characteristics of the data set and analytical methods. Clemens (2014a, b) has discussed the literature relevant to the theorem of the mobility transition and points out that time-series studies - such as in Naudé (2008) – show a wide range of inconsistent findings, while cross-section studies, where data on the level of economic development and emigration are pooled, consistently demonstrate a positive linear or inverted-U relationship, as predicted by the theorem of the mobility transition.

Clemens (2014a; b) argues that time-series studies that control for country-specific effects are often unable to detect a mobility transition because of the limited time span they investigate or due to the small time lags between measurement points, which increases the weight of short-term fluctuations. Naudé (2008) employs data between 1960 and 2005, which would be sufficient to detect a general mobility transition. But the 5-year data intervals used by Naudé (2008) might be considered a rather high frequency of measurement in order to correctly analyse long-term trends, since he controls for country-specific effects (cf. Clemens 2014a; b).

Analysing a large-scale data set on internal and international migration intentions in combination with socio-economic household characteristics, Dustmann and Okatenko (2014) demonstrate that migration probabilities increase with wealth in Sub-Saharan Africa and Asia, but do not in Latin America (the richest region in the sample; however, see UNDP 2009 for Mexico as a counter-example in Latin America on the countrylevel; and Baizan and González-Ferrer 2014 for a counterobservation with regard to part of migration from Senegal). Notably, satisfaction with local amenities turns out to be far more important for migration decisions than household wealth, with higher satisfaction leading to lower migration likelihood. Although Dustmann and Okatenko (2014) do not discuss their findings referring to the theorem of the mobility transition, migration intentions show a corresponding inverse U relation to GDP per capita over all three continents studied.

Runfola and Napier (2016) show for Malawi, that the distribution of international aid does not reduce outmigration on the district level, but has a supportive effect, together with literacy level. This is interpreted as the effect of raising the capacity to move through enhancing financial means of local populations. A study by Loschmann and Siegel (2014) on migration intentions in Afghanistan, as related to vulnerability, provides additional support that it is not the poorest of the poor or the most vulnerable who migrate.

Integrative statistical analyses

Hooghe et al. (2008), following the integrative theoretical approach of Massey (2015a; b) by synthetically testing the economic, the world-systems, the cultural, and the social network approach, plus the effect of state policies, demonstrate the prime importance of labour demand in Europe for the statistical explanation of immigration to European countries between 1980 and 2004. In contrast to labour demand, social expenditure in host countries proves to be irrelevant, as well as GDP per capita and the evolution of GDP – implying that immigration to Europe, while not connected to national wealth, does strongly follow European domestic labour market imbalances. In addition, past colonial ties are shown to shape migration patterns to Europe (see also Ndiaye et. al. 2013). Sharing a common language also has a detectable effect on immigration, but weaker than past colonial ties.

On a macro-level, Hooghe et al. (2008) do not find social immigrants' networks to be important for immigration. Political and historical variables such as laws against discrimination, naturalization laws or political freedom are not relevant for explaining immigration statistically. However, Hooghe et al. (2008) recognize data limitations restricting their investigation of possible direct effects of state policies. Discussing the lack of reliable data on irregular, illegal or undocumented immigration, Hooghe et al. (2008) state that "if we could arrive at a general measurement of immigration, including legal and illegal immigrants, this would probably even strengthen the power of labour market variables" (Hooghe et al. 2008: 501; see also e.g. de Haas 2008; Seeberg 2013; Cross 2013; for data and theoretical reflections on undocumented immigration see Donato and Massey 2016).

An integrative theoretical approach has also proven fruitful in the statistical analysis of intra-regional migration in Sub-Saharan Africa between 1980 and 2000, as conducted by Ryussen and Rayp (2013). Results indicate that cross-border movements within that region are largely driven by income differences, networks and geographical proximity. Conflicts in home countries and relative freedom in host countries do also play a certain role. Deteriorating environmental conditions in a potential destination country reduce immigration. Also, spillovereffects for the socio-political and environmental factors are suggested by Ryussen and Rayp (2013).

Institutions

Analysing global cross-border migration data, Ariu et al. (2016) report that high quality of institutions has a positive effect on the net inflow of college-educated migrants. The pattern for less educated is different insofar as they are also more likely to emigrate from countries with low institutional quality, but no effect of the institutional quality of destination countries on their movement can be discerned statistically. The study operationalized institutional quality as governance quality by using a complex indicator that consists of the following dimensions: Voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law, and control of corruption. A statistically independent positive effect of an institutional quality gap (but in this study including democratic quality) between origin and destination country on migration flows is also detected by Bertocchi and Strozzi (2008) for the period between 1870 and 1910. Here, a general index of institutional quality based on measures for democracy, suffrage extension, citizenship laws, land distribution policy, public education policy, and immigration policy attitudes was created. The Polity variable from the Polity IV dataset was used as a variable for democracy². Investigating internal migration between federal states in India, which show considerable politically and economically heterogeneity, Libman et al. (2013) show that human rights protection and economic well-being in the destination state are substitutive concerning migration patterns.



Imaginaries

Salazar (2011) focuses on the role of the imaginary in explaining contemporary migration (an issue which has also been highlighted in relation with youth migration, see e.g. Juaréz et al. 2013; see also Schapendonk and van Moppes 2007 and the MAFE reports by Tall and Tandia 2010 specifically for Senegal), going beyond a discursive construct that strictly separates allegedly cosmopolitan, touristic mobility from economically driven migration. Rather than reproducing this construct, Salazar (2011) argues for investigating "the relations be tween embodied practices of mobility and world-shaping meanings of mobility, and between different intersections of the representations of (im)mobilities from different subject positions" (Salazar 2011: 594).

This indicator is composed of a range of variables regarding the transfer of executive power, competitive elections, social exclusivity of executive office, independence of chief executive, institutionalized political expression, and their social exclusivity.

Salazar (2011) presents an analysis of migration aspirations and imaginaries in Tanzania, describing an almost obsessive character of the topic of emigration that goes very much beyond real migration movements. This character is explained by the increasing awareness of relative deprivation, which is supported by migrant remittances and conspicuous consumption patterns of returnees, as well as by media narratives, resulting in a fascinating image of a utopia, which is attractive in itself, beyond economic and social appeal. In explaining this attraction not only by economic differentials, but also by cultural factors. Adeyaniu and Oriola (2011) emphasize the rootedness of such imaginaries of Africans in colonial relations and their grounding in biased media representations of Western lives, and the effect of return migrants on peers in home societies.

Smith (2006) introduces a somewhat critical perspective on the role of imagination in migration, exemplified in his study of middle-class migrants from Nigeria in England, by emphasizing the role of economic factors and social position, drawing on concepts put forward by Marx and Bourdieu (see also Fall and Sarr 2016 specifically for Senegal). Smith (2006) criticizes the sole focus on imaginaries as being complicit with the "collective misrecognition" by middle-class migrants, who tend to interpret their migration success as the outcome of their personal narration and imagination instead of recognizing "their migration primarily as the expression of personal differentiation: a distinction" (Smith 2006: 57). However, the study of Willems (2014) on migration aspirations indicates that migration might also be coupled with desires to reconcile cultural contradictions (see for a similar argument Jónsson 2008). Several studies on the meaning of internal or international migration in West Africa have highlighted the relation of migration with social recognition either in terms of adulthood (e. g. Jónsson 2008; Charrière and Frésia 2008; Mondain and Daigne 2013; Gaibazzi 2013; Tanon and Sow 2013) or peer groups (Ungruhe 2010).

Imaginaries connected to migration are subject to changes not only on the national level, but also with regard to individual migration trajectories. Schapendonk (2012) and de Clerck (2015) thus question the category of transit migrants as too simplistic (see also Cross

2013). Schapendonk (2012) claims that migration is not a linear process of a rational decision to move from point A to B, with a meaningless intermittent time. The big arrows of migration maps thus misrepresent migration trajectories. According to him, the spatial evolution of a journey influences the continuation of the same trajectory (see also Cross 2013). In his view, it is not so much the beginnings and ends that matter, but what happens in between.

De Clerck (2015) illustrates this claim by a case study on Senegalese migrants in Turkey. She highlights the increasing importance of so-called atypical destinations for African emigrants, which go beyond Europe. Push-Pull theories are thereby seen under a critical light, because of their neglect of agency, a circumstance that disables an appropriate understanding of recent African emigration trends. Neither do the drivers of migration remain unchanged during the journey, nor do preferred destinations. Aspirations and migration spatialities are not fixed (see also Boyer and Néya 2015). From this perspective, De Clerck (2015) investigates the transit migration hypothesis which sees Europe as the preferred migration destination for Africans, and reduces migration to other countries to transit migration merely forced upon migrants due to growing immigration restrictions. Her empirical material, however, shows that the category of transit migration is too general to do justice to the lived migration experience; the majority of her informants never aspired to go to Europe. Still others shifted their preferences from Europe towards Turkey; first out of necessity, then because their aspirations changed, replacing the wish to enter Europe by the practicality of a livelihood in Turkey (de Clerck 2015). Likewise, Boccagni (2017) describes the changing nature of aspirations of immigrant workers in Italy (using a sample including mainly non-African workers).

Wissink et al. (2013) critically examine intention as a valid criterion in conceptualizing transit migration based on fieldwork in Turkey. They conceive of intentions as being formed within particular socio-institutional environments, and in a highly dynamic way. The notion of transit migration is criticized as being blurred and overly politicized, reducing its heuristic value.

The authors argue that intentions, aspirations, wishes and dreams must be conceptually distinguished in migration research. Likewise, transit migration must not be conceived as a stopover in a linear process. Intentions, it is suggested, are reformulated according to the experiences and opportunities during migration. The socio-institutional environment, social capital and risk perceptions are decisive for the shifting nature of migration intentions. They encountered overlapping economic and political intentions in migrants that were investigated in Turkey. Thus, the lack of job opportunities as a precondition to realize personal aspirations or caring for one's family was frequently explained by dysfunctions of the political system. A certain unrealistic image of Europe, where human rights are respected and everyone is taken care of, was widespread. Transit migration, Wissink et al. (2013) argue, is a valid concept only when used retrospectively regarding migration flows, but not on a local level considering individual migrants instead of flows.

A to some extent related approach towards a tentative general theory of migration aspirations, where aspirations are understood as a sort of attitude, has been taken by Carling (2014). In his view, investigating involuntary immobility is just as important as analysing actual mobility. To reach this aim, Carling argues for combining surveys with ethnography, and thus for bridging positivist and constructivist research on migration. In a quite self-reflective argument, Carling suggests that widespread migration aspirations as expressed in questionnaire answers in a certain country might indeed tell something particular about the characteristics of a given society regardless of the relevance of actual migration. He acknowledges that expressions of the wish to migrate might take on many different meanings, which ethnographic research might be suited best to elucidate. Carling suggests, for example, that the aspiration to migrate might be interpreted as an assertion of identity in certain cases, and not necessarily as an element of concrete emigration plans. Moreover, Carling (2014) argues against an analytical distinction between forced and voluntary migration since both involve choices and constraints. Intrinsic and instrumental values of migration might be distinguished, and intrinsic values might relate to engagement with space (through mobility) or place.

Recently, the International Organization for Migration (IOM) has led information campaigns in Cameroon aimed at deterring migration to Europe. The management of perceptions as one factor informing aspirations is thus acknowledged to be important by attempts to restrict immigration. Although not at the centre of his study, Heller (2014) questions the impact of such campaigns on migration aspirations against the backdrop of powerful structural forces in favour of migration and historical resistance of local population groups to educational interventions of colonizers. Heller (2014) links the latter to the recent example of the IOM information campaign.

The sceptical assessment of risk-based arguments about the prospects of migration in order to avert mobility is strengthened by findings of Tanon and Sow (2013) on youth migration in Mauretania, and is further supported by other studies highlighting the importance of migration in West Africa cited in this working paper. It is also underlined by findings of Hall (2016) in Agadez (Niger), where the local IOM engages in awareness campaigns. However, the study of Timmerman et al. (2014) conducted in Turkey shows that, contrary to what is frequently assumed, a "culture of migration" might disincentivise migration due to negative feedback through critical information, for example on the economic crisis in Europe. In contrast to their findings in two case study regions in Turkey, the case of Senegal, the authors argue, might be regarded as a "culture of migration", which reinforces migration aspirations due to relatively successful movements to Europe.

The argumentation of Tanon and Sow (2013) might however raise caution towards the possible influence of negative feedback in the face of deeply engrained cultural imaginaries and the structural remodeling of origin societies by migration patterns directed towards Europe despite their recent establishment in a specifically contemporary form, i.e., in ways that deviate from historical migration patterns (and the findings of Hall 2016 support this caution). Alpes (2014) even reports an increasing attractiveness of migration due to rising risk awareness.

Environment-migration nexus

Within global studies of the environment-migration nexus, complexity is increasingly acknowledged in research on possible linkages between climate change, conflict, and migration. Place-specific conditions and dynamics are highly relevant, which might preclude the formation of a general theory of climate-induced migration (Burrows and Kinney 2016). In contrast, Reuveny (2007) illustrates the attempt to formulate such a general theory of climate-induced migration and its connection to conflict. Reuveny (2007) argues that people in developing countries will more likely leave areas negatively affected by climate change, which might cause conflict in destination areas.

Raleigh et al. (2008) are sceptical that climate change will have a considerable effect on migration, concluding their review by stating "that large scale community relocation due to either chronic or sudden onset hazards is and continues to be an unlikely response" (Raleigh et al. 2008: iv). The review of Lilleør and Van den Broek (2011) argues that according to the economic migration literature, climate change might affect migration through either income differentials between origin and destination countries or income variability in origin areas. However, according to this review, sound and robust predictions of how climate change and increased climate variability will affect economic migration drivers are impossible for lack of reliable information. Many researchers have established a negative relationship between migration and rainfall, but evidence on the drivers of this relationship is limited (Lilleør and Van den Broek 2011).

Wrathall and Suckall (2016) emphasize that migration due to environmental stress such as flooding or increased rainfall variability does not correspond to labour migration theory: people do under this perspective not migrate with the purpose of exploiting economic opportunities, migration decisions are not based on rational choice, and migrants include groups that are least likely to bear the costs of migration and to extract its benefits. Wrathall and Suckall (2016) argue, that their material indicates that even in conditions of chronic stress or sudden and irreversible ecologic shifts, migrants might not connect their motivations to environmental factors, but rather to economic issues.

A policy oriented study by Newland (2011) puts projections of climate change-induced migration in a critical light, suggesting that most estimations of so called climate refugees are based on mechanistic thinking by climate scientists and are not informed by an understanding of migration dynamics: "[I]f they assume a sea-level rise of one meter, for example, the knowledge that 100 million people live no more than one meter above sea level generates the conclusion that 100 million people will be displaced. No allowance is made for adaptation to changes, or for the ability of governments (and a few other major actors) to influence the pattern of migration flows induced by climate change. Nor is it emphasized that most migration related to climate change is likely to take place within rather than across national borders" (Newland 2011: 2). The study states that most climate change-induced migration will be triggered by sea-level rise, higher temperatures, disruption of water cycles and severe storms, but will mostly be internal to affected countries.

A review by Gemenne (2011) concludes that "estimates and predictions regarding environmental displacement are not satisfactory [...]. In particular, they lack robust methodological foundations, and are generally grounded in a deterministic perspective [...]. Furthermore, they are strongly biased towards climate change" (Gemenne 2011: 48). Gemenne is thus hoping "that the current quest for global figures is abandoned, in order to make way for more focused studies [...]" (Gemenne 2011: 48). Similarly, Castles (2011) argues that migration will continue to be determined by multiple factors in both origin and destination countries. However, he suggests that climate will increase in importance as one of those factors in the future. Castles (2011) does not understand migration as an inevitable outcome of climate change, but rather as one possible adaptation strategy among others, testifying to some degree of migrants' agency even under difficult conditions. In general, Castles sees little evidence that climate change has induced large increases in migration so far.

Likewise, a review by Waldinger and Fankhauser (2015) states that climate has hardly had any effect on international migration, while such an effect on internal migration is well documented. Referring to empirical studies, Waldinger and Fankhauser (2015) argue that climate change might rather reduce migration due to income reductions and credit constraints – an issue which is also emphasized by Bettini (2017) and has recently been suggested by Gray and Wise (2016) for Kenya and Burkina Faso.

Tacoli (2009) criticizes a view of environmental refugees, which is assuming that migration is the symptom of a failure to adapt to environmental change (see Castles 2011 for a similar discussion) – a view which, in her understanding, dominates the respective literature. Quite to the contrary, Tacoli (2009) understands migration as a key adaptive response to environmental, cultural and socio-economic change. Warner and Afifi (2014), however, have demonstrated considerable variation in types of migration related to climate stressors, ranging from trapped population groups and erosive coping migration, to migration as survival strategy, to resilience-improving migration (see also Afifi et al. 2016; cf. Rademacher-Schultz et al. 2014). Moreover, Bettini (2014; 2017), Wrathall et al. (2014), Ransan-Cooper et al. (2015), Bettini and Gioli (2015) and Bettini et al. (2016) have highlighted the power relations implicit in framing environmentally induced migration as adaptation (for West Africa, see below; for a general critique of adaptation discourse see Ribot 2014; Turner 2016). Based on case studies in Peru and Honduras, Wrathall et al. (2014) argue that migration related to environmental stress might rather be conceived of as an "aspect of a shift produced by fundamental structures of power and domination, which circumscribe options for local adaptations and instead promote alternatives, like migration, that displace adaptation to other geographical spaces" (Wrathall et al. 2014: 301).

Tacoli (2009) argues, that while the environmental refugee narrative constructs migrants as an undifferentiated group making similar emergency responses and moving to unspecified destinations, the specific characteristics of migrant flows must be taken into

consideration, relating to duration, destination and composition. Extreme weather events as well as slow environmental change are expected to often contribute to increasing levels of mobility. However, any prediction is fraught by inherent problems concerning data on climate change and migration.

According to Tacoli, one of the most important contextual conditions for the effect of environmental change on migration is urbanization. But contrary to widespread beliefs, urbanization is rather beneficial in her view (e.g., because of remittances) and, moreover, seldom the result of rural-urban migration. The assumption that rural-urban migration constitutes the largest part of internal migration is equally misleading (Tacoli 2009). In fact, Tacoli argues, the extent of rural-rural, rural-urban, or urban-urban migration largely reflects the degree of urbanization in a country. Furthermore, she continues, it is wrong to assume that climateinduced migration might be primarily between poor and rich countries. Such migration is rather to be expected to take place within regions. The key problem with the notion of "the environmental refugee", Tacoli (2009) maintains, is the suggestion of a direct link between the environment and migration; social capital and financial demands of migration are neglected. In fact, climate change might undermine the enabling conditions of migration and might go along with decreasing migration, she argues (see also Waldinger and Fankhauser 2015; Gray and Wise 2016; Bettini 2017).

Summarizing research on West Africa, Tacoli states, that rainfall predictions for West Africa are uncertain, although mean temperatures for Africa on the whole will rise; that links between drought, desertification and migration are complex; that the drought in northern Mali 1983-1985 increased temporary and short-term migration, while causing long-term inter-continental movement to decrease; that research in Burkina Faso suggests that decrease in rainfall increases rural-rural migration, while average rainfall increases the likelihood of migration abroad; that gender is an important variable; that women in the Sahel are thus less likely to engage in short-term movement than men. In general, migration patterns of the better-off seem to be relatively unaffected by environmental variables, Tacoli (2009) emphasizes, and that the role of institutions as mediating environmental change is important: "The impacts of slow-onset climate change are also more likely to affect politically and economically marginalized groups, especially where local institutions are unable to mediate growing competition for resources" (Tacoli 2009: 518). It thus is often expected that pastoralists will be pushed away from their customary rangelands and routes due to drought, which might increase conflicts. The Darfur crisis is often cited as an example, Tacoli states. "However, in this case as probably in many others, conflict is the result of the combination of environmental pressures and the breakdown of traditional social structures and well-established local mediation and dispute resolution mechanisms" (Tacoli 2009: 518).

Displacement by extreme weather events does not necessarily lead to outmigration. Quite to the contrary, mass emigration did not occur after the 2004 Tsunami, neither was it observed after the 2004 tornado in Bangladesh. In both cases, coping strategies were effective, Tacoli (2009) emphasizes. Coping strategies will also determine migration as a response to sea-level rise. In fact, many attractive migration destinations are potentially affected by sea-level rise, and she concludes, that "[i]n summary, research on contexts that offer similarities with the predicted impacts of climate change suggests that environmental degradation does not inevitably result in migration. Where it does, it is likely that movement is predominantly short term, as in the

case of extreme weather events and natural disasters, and short distance, as in the case of drought and land degradation" (Tacoli 2009: 519).

Resuming the critical debate on the notion of environmental refugees, Doevenspeck (2011) points out the terminological ambiguity, shortcomings in content, and the possibility of political instrumentalisation. Clearly doubtful are allegedly scientific publications such as Potts et al. (2013), which do not cite scholarly evidence for the stark claims that are made with reference to climate change and its potential societal effects, including migration, and do not provide arguments for the assumed links.

More recent global modelling approaches of possible impacts of climate on migration have produced different results. Marchiori et al. (2012) report that internal and international migration in Sub-Saharan Africa has increased since the 1960s due to climate variations, yet that urbanization has had a mitigating effect on international migration (for a methodological critique of the conclusions Marchiori et al. 2012 draw, see Eklund et al. 2016). However, an improved global model by Beine and Parsons (2015) does not confirm a direct effect of climate variations on international migration.

Indirect effects of such variations operating through wages are reported, but mostly as leading to internal migration. Natural disasters are mainly found to increase internal migration to urban centres. In contrast, Drabo and Mbaye (2011) find that natural disasters are positively associated with emigration rates, and that disasters exacerbate the emigration of the highly skilled. Maurel and Tuccio (2016) report statistical confirmation of a theoretical model that conceives climate shocks as operating on migration through urbanization: shocks are assumed to accelerate a transition from a "traditional" to a "modern" sector, increasing internal rural-urban migration. Demographic and labour supply pressures in urban centres are thought to reduce wages and to further foster cross-border migration.

Witmer et al. (2017) report statistically significant relations between migration and the figures of violent conflict (measured as numbers of events with a daily temporal resolution based on media databases) and political rights, population size, and increasing temperatures in Africa, while no significant relation with precipitation anomalies is identified. The study takes sub-national variation into account and is claimed by the authors to be the most sophisticated macro-level approach to this type of research to date. The authors conclude that climate change does not necessarily lead to increased conflict, presuming that political rights are further expanded as they have been in the past. Conflict levels might even decline, despite growing populations in the context of climate change. Unidirectional scenarios of possible climate change effects on conflict, and thus on migration, are likewise rejected by the theoretically oriented study of Broszka and Fröhlich (2016). Kniveton et al. (2012), focusing on dryland regions of Africa, have emphasized "nonlinear and emergent changes in total migration that are not apparent when only climate change is considered" (Kniveton et al. 2012: 446) due to demographic influences and social networks. In their approach, the theory of planned behaviour is used as an input into agent based modelling, which has been reviewed positively by Piguet (2012). As a result, the impact of climate change on migration increases with increasing population growth. Kniveton et al. (2011) present further output of their modelling exercise, indicating that international migration is lowest when global economic growth is low, population growth is high, and social, political, and economic governance is exclusive. Under these non-climate scenario conditions, dry climate scenarios produce more international migration than wetter scenarios. Criticizing previous studies on the connection between climate and migration for lack of expertise in the use of climate data, deficiencies in migration data access and lack of care for model specification, Gray and Wise (2016) demonstrate that climate effects on migration are countryspecific and vary widely for a range of Sub-Sahara African countries.

The critique passed on a direct, uniform and strong climate-migration nexus, or the impact of environmental change more generally, by global studies, is supported by local case studies for the African context (for a discussion of West Africa-specific case studies see Hochleithner and Exner 2018). Meze-Hausken (2000), who investigated farmers' responses to drought in northern Ethiopia, including migration, states that "any speculative scenario of mass migration under climate change must be rejected for dryland populations whose main strategies are built on adaptation rather than on resignation" (Meze-Hausken 2000: 402). Interestingly, Meze-Hausken did not observe any direct correlation between vulnerability and the time of relocation (in terms of internal migration). However, some findings suggest that families with diversified survival strategies as well as larger families tend to stay longer under conditions of drought. The reasons for these patterns did not become entirely clear.

Overcoming some data limitations that probably hampered previous studies on the regional consequences of climate variation on migration, a study by Maurel and Kubik (2014) on Tanzania finds a low economic impact. A 1% reduction in agricultural income is found to raise the probability of migration for the average household by 3%. This result however only concerns households which are highly dependent on agriculture. For households with diversified income, no significant relation is found. Mastrorillo et al. (2016), in a statistical analysis of the effect of climate variability on internal migration in South Africa, find that weather anomalies (higher temperature and lower precipitation) increase outmigration, but primarily of black and low-income individuals. Agriculture is suggested to be the transmission channel of climate effects on migration. A case study conducted in Vietnam by Koubi et al. (2016) shows that individual perceptions of long-term environmental change, such as droughts, reduce migration in contrast to sudden-onset events such as floods. Long-term change, the authors argue, triggers adaptation rather than migration, for individuals in general have a strong preference to stay.

Environment-migration-conflict nexus

An important sub-topic in the debate on an environment-migration nexus is a possible connection between environmental change or variability and conflict, which might lead to migration. Raleigh (2011), discussing conflict-driven migration, suggests that little reliable evidence for a link between civil conflict and climate change exists, although he acknowledges that environmental conditions shape reactions of people to economic and political threats.

Analysing environmental impact on internal armed conflict by using data of small sub-national geographical units, Raleigh and Urdal (2007) find that population growth and density are associated with increased risks, while the effects of land degradation and water scarcity are weak to insignificant. They conclude that political and economic factors are by far more important for the incidence of conflict than local level demographic or environmental factors.

In a review of research on climate change-induced armed conflict, Buhaug et al. (2008) argue that evidence of such a link is missing and studies published up to then are suffering serious methodological limitations including data deficiencies, neglect of context, neglect of mediating conditions and potential thresholds, untested assumptions of linear and multiplicative linkages between variables, over-stretched data aggregation, a narrow conception of conflict, as well as sampling and political biases. The critical stance towards the research on climate change and migration until this date is supported by Salehyan (2008). In the literature reviewed by Buhaug et al. (2008), migration appears as both a cause and consequence of worsening environmental conditions.

A review by Gleditsch (2011) comes to conclusions quite similar to those of Buhaug et al. (2008), arguing that "[t]o date there is little published systematic research on the security implications of climate change. The few studies that do exist are inconclusive, most often finding no effect or only a low effect of climate variability and climate change" (Buhaug et al. 2008: 1; see also Theisen et al. 2013). Reacting upon Burke et al. (2009),

who predict a substantial increase in violent conflicts in Africa due to climate change, Buhaug (2010) refutes such a connection for a number of methodological reasons, and argues that "[s]cientific claims about a robust correlational link between climate variability and civil war do not hold up to closer inspection" (Buhaug 2010: 16480), while outlining methodological limitations that his own work could neither overcome. While Burke et al. (2010) do not accept the criticism brought forward by Buhaug (2010), they concede that the link between climate and conflict has weakened in Africa since 2002 - a time period Burke et al. (2009) exclude from their analysis. Gleditsch (2011) supports Buhaug (2010), emphasizing that climate change does not add any explanatory value to a conflict model published by Buhaug earlier. Scheffran et al. (2012) outline the inconclusiveness of research on a possible climate-conflict nexus, partly attributing it to data deficiencies and conceptual inconsistencies, partly interpreting this outcome as a result of the indeterminate character of climate impacts on societal responses.

In the introduction to a special issue of Political Geography, Salehyan (2014) repeats caveats that had been voiced in earlier critical literature reviews on potential effects of climate on conflict, adding to abstain from broad generalizations of this literature. Salehyan (2014) argues that "[c]ollectively, we think *something* is going on, but we do not know what that something is yet" (Salehyan 2014: 1; emphasis in the original). But given the questionable theoretical foundations of the assumption that climate exerts a strong influence on conflict, one might be more sceptical about the future prospects of this field of research than Salehyan suggests.

The contribution of Devlin and Hendrix in the special issue mentioned above (2014) expands on a previously published analysis (Hendrix and Glazer 2007) with a global data set, focusing on interstate conflict triggered by water scarcity. They find that on shorter time scales, acute rainfall scarcity is pacifying, while over the longer term, rainfall scarcity and variability increase the propensity of inter-state conflict and suggest "relatively strong evidence for significant climatic impacts on interstate conflict" (Devlin and Hendrix 2014: 34).

Wischnath and Buhaug (2014) provide statistical evidence for increases of political violence due to harvest losses in India, but note that environmental stress does not always or in general lead to intensified violence. Uexkull (2014), using sub-national data, demonstrates that rainfed cropland areas suffer from an increased risk of civil conflict and violence after drought in Sub-Sahara Africa in recent decades (1989-2008). She also provides some indications that sustained drought increases the risk of conflict more generally. Uexkull however emphasizes the lack of knowledge on causal mechanisms and micro-level conditional factors of the statistically observed pattern.

Some publications attempt to include power relations in their investigations of climate change and conflict. In a qualitative study, Raleigh (2010) develops an analytical framework inspired by political ecology that recognizes the mediation of exposure to physical changes by political and economic marginalization as well as state capacity. Globally analysing data on armed-conflict outbreaks and climate-related natural disasters (such as heat waves or droughts) for the period 1980 to 2010, Schleussner et al. (2016) report a coincidence rate of these variables of 9%. This rate increases to 23% in ethnically highly fractionalized countries. The two mechanisms hypothesized are to some extent related to the (theoretically more elaborate) reasoning of Raleigh (2010), insofar as Schleussner et al. (2016) assume selective access to political power and resources according to ethnicity as well as high and rapid ethnic mobilization potential in case of conflict.

In a similar manner, Uexkull et al. (2016) statistically investigate data on drought, ethnicity and conflict between 1989 and 2014 for Asia and Africa, concluding that drought rarely has a considerable effect on the short-term risk that the state might be challenged by parts of the population using military means. "However, for agriculturally dependent groups as well as politically excluded groups in very poor countries, a local drought is found to increase the likelihood of sustained violence" (Uexkull et al. 2016: 12391), which is interpreted as indicating a reciprocal relationship between drought and conflict.

Hsiang and Burke (2014) conclude their review of studies on a possible climate-conflict nexus with the statement that there is consistent support for such a nexus across various spatial and temporal scales. Buhaug et al. (2014) reject this result because of insufficient sample selection and weak analytical coherence, indicating that a proper assessment of the available literature points to mixed and inconclusive results. In his review of the literature on climate change and conflict, Buhaug (2015; see also 2016) reiterates several conclusions of previous assessments, stating that "[t]en years of generalizable quantitative research on climate change and armed conflict appears to have produced more confusion than knowledge" (Buhaug 2015: 269). This, Buhaug argues, is not so much the result of poor methodologies or data availability - which have both improved -, but rather of a "failure to converge on a single robust association between climate and conflict" (Buhaug 2015: 269), with "several opposing and seemingly incompatible patterns" (Buhaug 2015: 269) that have been reported.

Buhaug (2015) identifies a lack of theory guiding empirical quantitative research in the field, a lack of acknowledging the importance of institutional mediations of possible climate effects, and a tendency to oversell tentative or preliminary findings due to tabloid interest in headlines. Moreover, he notes that climate variability and climate change often are not properly distinguished. Buhaug suggests that statistical approaches might be unable "to capture and quantify very complex causal linkages that span long time periods, or vary greatly in the temporal dimension between cases and involve many intermediate steps. To the extent that climatic conditions affect conflict dynamics only in interaction with very rare constellations of case-specific conditions, it can probably never be detected with statistical significance in a comparative, generalizable analytical design" (Buhaug 2015: 270).

Similarly, a review by Detges (2017) emphasizes that quantitative research on potential climate change linkages to violent conflict must neither be over- nor undervalued, noting that "[w]hether and how the climate will influence violent conflicts and fragility depends on a number of intervening socio-economic and institutional variables that have not yet been fully determined" (Detges 2017: 14). The call of Detges (2017) to expand, inter alia, qualitative fieldwork that produces causal theory is also voiced by Imran (2013), who casts doubt on the merit of merely quantitative studies in view of understanding the potential effect of climate change on violent conflict in a country, investigating Pakistan as a case. Selby (2014) goes further and questions quantitative research on the matter more fundamentally, arguing that, regarding climate conflict, quantitative methods within a positivist paradigm of research are particularly ill-suited for its study. Benjaminsen (2008) and Benjaminsen et al. (2012) are examples of qualitative case study approaches towards the climate-conflict debate, which are able to substantiate critical views on certain aspects of statistical analyses.

In contrast to the common approach to possible linkages between the environment, conflict, and migration, it is worth mentioning, that reverse causation between migration and conflict might also be considered. For instance, migration might reduce the outbreak of conflict, acting as a safety valve for specific situations. Issifou (2017) accordingly reports a negative and significant correlation between migration rate and natural resources as an interaction variable with the probability of the outbreak of civil wars. While acknowledging some data limitations, this finding, if robust, would mean that the conflict-increasing statistical effect of natural resources on civil war, which some studies have reported, is conditional on the migration rate.

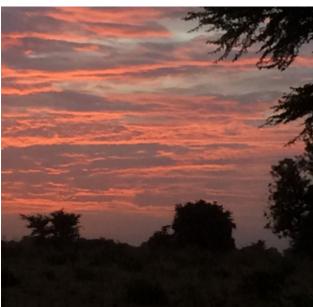


Photo: Jesse Ribot

Excursus

Rural-urban migration

Although not in the focus of this working paper, rural-urban migration in Sub-Saharan Africa should be briefly mentioned here, as several recent studies address this topic quite prominently by cross-cutting approaches discussed above. Sometimes, migration to the city in West Africa has been seen as a first step towards international emigration. Moreover, climate change is sometimes purported to increase rural outmigration in favour of city populations. However, relating to Francophone West Africa, Beauchemin and Boucquier (2004) question the projections of urban growth by the UN. Moreover, they argue that urban growth in the region is only moderately driven by migration, contrary to conventional wisdom. They contest widespread views that see rural migrants in cities at a disadvantage.

Beauchemin (2011) draws attention to recent trends in West African urban development that run counter a perceived irreversibility in urban growth. Rather, rural outmigration in the region tends to decrease or stagnate, parallel to increasing urban outmigration. In Ivory Coast, Beauchemin (2011) even finds a pattern of counterurbanization - a pattern not unknown to Africa in the context of economic crises, though. In Burkina Faso, a similar trend is to be observed, interpreted by Beauchemin as the effect of a stagnant or weak economy, which makes return to rural areas (although also affected by crises) more attractive than enduring hardship in the city. De Brauw et al. (2014) likewise point to rather slow rural-urban migration since the 1990s in several Sub-Saharan African countries. The misrecognition of real urban growth in many parts of Sub-Saharan Africa, and a general problematisation of urban growth, which might be questioned (see also Tacoli 2009), appears to be complemented by a considerable disenfranchisement of urban migrants by many African governments (Raleigh 2014).

In addition to economic and political conditions, a number of studies has linked urbanization in Africa to climate factors. Barrios et al. (2006) argue that rainfall shortages increased urban growth in Sub-Saharan Africa – in contrast to other regions in the "developing world". This link, they suggest, has become stronger after in-

dependence, for the free movement of Africans had often been restricted during colonialism. Henderson et al. (2017) show that drier conditions in Africa increased urbanization and total urban incomes, given that a sufficient degree of manufacturing in an urban area is present. This, however, is the case in a mere 25% of the sample. In the overwhelming majority of remaining urban centres, which are market towns serving agriculture, drying has little impact on urbanization or total urban incomes. Continuing dependence on agriculture thus poses problems under climate change, they conclude.

Parnell and Walawege (2011) criticize the emphasis put on migration and displacement in the context of debates on global environmental change in Africa. Instead, they argue, natural population growth in cities is a much more important dynamic, which is mostly overlooked when emphasizing the potential impact of environmentally induced migration. This growth is considerable even without rural outmigration (cf. Beauchemin and Boucquier 2004) but is problematic because of weak management and environmental change that might negatively affect cities.

Conclusion

In this working paper we presented an overview of global scholarly literature on migration with a focus on rural areas and population groups in Sub-Saharan Africa. Our review points at three basic dimensions of current research, distinct by their presumptions as related to basic premises of the social sciences, by the object of research, and by an opposition between neo-Malthusian and context-sensitive political ecology approaches.

Among the theories currently present in academic discourse, the theorem of "mobility transition", which denotes long-term structural changes in migration. The theorem, sometimes also called "the migration transition" or the "emigration life cycle", currently is one of the empirically most thoroughly confirmed approaches in international migration research. Most notably, the mobility transition theorem concludes that more development brings higher emigration and that most migrants originate from middle income countries. Already highlighted by Zelinsky (1971), Massey (1988), and others, the theorem is now being supported by several recent and detailed cross-national statistical analyses with plausible theoretical explanations (see e.g. de Haas 2007; Hatton and Williamson 2009; UNDP 2009; Hatton 2010; Clemens 2014a; b), as well as by longitudinal national case studies (e.g. on Turkey: Korfal and Sert 2015), and panel data (Dustmann and Okatenko 2014). However, the theorem has remained marginal in both policy debates (de Haas 2007; Clemens 2014a; b; see UNDP 2009 for a similar assessment) and a significant share of scholarly migration research.

Within global studies of the environment-migration nexus, complexity is increasingly acknowledged as a central feature in research on possible linkages between climate change, conflict, and migration. An important sub-topic in this debate is a possible connection between environmental change or variability and conflict, which might lead to migration. Results, however, appear rather inconclusive to date.

Adeyaniu, C. T., Oriola, T. B. (2011): Colonialism and Contemporary African Migration: A Phenomenological Approach. Journal of Black Studies 42 issue: 6, page(s): 943-967.

Afifi, T. (2011): Economic or Environmental Migration? The Push Factors in Niger. International Migration 49 (S1), e95-e124.

Afifi, T., Milan, A., Etzold, B., Schraven, B., Rademacher-Schulz, C., Sakdapolrak, P., Reif, A., van der Geest, K., Warner, K. (2016): Human mobility in response to rainfall variability: opportunities for migration as a successful adaptation strategy in eight case studies. Migration and Development 5 (2), 254-274.

Alpes, M. J. (2014): Imagining a future in 'bush': migration aspirations at times of crisis in Anglophone Cameroon. Identities 21 (3), 259-274.

Arango, J. (2000): Explaining migration: a critical view. International social science journal 52 (165), 283-296.

Ariu, A., Docquier, F., Squicciarini, M. P. (2016): Governance quality and net migration flows. Regional Science and Urban Economics 60, 238-248.

Bailey, A. J. (2010): Population geographies and climate change. Progress in Human Geography 35 (5), 686-695.

Baizan, P., González-Ferrer, A. (2014): What drives Senegalese migration to Europe? The role of economic restructuring, labor demand and the multiplier effect of networks. Demo-Soc Working Paper No. 2014--52, Universitat Pompeu Fabra, Barcelona.

Bakewell, O. (2008): 'Keeping Them in Their Place': the ambivalent relationship between development and migration in Africa. Third World Quarterly 29 (7), 1341-1358.

Bakewell, O. (2010): Some Reflections on Structure and Agency in Migration Theory. Journal of Ethnic and Migration Studies, 36 (10), 1689-1708.

Bakewell, O., Jónsson, G. (2013): Theory and the Study of Migration in Africa. Journal of Intercultural Studies 34 (5), 477-485.

Barrios, S., Bertinelli, L., Strobl, E. (2006): Climatic change and rural—urban migration: The case of sub-Saharan Africa. Journal of Urban Economics 60 (3), 357-371.

Bauchemain, C., Kabbanji, L., Sakho, P., Schoumaker, B. (2013): Migrations africaines: le codéveloppement en question, Paris: Armand Colin. Beauchemin, C. (2011): Rural— Urban Migration in West Africa: Towards a Reversal? Migration Trends and Economic Situation in Burkina Faso and Côte d'Ivoire. Popul. Space Place 17, 47-72.

Beauchemin, C. (2015): Migration between Africa and Europe (MAFE): Looking beyond Immigration to Understand International Migration. Population-E, 70 (1), 7-12.

Beauchemin, C., Bocquier, P. (2004): Migration and Urbanisation in Francophone West Africa: An Overview of the Recent Empirical Evidence. Urban Studies 41 (11), 2245-2272. Beine, M., Parsons, C. (2015): Climatic Factors as Determinants of International Migrations. Scandinavian Journal of Economics 117 (2), 723-767.

Benjaminsen, T. A. (2008): Does Supply-Induced Scarcity Drive Violent Conflicts in the African Sahel? The Case of the Tuareg Rebellion in Northern Mali. Journal of Peace Research 45 (6), 819-836.

Benjaminsen, T. A., Alinon, K., Buhaug, H., Buseth, J. T. (2012): Does climate change drive land-use conflicts in the Sahel? Journal of Peace Research 49 (1), 97-111.

Bertocchi, G., Strozzi, C. (2008): International migration and the role of institutions. Public Choice 137, 81-102.

Bettini, G. (2014): Climate migration as an adaption strategy: de-securitizing climate-induced migration or making the unruly governable? Critical Studies on Security 2, (2), 180-195.

Bettini, G. (2017): Where Next? Climate Change, Migration, and the (Bio)politics of Adaptation. Global Policy 8 (1), 33-39.

Bettini, G., Andersson, E. (2014): Sand Waves and Human Tides: Exploring Environmental Myths on Desertification and Climate-Induced Migration. Journal of Environment & Development 23 (1), 160-185.

Bettini, G., Gioli, G. (2016): Waltz with development: insights on the developmentalization of climate-induced migration. Migration & Development 5 (2), 171-189.

Bettini, G., Nash, S. L., Gioli, G. (2016): One step forward, two steps back? The fading contours of (in)justice in competing discourses on climate migration. The Geographical Journal, early view. DOI: 10.1111/geoj.12192.

Black, R., Adger, W. N., Arnell, N. W., Dercon, S., Geddes, A., Thomas, D. S. G. (2011b): The effect of environmental change on human migration. Global Environmental Change 21S, S3-S11.

Black, R., Bennett, S., Thomas, S., Beddington, J. (2011a): Climate change: migration as adaptation. Nature 478, 447-449.

Boccagni, P. (2017): Aspirations and the subjective future of migration: comparing views and desires the "time ahead" through the narratives of immigrant domestic workers. Comparative Migration Studies 5 (4). doi: 10.1186/s40878-016-0047-6

Bodvarsson, Ö. B., Simpson, N. B., Sparber, C. (2015): Migration Theory, in: Chiswick, B. R., Miller, P. W. (eds.): Handbook of the Economics of International Migration, Vol. 1, 3-51.

Boyer, F., Mounkaila, H. (2010): Partir pour aider ceux qui restent ou la dépendance face aux migrations, Hommes et migrations, 1286-1287, pp. 212-221.

Boyer, F., Néya, S. (2015): Retours, circulations, installations? Les reconfigurations du système migratoire ivoiro-burkinabè, Afrique et developpement, Volume XL, No. 1, 2015, pp. 63-79.

Bredeloup, S. (2013a): Circumstantial Solidarities and the Transformation of Migratory Networks. Journal of Intercultural Studies 34 (5), 517-532.

Bredeloup, S. (2013b): The figure of the adventurer as an African migrant. Journal of African Cultural Studies 25 (2), 170-182.

Brenner, R. (1977): The Origins of Capitalist Development. A Critique of Neo-Smithian Marxism. NLR I/104, July-August 1977, 25-92.

Broszka, M., Fröhlich, C. (2016): Climate change, migration and violent conflict: vulnerabilities, pathways, and adaptation strategies. Migration and Development 5 (2), 190-210.

Buhaug, H. (2010): Climate not to blame for African civil wars. PNAS 107 (38), 16477-16482.

Buhaug, H. (2015): Climate— conflict research: some reflections on the way forward. WIREs Clim Change 6, 269-275.

Buhaug, H. (2016): Climate Change and Conflict: Taking Stock. Peace Econ Peace Sci Publ Pol 22 (4), 331-338.

Buhaug, H., Gleditsch, N. P., Theisen, O. M. (2008): Implications of Climate Change for Armed Conflict. Social Dimensions of Climate Change Workshop. Washington, DC. Paper commissioned by the World Bank Group. https://www.prio.org/Publications/Publication/?x=249 [20.8.2017]

Buhaug, H., Nordkvelle, J., Bernauer, T., Böhmelt, T., Brzoska, M., Busby, J. W., Ciccone, A., Fielde, H., Gartzke, E., Gleditsch, N. P., Goldstone, J. A., Hegre, H., Holtermann, H., Koubi, V., Link, J. S. A., Link, P. M., Lujala, P., O'Loughlin, J., Raleigh, C., Scheffran, J., Schilling, J., Smith, T. G., Theisen, O. M., Tol, R. S. J., Urdal, H., von Uexkull, N. (2014): One effect to rule them all? A comment on climate and conflict. Climatic Change 127, 391-397.

Burke, M. B., Miguel, E., Satyanath, S., Dykema, J. A., Lobell, D. B. (2009): Warming increases the risk of civil war in Africa. PNAS 106 (49), 20670-20674.

Burke, M. B., Miguel, E., Satyanath, S., Dykema, J. A., Lobell, D. B. (2010): Climate robustly linked to African civil war. PNAS 107 (51), E185.

Burrows, K., Kinney, P. L. (2016): Exploring the Climate Change, Migration and Conflict Nexus, International Journal of Environmental Research and Public Health 13 (4), 443.

Carling, J. (2014): The role of aspirations in migration. Paper presented at "Determinants of International Migration", International Migration Institute, University of Oxford, 23-25 Sept 2014.

Carling, J., Åkesson, L. (2009): Mobility at the heart of a nation: patterns and meanings of Cape Verdean migration. International migration 47 (3), 123-155.

Castles, S. (2007): Twenty-First Century Migration as a Challenge to Sociology. Journal of Ethnic and Migration Studies 33 (3), 351-371.

Castles, S. (2010): Understanding Global Migration: A Social Transformation Perspective. Journal of Ethnic and Migration Studies 36 (10), 1565-1586.

Castles, S. (2011): Concluding remarks on the climate change-migration nexus, in: Piguet, E., Pécoud, A., de Guchteneire, P. (eds.): Climate change and migration. Cambridge University Press, 415-427.

Castles, S. (2013): The Forces Driving Global Migration. Journal of Intercultural Studies 34 (2), 122-140.

Castles, S. (2014): International migration at a crossroads. Citizenship Studies 18 (2), 190-207.

Castles. S. (2017): Migration policies are problematic – because they are about migration, Ethnic and Racial Studies, 40:9, 1538-1543.

Charrière, F., Frésia, M. (2008): West Africa as a Migration and Protection Area. UNHCR http://www.unhcr.org/49e479c311.pdf [17.8.2017]

Cissé, M. (2012): Migration de circulation, retour et participation au dévelopement des pays d'origine: cas des migrants senegalais qualifiés, in: Les Cahiers du Cread, 98-99 (2011-2012), pp. 125-142.

Clemens, M. A. (2014a): Does Development Reduce Migration? IZA DP No. 8592

Clemens, M. A. (2014b): Does development reduce migration? in: Lucas, E. B. R. (ed.): International Handbook on Emigration and Economic Development. Edward Elgar Publishing, Cheltenham, 152-185.

Cross, H. (2013): Labour and underdevelopment? Migration, dispossession and accumulation in West Africa and Europe, Review of African Political Economy 40 (136), 202-218.

Czaika, M. (2012): Internal versus international migration and the role of multiple deprivation. Some evidence from India. Asian Population Studies 8 (2), 125-149.

Czaika, M. (2015): Migration and Economic Prospects. Journal of Ethnic and Migration Studies 41 (1), 58-82.

Czaika, M., de Haas, H. (2012): The Role of Internal and International Relative Deprivation in Global Migration. Oxford Development Studies 40 (4), 423-442.

Czaika, M., Vothknecht, M. (2014): Migration and aspirations - are migrants trapped on a hedonic treadmill? IZA Journal of Migration

De Brauw, A., Mueller, V., and Lee, H.L. (2014): The role of rural-urban migration in the structural transformation of Sub-Saharan Africa. World Development, 63, 33-42.

de Clerck, H. M.-L. (2015): Europe is no longer the only 'El Dorado' for Sub-Sahara Africans: the case of contemporary Senegalese migration to Turkey. Migration and Development 4 (2), 272-290.

de Haan, A. (1999): Livelihoods and poverty: The role of migration – a critical review of the migration literature. The Journal of Development Studies 36 (2), 1-47.

de Haas, H. (2007): Turning the Tide? Why Development Will Not Stop Migration. Development and Change Volume 38 (5), 819-841.

de Haas, H. (2008): The Myth of Invasion: the inconvenient realities of African migration to Europe. Third World Quarterly 29 (7), 1305-1322.

de Haas, H. (2010a): The Internal Dynamics of Migration Processes: A Theoretical Inquiry. Journal of Ethnic and Migration Studies 36 (10), 1587-1617.

de Haas, H. (2010b): Migration transitions. A theoretical and empirical inquiry into the developmental drivers of international migration. Working Papers 24, International Migration Institute, University of Oxford.

Detges, A. (2017): Climate and Conflict: Reviewing the Statistical Evidence. A summary for policy-makers. https://www.adelphi.de/ en/publication/climate-and-conflict-reviewing-statistical-evidence [20.8.2017]

Devlin, C., Hendrix, C. S. (2014): Trends and triggers redux: Climate change, rainfall, and interstate conflict. Political Geography 43, 27-39.

Diara Doka, M., Madougou, D., Diouf, A. (2014): Food crisis, gender and resilience in the sahel: lessons form the 2012 crisis in Burkina Faso, Mali and Niger, Oxfam research reports.

Doevenspeck, M. (2011): The Thin Line Between Choice and Flight: Environment and Migration in Rural Benin. International Migration 49 (s1), e50-e68.

Donato, K. M., Massey, D. S. (2016): Twenty-First-Century Globalization and Illegal Migration. ANNALS AAPSS 666, 7-26.

Drabo, A., Mbaye, L. M. (2011): Climate Change, Natural Disasters and Migration: An Empirical Analysis in Developing Countries. IZA Discussion Paper No. 5927.

Dustmann, C., Okatenko, A. (2014): Outmigration, Wealth Constraints, and the Quality of Local Amenities. Journal of Development Economics 110, 52-63.

Eklund, L., Romankiewicz, C., Brandt, M., Doevenspeck, M., Samimi, C. (2016): Data and methods in the environment-migration nexus: a scale perspective. DIE ERDE 147 (2), 139-152.

Fall, P.D., Sarr, M.Y. (2016): Le discours populaire sur la migration de longue distance en milieu rural sénégalais, Revista Internacional de Estudios Migratorios, Vol. 7(1), pp. 123-152.

Faulconbridge, J., Hui, A. (2016): Traces of a Mobile Field: Ten Years of Mobility Research. Mobilities 11 (1), 1-14.

Faulkingham, R. H., Thorbahn, P. F. (1975): Population dynamics and drought: A village in Niger. Population Studies 29 (3), 463-477.

Ferrie, J. P., Hatton, T. J. (2015): Two Centuries of International Migration, in: Chiswick, B. R., Miller, P. W. (eds.): Handbook of the Economics of International Migration, Vol. 1, 53-88.

Findley, S. E. (1994): Does Drought Increase Migration? A Study of Migration from Rural Mali during the 1983-1985 Drought. International Migration Review 28 (3), 539-553.

Findley, S. E. (1994): Does Drought Increase Migration? A Study of Migration from Rural Mali during the 1983-1985 Drought, International Migration Review 28 (3), 539-553.

Flahaux, M.-L., Haas, H. de (2016): African migration: trends, patterns, drivers. Comparative Migration Studies 4 (1), 1-25.

Gaibazzi, P. (2013): Cultivating Hustlers: The Agrarian Ethos of Soninke Migration. Journal of Ethnic and Migration Studies 39 (2), 259-275.

Gemenne, F. (2011): Why the numbers don't add up: A review of estimates and predictions of people displaced by environmental changes. Global Environmental Change 21S, S41-S49.

Ghatak, S., Levine, P., Wheatley Price, S. (1996): Migration Theories and Evidence: An Assessment. Journal of Economic Surveys 10 (2), 159-198.

Gioli, G., Hugo, G., Costa, M. M., Scheffran, J. (2016): Human mobility, climate adaptation, and development, Migration and Development, 5 (2), 165-170.

Gleditsch, N. P. (2011): Regional Conflict and Climate Change. Paper prepared for the workshop on Research on Climate Change Impacts and Associated Economic Damages, Washington, DC, 27-28 January 2011.

Glick Schiller, N. (2015): Explanatory frameworks in transnational migration studies: the missing multi-scalar global perspective. Ethnic and Racial Studies 38 (13), 2275-2282.

Glick Schiller, N., Salazar, N. B. (2013): Regimes of Mobility Across the Globe. Journal of Ethnic and Migration Studies 39 (2), 183-200.

Gray, C., Wise, E. (2016): Country-specific effects of climate variability on human migration. Climatic Change 135 (3-4), 555-568.

Hall, S. (2016): Selling Sand in the Desert, The Economic Impact of Migration in Agadez, a study commissioned by IOM Niger.

Hampshire, K. (2002): Fulani on the Move: Seasonal Economic Migration in the Sahel as a Social Process. The Journal of Development Studies 38 (5), 15-36.

Hanson, G. H. (2010): International Migration and the Developing World, in: Rodrik, D., Rosenzweig, M. (eds.): Handbook of Development Economics, Vol. 5. Elsevier B.V., 4363-4414

Hatton, T. J. (2010): The cliometrics of international migration: a survey. Journal of Economic Surveys 24 (5), 941-969.

Hatton, T. J. (2014): The economics of international migration: A short history of the debate. Labour Economics 30, 43-50.

Hatton, T. J., Williamson, J. G. (2009): Emigration in the long run: evidence from two global centuries. Asian-Pacific Economic Literature 23 (2), 17-28.

Heller, C. (2014): Perception management - Deterring potential migrants through information campaigns. Global Media and Communication 10 (3), 303-318.

Henderson, J. V., Storeygard, A., Deichman, U. (2017): Has climate change driven urbanization in Africa? Journal of Development Economics 24, 60-82.

Hendrix, C. S., Glaser, S. M. (2007): Trends and triggers: Climate, climate change and civil conflict in Sub-Saharan Africa. Political Geography 26, 695-715.

Herrmann, S. M., Hutchinson, C. F. (2005): The changing contexts of the desertification debate. Journal of Arid Environments 63,

Hochleithner and Exner (2018a): Local Government and Migration: A Review of Literature and Media Narratives with focus on West African Sahel. Working Paper 13, ICLD, Sweden.

Hochleithner and Exner (2018b): Outmigration, Development, and Global Environmental Change: A Review and Discussion of Case Studies from the West African Sahel. Working Paper 15, ICLD, Sweden.

Hooghe, M., Trappers, A., Meuleman, B., Reeskens, T. (2008): Migration to European Countries: A Structural Explanation of Patterns, 1980-2004. IMR 42 (2), 476-504.

Hornung, C. A. (1980): Status Inconsistency, Achievement Motivation, and Psychological Stress. Social Science Research 9, 362-380.

Hsiang, S. M., Burke, M. (2014): Climate, conflict, and social stability: what does the evidence say? Clim Change 123, 39-55.

Hugo, G. (2008): Migration, Development and Environment. IOM Migration Research Series No. 35. International Organization for Migration, Geneva.

Hui, A. (2016): The Boundaries of Interdisciplinary Fields: Temporalities Shaping the Past and Future of Dialogue between Migration and Mobilities Research. Mobilities 11 (1), 66-82.

Hunter, L. M., Luna, J. K., Norton, R. M. (2015): Environmental Dimensions of Migration. Annu. Rev. Sociol. 41, 377-397.

Hunter, L. M., Nawrotzki, R. J. (2016): Migration and the environment, in: White, M. J. (ed.): Handbook of Migration and Population Distribution. Springer, Dordrecht, 465-484.

IMI (International Migration Institute, 2012): Global Migration Futures: Using scenarios to explore future migration in the Horn of Africa & Yemen. https://www.imi.ox.ac.uk/ publications/global-migration-futures-using-scenarios-to-explore-future-migration-in-the-horn-of-africa-yemen [7.8.2017] Imran, Z. (2013): Climate change and its impact on the political dynamics of Pakistan. CISSM Working Paper. http://drum.lib.umd. edu/handle/1903/15612 [20.8.2017]

Issifou, I. (2017): Can migration reduce civil conflicts as an antidote to rent-seeking? Economic Systems, published online, DOI: 10.1016/j.ecosys.2016.11.003.

Jónsson, G. (2008): Migration Aspirations and Immobility in a Malian Soninke Village. International Migration Institute, Working Paper 10.

Jónsson, G. (2010): The environmental factor in migration dynamics - a review of African case studies. Working Papers 21, International Migration Institute, University of Oxford.

Juárez, F., LeGrand, T., Lloyd, C. B., Singh, S., Hertrich, V. (2013): Youth Migration and Transitions to Adulthood in Developing Countries. ANNALS AAPSS 648, 6-15.

King, R., Skeldon, R. (2010): 'Mind the Gap!' Integrating Approaches to Internal and International Migration. Journal of Ethnic and Migration Studies 36 (10), 1619-1646.

Kniveton, D. R., Smith, C. D., Black, R. (2012): Emerging migration flows in a changing climate in dryland Africa. Nature Climate Change 2, 444-447.

Kniveton, D. R., Smith, C. D., Wood, S. (2011): Agent-based model simulations of future changes in migration flows for Burkina Faso. Global Environmental Change 21S, S34-S40.

Konseiga, A. (2006): Household Migration Decisions as Survival Strategy: The Case of Burkina Faso. Journal of African Economies 16 (2), 198-233.

Korfal, D. K., Sert, D. Ş. (2015): Development as a determinant of non-migration: case of Turkey. Migration and Development 4 (2), 256-271.

Koubi, V., Spilker, G., Schaffer, L., Bernauer, T. (2016): Environmental Stressors and Migration: Evidence from Vietnam. World Development 79, 197-210.

Lang, K., Dickens, W. T. (1987): Neoclassical and sociological perspectives on segmented labor markets. National Bureau of Economic Research, Working Paper No. 2127.

Lee, E. S. (1966): A theory of migration. Demography 48 (3), 47-57.

Lee, J.-y., Toney, M. B., Berry, E. H. (2009): Social status inconsistency and migration. Research in Social Stratification and Mobility 27, 35-49.

Libman, A., Herrmann-Pillath, C., Yadav, G. (2013): Are human rights and economic well-being substitutes? The evidence from migration patterns across the Indian states. European Journal of Political Economy 31, 139-164.

Lilleør, H. B., Van den Broek, K. (2011): Economic drivers of migration and climate change in LDCs. Global Environmental Change 21S, S70-S81.

Loschmann, C., Siegel, M. (2014): The influence of vulnerability on migration intentions in Afghanistan. Migration and Development 3 (1), 142-162.

Lucas, R. E. B. (2015): African Migration, in: Chiswick, B. R., Miller, P. W. (eds.): Handbook of the Economics of International Migration, Vol. 1, 1445-1596.

Mabogunje, A. (1970): Systems Approach to a Theory of Rural-Urban Migration. geographical analysis 2 (1), 1-18.

Marchiori, L., Maystadt, J.-F., Schumacher, I. (2012): The impact of weather anomalies on migration in sub-Saharan Africa. Journal of **Environmental Economics and Management** 63, 355-374.

Massey, D. S. (1988): Economic Development and International Migration in Comparative Perspective. Population and Development Review 14 (3), 383-413.

Massey, D. S. (2015a): Migration, Theory of. International Encyclopedia of the Social & Behavioral Sciences, 2nd edition, Volume 15, 466-471.

Massey, D. S. (2015b): Migration: Motivations. International Encyclopedia of the Social & Behavioral Sciences, 2nd edition, Volume 15, 452-456.

Massey, D. S., Arango, J., Hugo, G., Kouaouci, A., Pellegrino, A., Taylor, J. E. (1993): Theories of International Migration: A Review and Appraisal. Population and Development Review 19 (3), 431-466.

Massey, D. S., Arango, J., Hugo, G., Kouaouci, A., Pellegrino, A. and Taylor, J. E. (1998): Worlds in Motion: Understanding International Migration at the End of the Millennium. Oxford, Clarendon Press.

Mastrorillo, M. Licker, R., Bohra-Mishra, P., Fagiolo, G., Estes, L. D., Oppenheimer, M. (2016): The influence of climate variability on internal migration flows in South Africa. Global Environmental Change 39, 155-169.

Matereke, K. (2016): "Africa, Are We There Yet?" Taking African Mobilities Seriously -Concluding Remarks. Transfers 6 (2), 112-119. Maurel, M., Kubik, Z. (2014): Climate Variability and Migration: Evidence from Tanzania. FERDI, Working Paper 104.

Maurel, M., Tuccio, M. (2016): Climate Instability, Urbanisation and International Migration. The Journal of Development Studies 52 (5), 735-752.

Mavhunga, C. C., Cuvelier, J., Pype, K. (2016): Special Section on African Mobilities: "Containers, Carriers, Vehicles". Three Views of Mobility from Africa. Transfers 6 (2), 43-53.

Mayer, B. (2016): Climate migration and the politics of causal attribution: a case study in Mongolia. Migration and Development 5 (2), 234-253.

McCorkel, J. A., Myers, C. (2003): What Difference Does Difference Make? Position and Privilege in the Field. Qualitative Sociology 26 (2), 199-231.

McKune, S. L., Silva, J. A. (2013): Pastoralists under Pressure: Double Exposure to Economic and Environmental Change in Niger. The Journal of Development Studies 49 (12), 1711-1727

Mertz, O., D'haen, S., Maiga, A., Moussa, I. B., Barbier, B., Diouf, A., Diallo, D., Da, E. D., Dabi, D. (2012): Climate Variability and Environmental Stress in the Sudan-Sahel Zone of West Africa. AMBIO 41, 380-392.

Mertz, O., Mbow, C., Nielsen, J. Ø., Maiga, A., Diallo, D., Reenberg, A., Diouf, A., Barbier, B., Moussa, I. B., Zorom, M., Ouattara, I., Dabi, D. (2010): Climate Factors Play a Limited Role for Past Adaptation Strategies in West Africa. Ecology and Society 15 (4), Art. 25.

Mertz, O., Mbow, C., Reenberg, A., Diouf, A. (2009): Farmers' perceptions of climate change and agricultural adaptation strategies in rural Sahel. Environmental Management 43, 804-816.

Meze-Hausken, E. (2000): Migration caused by climate change: How vulnerable are people in dryland areas? A case study in Northern Ethiopia. Migration and Adaptation Strategies for Global Change 5, 379-406.

Molho, I. (1986): Theories of Migration: A Review. Scottish Journal of Political Economy 60 (5), 526-556.

Mondain, N., Diagne, A. (2013): Discerning the Reality of 'Those Left Behind' in Contemporary Migration Processes in Sub-Saharan Africa: Some Theoretical Reflections in the Light of Data From Senegal. Journal of Intercultural Studies 34 (5), 503-516.

Naudé, W. (2008): Conflict, Disasters, and No Jobs. Reasons for International Migration from Sub-Saharan Africa. Research Paper No. 2008/85, UNU-WIDER.

Ndiaye, M., Robin, N. (2013): Les migrations internationales en Afrique de l'Ouest. Hommes et migrations, 1286-1287, pp. 48-61.

Neumann, K., Hermans, F. (2017): What Drives Human Migration in Sahelian Countries? A Meta-analysis. Population, Space and Place 23, e1962, 1-16.

Newland, K. (2011): Climate Change and Migration Dynamics. Migration Policy Institute. Washington, DC.

Nicholson, C. T. M. (2014): Climate change and the politics of causal reasoning: the case of climate change and migration. The Geographical Journal 180 (2), 151-160.

Nyamnjoh, F. B. (2013): Fiction and reality of mobility in Africa. Citizenship Studies 17 (6-7), 653-680.

Obeng-Odoom, F. (2016): Migration, African migrants, and the world: towards a radical political economy. African identities 14 (4), 396-408.

Obeng-Odoom, F. (2017): Unequal access to land and the current migration crisis. Land Use Policy 62, 159-171.

Parnell, S., Walawege, R. (2011): Sub-Saharan African urbanisation and global environmental change. Global Environmental Change 21S, S12-S20.

Piguet, E. (2012): The drivers of human migration. Nature Climate Change 2, 400-401.

Piguet, E. (2013): From "Primitive Migration" to "Climate Refugees": The Curious Fate of the Environment in Migration Studies. Annals of the Association of American Geographers 103 (1), 148-162.

Piguet, E., Pécoud, A., de Guchteneire, P. (2010): Migrations et changements climatiques. Neuchatel: MAPS.

Potts, M., Zulu, E., Wehner, M., Castillo, F., Henderson, C. (2013): Crisis in the Sahel. Possible Solutions and the Consequences of Inaction. A report following the OASIS Conference (Organizing to Advance Solutions in the Sahel) hosted by the University of California, Berkeley and African Institute for Development Policy in Berkeley on September 21, 2012. http://oasisinitiative.berkeley.edu/publications/2016/2/20/crisis-in-the-sahel-possible-solutions-and-the-consequences-of-inaction [20.8.2017]

Quiminal, C. (2006): Décentralisation, démocratie et migrations dans la région de Kayes, in: Fay, C., Yaouaga Félix Koné, Catherine Quiminal, eds. Décentralisation et pouvoirs en Afrique, Paris: IRD Éditions.

Rademacher-Schulz, C., Schraven, B., Mahama, E. S. (2014): Time matters: shifting seasonal migration in Northern Ghana in response to rainfall variability and food insecurity. Climate and Development, 6 (1), 46-52.

Raleigh, C. (2010): Political Marginalization, Climate Change, and Conflict in African Sahel States. International Studies Review 12, 69-86.

Raleigh, C. (2011): The search for safety: The effects of conflict, poverty and ecological influences on migration in the developing world. Global Environmental Change 21S, S82-S93.

Raleigh, C. (2014): Migration, Urbanization, and Political Power in Sub-Saharan Africa. Annals of the Association of American Geographers 104 (2), 253-261.

Raleigh, C., Jordan, L., Salehyan, I. (2008): Assessing the Impact of Climate Change on Migration and Conflict. Sahel and West Africa Club Secretariat/OECD.

Raleigh, C., Urdal, H. (2007): Climate change, environmental degradation and armed conflict. Political Geography 26, 674-694.

Ransan-Cooper, H. (2016): The role of human agency in environmental change and mobility: a case study of environmental migration in Southeast Philippines. Environmental Sociology 2 (2), 132-143.

Ransan-Cooper, H., Farbotko, C., McNamara, K. A., Thornton, F., Chevalier, E. (2015): Being(s) framed: The means and ends of framing environmental migrants. Global Environmental Change 35, 106-115.

Reuveny, R. (2007): Climate change-induced migration and violent conflict. Political Geography 26, 656-673.

Ribot, J. (2014): Cause and response: vulnerability and climate in the Anthropocene, The Journal of Peasant Studies, 41 (5), 667-705.

Riosmena, F. (2016): The Potential and Limitations of Cross-Context Comparative Research on Migration. ANNALS AAPSS 666, 28-45.

Romankiewicz, C., Doevenspeck, M. (2015): Climate and Mobility in the West African Sahel: Conceptualising the Local Dimensions of the Environment and Migration Nexus, in: Greschke, H., Tischler, J. (eds.): Grounding Global Climate Change. Springer, Dordrecht, 79-100.

Runfola, D. M., Napier, A. (2016): Migration, climate, and international aid: examining evidence of satellite, aid, and micro-census data. Migration and Development 5 (2), 275-292.

Ruyssin, I., Rayp, G. (2013): Determinants of Intraregional Migration in Sub-Saharan Africa 1980-2000. The Journal of Development Studies 50, 426-443.

Salazar, N. B. (2011): The Power of Imagination in Transnational Mobilities. Identities 18, 576-598.

Salehyan, I. (2008): From Climate Change to Conflict? No Consensus Yet. Journal of Peace Research 45 (3), 315-326.

Salehyan, I. (2014): Climate change and conflict: Making sense of disparate findings. Political Geography 43, 1-5.

Sanfo, S., Fonta, W. M., Boubacar, I., Lamers, P. A. J. (2016): Survey data on key climate and environmental drivers of farmers' migration in Burkina Faso, West Africa. Data in Brief 9, 1013-1019.

Schapendonk, J. (2012): Turbulent Trajectories: African Migrants on Their Way to the European Union. Societies 2, 27-41.

Schapendonk, J. van Moppes, D. (2007): Migration and Information. Images of Europe, migration encouraging factors and en route information sharing. Working Papers Migration and Development Series, Report 16. Prepared for Radboud University, Nijmegen.

Scheffran, J., Brzoska, M., Kominek, J., Link, P. M., Schilling, J. (2012): Climate Change and Violent Conflict. Science 336, 869-871.

Schleussner, C.-F., Donges, J. F., Donner, R. V., Schellnhuber, H. J. (2016): Armed-conflict risks enhanced by climate-related disasters in ethnically fractionalized countries. PNAS 113 (33), 9216-9221.

Schoorl, J., Heering, L., Esveldt, I., Groenewold, G., van der Erf, R., Bosch, A., de Valk, H., de Bruijn, B. (2000): Push and pull factors of international migration. A comparative report. European Communities, Luxembourg.

Seeberg, P. (2013): Morocco and the EU. New tendencies in transnational migration and the EU's migration policies. Center for Mellemøststudier. Syddansk Universitet.

Selby, J. (2014): Positivist Climate Conflict Research: A Critique. Geopolitics 19 (4), 829-856.

Sheller, M. (2016): Uneven Mobility Futures: A Foucauldian Approach. Mobilities 11 (1), 15-31.

Shimeles, A. (2010): Migration Patterns, Trends, and Policy Issues in Africa. African Development Bank Group, Working Paper Series 119.

Smith, A. (2006): 'If I have no money for travel, I have no need'. Migration and Imagination. Cultural Studies 9 (1), 47-62.

Stahl, C. W. (1995): Theories of International Labour Migration: An Overview. Asian and Pacific Migration Journal 4 (2-3), 211-232.

Stark, O. (1991): The Migration of Labor. Blackwell, Oxford.

Tacoli, C. (2009): Crisis or adaptation? Migration and climate change in a context of high mobility. Environment & Urbanization 21 (2), 513-525.

Tall, S.M., Tandia, A. (2010): Regards sur la migration irrégulière des Senegalais: vouloir faire fortune en Europe avec les pirogues de fortune. Fiesole: CARIM.

Tanon, F., Sow, A. (2013): Unaccompanied Young Migrants from Africa: The Case of Mauritania. ANNALS AAPSS 648, 189-203.

Theisen, O. M., Gleditsch, N. P., Buhaug, H. (2013): Is Climate Change a Driver of Armed Conflict? Climatic Change 117 (3), 613-625.

Timera, M. (2001): Les migrations des jeunes Sahéliens: affirmation de soi et Emancipation. Autrepart 18/2, p. 37-49.

Timmerman, C., Hemmerechts, K., De Clerck, H. M.-L. (2014): The Relevance of a "Culture of Migration" in Understanding Migration Aspirations in Contemporary Turkey. Turkish Studies 15 (3), 496-518.

Todaro (1976): Internal Migration in Developing Countries: A Survey, in: Easterlin, R. A. (ed.): Population and Economic Change in Developing Countries. University of Chicago Press, 361-402.

Turner, M. D. (2016): Climate vulnerability as a relational concept. Geoforum 68, 29-38.

Uexkull, N. (2014): Sustained drought, vulnerability and civil conflict in Sub-Saharan Africa. Political Geography 43, 16-26.

Uexkull, N., Croicu, M., Fjelde, H., Buhaug, H. (2016): Civil conflict sensitivity to growing-season drought. PNAS 113 (44), 12391-

UNDP (2009): Human Development Report. Overcoming barriers: Human mobility and development. Palgrave Macmillan for United Nations Development Programme.

Ungruhe, C. (2010): Symbols of success: Youth, peer pressure and the role of adulthood among juvenile male return migrants in Ghana. Childhood 17(2), 259-271.

Van Hear, N. (2010): Theories of Migration and Social Change. Journal of Ethnic and Migration Studies 36 (10), 1531-1536.

Vollmer, B. A., Sert, D. Ş., İçduygu, A. (2015): EU migration legacies – perspectives from sending countries, Migration and Development 4 (2), 232-237.

Waldinger, M., Fankhauser, S. (2015): Climate change and migration in developing countries: evidence and implications for PRISE countries. Policy paper. ESRC Centre for Climate Change Economics and Policy, Grantham Research Institute on Climate Change and the Environ-

Warner, K., Afifi, T. (2014): Where the rain falls: Evidence from 8 countries on how vulnerable households use migration to manage the risk of rainfall variability and food insecurity. Climate and Development 6 (1), 1-17.

WFP (World Food Program) (2017): At the Root of Exodus: Food security, conflict and international migration. https://www.wfp. org/content/2017-root-exodus-food-security-conflict-and-international-migration [16.8.2017]

Willems, R. (2014): Local realities and global possibilities: deconstructing the imaginations of aspiring migrants in Senegal. Identities: Global Studies in Culture and Power 21 (3), 320-335.

Wimmer, A., Glick Schiller, N. (2003): Methodological Nationalism, the Social Sciences, and the Study of Migration: An Essay in Historical Epistemology. International Migration Review 37 (3), 576-610.

Wischnath, G., Buhaug, H. (2014): Rice or riots: On food production and conflict severity across India. Political Geography 43, 6-15.

Wissink, M., Düvell, F., van Eerdewijk, A. (2013): Dynamic Migration Intentions and the Impact of Socio-Institutional Environments: A Transit Migration Hub in Turkey. Journal of Ethnic and Migration Studies 39 (7), 1087-1105.

Witmer, F. D. W., Linke, A. M., O'Loughlin, J., Gettelman, A., Laing, A. (2017): Subnational violent conflict forecasts for sub-Sahara Africa, 2015-65, using climate-sensitive models. Journal of Peace Research 54 (2), 175-192.

Wouterse, F., van den Berg, M. (2011): Heterogenous migration flows from the Central Plateau of Burkina Faso: the role of natural and social capital. The Geographical Journal 177 (4), 357-366.

Wrathall, D. J., Bury, J., Carey, M., Mark, B., McKenzie, J., Young, K., Baraer, M., French, A., Rampini, C. (2014): Migration Amidst Climate Rigidity Traps: Resource Politics and Social – Ecological Possibilism in Honduras and Peru. Annals of the Association of American Geographers 104 (2), 292-304.

Wrathall, D. J., Suckall, N. (2016): Labour migration amidst ecological change. Migration and Development 5 (2), 314-329.

Zelinksy, W. (1971): The Hypothesis of the Mobility Transition. Geographical Review 61 (2), 219-249.



