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Is the 'Environmental Migration' Nexus an Analytically Meaningful Subject for Research?

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Editorial

The conference "Environmental Change and Migration: From Vulnerabilities to Capabilities" was the first of a new conference series on "Environmental Degradation, Conflict and Forced Migration". It was organised by the European Science Foundation, the Bielefeld University and its Center for Interdisciplinary Research. The Center on Migration, Citizenship and Development (COMCAD), the Universities' unit responsible for scientific content and quality of the conference, has launched a COMCAD Working Paper Series on "Environmental Degradation and Migration". The new series intends to give conference participants the opportunity to share their research with an even broader audience.

The symposium focused on how environmental change impacts the nexus between vulnerabilities on the one hand and capabilities on the other hand, and how this relationship affects mobility patterns. Although the conference organizers chose to include all kinds of environmental change and types of migration, climate change figured prominently among the submissions to the conference. Therefore, the conference aimed to bring together the perspectives from climate change, vulnerability, and migration studies, and to draw conclusions about the political implications of the knowledge scientists currently have available. Toward that goal, the conference was structured along three pillars. The first concentrated on climate change and the vulnerability of certain regions and groups. It covered case studies as well as different approaches for making climate change projections and assessing the likelihood of vulnerability. The second pillar focused on empirical research on environmentally induced migration from a vulnerabilities perspective, but acknowledged the occasionally strong elements of capability within it. In this way, the aim was to learn about approaches and options to support existing capabilities. The third pillar was concerned with the opportunities and pitfalls of policy options in dealing with the future challenge of climate induced displacement, and with the analysis of dominant public discourses within the field.

The researchers invited represented a wide range of disciplines, including sociology, social anthropology, migration, conflict, gender and development studies, geography, political science, international law, and climate and environmental science. The conference was also well balanced in terms of geographic origin, gender, and academic status of the participants. The conference programme and full report can be found at www.esf.org/conferences/10328.

Bielefeld, February 2011 Jeanette Schade and Thomas Faist

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Abstract

This paper makes the case that the ‘environmental migration’ nexus has no intrinsic capacity to provide us an operable understanding that can guide policy work. It then attempts to account for the continuing efforts to substantiate the ‘issue-area’ despite a range of widely noted problems with its conceptual basis. It concludes by outlining, in light of the preceding arguments, what role remains for social scientists.

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1. Introduction[1]

In recent years, the concept 'environmental migration' ('EM') has achieved particular mainstream currency among various epistemic communities,[2] and a significant amount of funding is being allocated to researching the 'nexus'. This policy-oriented interest is fundamentally conditioned by and dependent on the belief that there is a knowable, and ultimately quantifiable, relationship (however complex) between environmental drivers and human migration patterns. However, the conceptual basis of 'EM' - and the cluster of equivalent terms that hold the same assumption - has also been subject to trenchant critique. It has been shown that, in all contexts in which it has been used, 'EM' is a term that neither aids us in achieving an analytically useful rendering of this assumed 'causal relationship', nor helps us arrive at any generalisable understanding. In short, it has not been demonstrated to have any 'truth-value' and thus has no operability.

Despite widely cited work that has exposed the fundamental conceptual and methodological problems and limitations intrinsic to the concept,[3] and notwithstanding the absence of an analytically rigorous and policy-operable definition, the 'EM' nexus has only *gained* in currency among epistemic actors. Indeed, definitions have accrued legitimacy as a function more of their ubiquity than their ability to help us say anything of analytical value. The following widely cited International Organisation for Migration (IOM) definition is a case in point:

> "Environmental migrants are persons or groups of persons who, for compelling reasons of sudden or progressive changes in the environment that adversely affect their lives or living conditions, are obliged to leave their habitual homes, or choose to do so, either temporarily or permanently, and who move either within their country or abroad". (IOM 2007: 1).

While it is gratuitous to disparage the humanitarian sentiment which conditions this definition, it remains the case that it does not provide a guide to analytically rigorous understanding. Specifically, it fails to provide a basis from which we can achieve a general understanding of the relationship between environmental factors and migration. Arriving at this precise under-

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[1] This paper is based in part on the author's M.Phil. thesis, entitled '*A critical review of "environmental migration" as a policy relevant concept',* and conducted at the University of Oxford. The paper has been written as the author begins his PhD at Swansea University, supervised by Dr Nicola Piper and Prof Marcus Doel.

[2] An epistemic community is a 'network of professionals with recognized expertise and competence in a particular domain and an authoritative claim to policy-relevant knowledge within that domain or issue-area' (Haas 1992: 3).

[3] As noted by Lonergan 1998; Black 1998, 2001; Castles 2002; Zetter 2008; Betts 2010.

standing of the 'EM' nexus is imperative if the concept is to be genuinely (as opposed to potentially) policy-relevant, as policy is always elaborated with specific applications and relevancies in mind. An understanding of the 'mechanics' of the 'causal nexus' is ultimately oriented to two key goals that, although rarely explicitly acknowledged, nevertheless fundamentally orientate and legitimate the policy community's engagement with the theme. These are:

> a) To build[4] predictive[5] models for future scenarios regarding the provenance and numbers of 'environmental migrants',[6] so as to guide state responses to possible (and expected/ assumed) ruptures or changes to the socio-political, economic and geopolitical fabric that is the status quo, namely in terms of 'security', broadly defined.
>
> b) To construct legal and normative frameworks for structuring institutional and governmental responses (*i.e. pre-emptive intervention to prevent the need for 'EM'*) and responsibilities (*i.e. burden-sharing between states if and when 'EM' might occur*).[7]

It is crucial that we assess any elucidation of the concept in relation to the policy need to establish this general relationship in order to fulfil these objectives. *To say that the environment affects migration is a truism*; the point of research into the nexus is surely to establish the precise nature and dynamic of this relationship, which, if successful, would then constitute an operable understanding that could then guide and inform policy-making[8]. Without being oriented to this goal, the discussion is left bereft of purpose as a policy-relevant category. Given

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[4] Paul Cilliers sees science as concerned with prediction (as opposed to philosophy, which is interested in understanding). According to Cilliers 'from the traditional scientific perspective, models are required in order to predict and control the behaviour of complex systems' (Cilliers 2005: 12). Policy-making depends on the 'neutral language of science' for its legitimacy (Shore and Wright 1997), and as such there is a need for scientifically rigorous modelling.

[5] Etienne Piguet (panelist, Oxford RSC Environmental Migration Workshop 8-9 January 2009) has outlined seven families of research that have attempted to model the relationship between environment and migration. See **Appendix** for an overview.

[6] In November 2007, IOM released a policy paper aimed at raising awareness of the need to assemble better evidence in order to 'develop a global strategy to plan for, adapt to, and mitigate the processes and effects of environmentally induced migration' (Warner & Laczko 2008: 237). It is interesting that the implicit emphasis is in dealing with environmental migration as an inexorable process that will have certain consequences for socio-economic stability in receiving states, rather than focusing primarily on ensuring migrants themselves are protected and represented.

[7] Legal scholars at the University of Limoges (France) have been working on a 'Convention on the International Status of Environmentally-displaced Persons', which combines key principles from environmental and refugee law (Prieur et al. 2008, in Gemenne 2009: 22). Roger Zetter (2009) has also written on this.

[8] There is, of course, a need to distinguish between ordinary language use and formal analytical language as used by social scientists, and on which policy-making depends for legitimacy.

this situation, it is necessary for us to pull back from the debate, and decide what we *can* actually say about the efficacy of the concept.

With this point in mind, this paper will make the case that the 'EM' nexus has *no* intrinsic or potential validity as a tool for analysis or as a guide to policy action. It will therefore first attempt to unpack the politics of the term's recent impetus. Second, it will critically assess the conventional wisdoms that have structured our engagement with, and understanding of, the concept. Third, some tentative comments will be made with regard to why the substantive discussion of the term continues despite the trenchant conceptual critiques that have been articulated against it. In light of this discussion, the paper will end by reflecting on what, in light of this discussion, remains to be done by social science and social scientists.

2. The origins of the contemporary concern with 'EM'

The use of the term 'EM' in this paper is intended to be inclusive of the multiplicity of terms and 'typologies' that have been tabled over the years. A non-exhaustive list of these terms include:

> "Forced environmental migrant, environmentally motivated migrant, climate refugee, climate change refugee, environmentally displaced person (EDP), disaster refugee, environmental displacee, eco-refugee, ecological displaced person and environmental refugee-to-be (ERTB)." (Boano *et al*. 2008: 4).

This list indicates that there is a chaotic multitude of discursive threads making up the tapestry of the 'EM' literature,[9] with the result that tracing the development of any aspect of the discussion on its own terms is virtually impossible. However, although they each claim subtly different jurisdictions, all these terms are conditioned by a common assumption: that there is a determinable relationship between a given environmental 'driver' and some typology of human migration. Ascertaining this relationship is their *raison d'être*.

This continuous will to neology is driven by the fact that each term tabled, and each definition elaborated, has proven analytically inadequate. However, any review of the history of the term indicates that the impetus for the concept has always been political, as opposed to driven by the unambiguous existence of an *a priori* analytically distinct category of people who move as a result of an environmental driver. The key agendas have been those of envi-

[9] Gunvor Jonsson has noted that 'terminology is often confused, with concepts such as environment and climate change and variability being conflated' (2010: 2).

ronmentalists and security specialists, and there is significant overlap between the agendas and perspectives of these communities.

Patricia Saunders (2000) has noted that the discussion of one term, 'environmental refugees', grew out of concerns about security, which can be defined in this instance as an interest in maintaining American (or 'Western') geopolitical ascendancy. It is no coincidence that the first concern with 'environmental refugees' was articulated in the late 1970s by a researcher of the WorldWatch Institute, which at the same time was making the links between environmental degradation and security/conflict a central organising theme of its work. Worldwatch stated that:

> "Numerous new threats derive directly or indirectly from the rapidly changing relationship between humanity and the earth's natural systems and resources. …[T]hese…stresses convert into social unrest and political instability.'" (Brown 1977: 37).

For Saunders, the term 'environmental refugee' was 'deeply embedded in the globalisation agenda of its American originators and contemporary geopolitical preoccupations' (2000: 240). Specifically, there were Malthusian causal assumptions about how environmental pressures could lead to conflict which in turn could lead to migration, or alternatively that environmental pressures could lead to migration which could lead to conflict.[10]

Subsequently, 'EM' has often been mobilised by researchers in conflict studies. This increased in the 1990s, as security analysts found themselves having to search for new analytical frameworks for examining security following the end of the cold war.[11] Thus Thomas Homer Dixon stated that he feared environmental degradation would produce 'waves of environmental refugees that spill across borders with destabilizing effects' on both the domestic and international order (Homer-Dixon 1991: 77). He later stated that 'large population movements caused by environmental stress [will] induce "group identity" conflicts, especially ethnic clashes' (Homer-Dixon 1994: 6-7). In a similar vein, Norman Myers has claimed that 'developed countries cannot isolate themselves from distress and disaster in developing countries', and sees the 'threat' as 'environmental refugees' who have come to the OSCE countries 'usually illegally'. He emphasised how 'today's stream will surely be regarded as a

[10] These views, however, are contradicted by research which has shown that conflict occurs not over lack of resources, but over an abundance of resources, as the investment in conflict tends to come from outside actors who have something to gain from a particular outcome.

[11] Galtung 1998; Homer-Dixon 1991, 1994; Homer-Dixon and Blitt 1999; Myers 2005.

trickle when compared with the floods that will ensue in decades ahead' (2005: 3-4). In the words of Jodi Jacobson:

> The vision of tens of millions of persons permanently displaced from their homes is a frightening prospect, one that could rival war in its effect on humanity. The growing number of environmental refugees is perhaps the best single measure of global environmental decline. (Jacobson 1988: 258)

The environmental studies community[12] has long been the second underwriter of the 'EM' nexus' currency. In explaining this interest in the 'EM' concept, Stephen Castles has noted that the emotive topic of migration, if argued to be due to environmental drivers, could then spur state action on environmental issues: 'if environmental factors lead to refugee flows this would be a powerful reason for the "international community" to take pre-emptive action' (Castles 2002: 6). James Morrissey concurs with this view, explaining that:

> Around the time that the term "environmental refugee" came into use, the environmental lobby was dominated by the conservation paradigm, and the emotive notion of 'environmental refugees' was very likely employed to stir up support for increased efforts at conservation and environmental protection. (Morrissey 2009: 8)

As early as 1988, Jacobson suggested that an (apparent) decline in the planet's habitability was increasingly evident in the numbers of 'environmental refugees', the existence of which she claimed was a 'yardstick of habitability'. Migration has, therefore, long been mobilised by environmentalists as a way to put a 'human face' on the environmental problems, by making the 'consequences' of environmental change more emotive and immediate to the public and to political actors.

However, the proliferation of interest in 'EM' in the late 2000s has emerged from a concern with two issue-areas that have been increasingly foregrounded in public and political debate.

The first is migration in general terms. Interest in migration - especially immigration - and its governance has increased dramatically since the end of the Cold War, as political discourse in the twenty-first century shifts away from the great binaries of the twentieth century, and towards previously secondary and/or peripheral concerns, including terrorism, national identity, social cohesion, and, linked with all these themes, migration itself.

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[12] Foley 1999; Myers 1987, 1993, 1995, 1997; Polunin 1998; Westing 1992.

The second is climate change. It is clear that the upturn in interest over the last five years, in 'EM' as a subject of policy, has occurred as a corollary of increasing mainstream political concern with climate change as an issue-area, contemporaneous with the publication of the Stern Report (2006), and the release of *An Inconvenient Truth* (2006). Indeed, there was a flurry of publications on the 'EM' nexus from 2007.

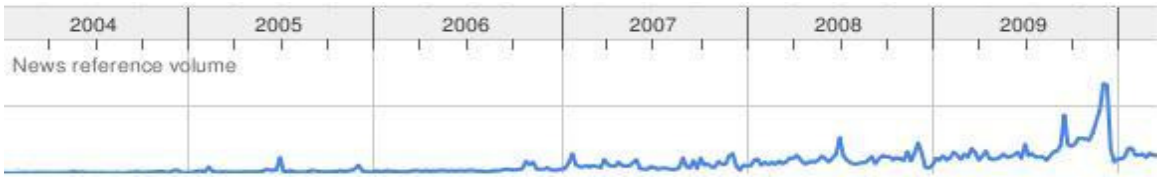

Figure I: Scale is based on the average internet news reference volume on the keywords 'climate change' in all years. The data is normalized. Source: Google Trends.

It was perhaps inevitable that these two issues-areas would be fused at one point, creating a 'blockbuster' issue for epistemic attention. As a consequence, the currency that 'EM' has gathered is more a reflection of the politics of issue-linkage than the concept's analytical rigour or empirical basis. From an academic perspective, this sequence of events is cause for concern.

In the absence of any operable understanding, much of the contemporary literature seeks legitimacy by citing definitions and enumerations of 'environmental migrants/ refugees' propounded in papers produced in the 1970s[13], 1980s[14] and 1990s.[15] Sometimes recent papers also cite non-specialist sources, such as Friends of the Earth,[16] Greenpeace Germany (Jakobeit and Methmann 2007) and Christian Aid;[17] and inter-governmental organisations such as the Council of Europe[18] and UNESCO.[19] Although it is clear that the claims made in a number of these sources are entirely unsupported, some draw their figures from the aca-

[13] Brown *et al.* 1976.

[14] Timberlake 1983a, b; Timberlake and Tinker 1984; El-Hinnawi 1985; Jacobson 1988; Tolba 1989.

[15] IPCC 1990; Suhrke 1993; Myers & Kent 1995; Myers 1993, 1997, among others.

[16] Friends of the Earth, 'A Citizen's Guide to Climate Refugees, Fact Sheet Four: Predictions of Climate Refugees to 2050' (FOTE: London), 2007. *FotE* predicts 'climate refugees' of 200 million worldwide by 2050 (2007: 10).

[17] Christian Aid (2007) suggested up to 1 billion 'climate change refugees' by 2050.

[18] The Council of Europe quotes the IPCC estimate of 150 million 'ERs' by 2050 (Parliamentary Assembly Doc. 11084, 23 Oct 2006, The Problem of Environmental Refugees: 1).

[19] UNESCO (2007) quotes an unreferenced estimate of 60 million 'desertification migrants' by 2020.

demic literature. Norman Myers is the most often cited. However, it is perplexing that his enumerations of 'environmental refugees' have such authority. They have been subjected to criticism on both methodological and conceptual grounds,[20] and Myers has himself admitted that his figures were based on 'heroic extrapolation' (Brown 2008: 12). It is therefore worth noting that we should not assume that the longevity and repetition of a concept, or cluster of concepts, necessarily ensures analytical legitimacy or relevance to the contemporary debate.

We have here made the case that the impetus of the 'EM' nexus is due more to politics than to its intrinsic analytical efficacy, or capacity to facilitate understanding or guide policy action. We can now turn to the task of critically interrogating the contextualised use of 'EM' as a policy-relevant construct.

3. Critically evaluating the 'EM' construct

In this section, we will examine each context in which the 'EM' concept has been applied, and assess its capacity to aid our understanding in each case. We must however remember that the environment can *always* be found to play a role in any particular case study. The *raison d'être* of any discussion of 'EM' is to establish a generalisable definition or typology that captures what this role actually is. In other words, we must not take the influence of the environmental as self-evidently meaningful, but must always work to see how and why elaborating it makes sense from the perspective of the policy community.

Richard Bilsborrow (1992) was one of the first writers to draw attention to the 'conceptual implications of homogenising all environmentally motivated migrants' (Morrissey 2009: 6). The evidence for such scepticism is apparent in the widely cited 2008 paper by Graeme Hugo, which assumes the validity of an overarching concept of 'EM', in relation to the 'development' discourse. We will here use the Hugo paper as a starting point for this critical analysis.

Hugo states that we live in a world where 'global environmental stress and degradation have accelerated and unprecedented numbers…are seeing migration as an option' (Hugo 2008: 1). He goes on to outline what he sees as four types of 'EM', although with the caveats that a) 'there are instances where they [the types of environmentally induced migration] are interrelated' and b) the estimates of the numbers of migrants in each category are estimates 'made without substantiation' (Hugo 2008: 19). Using these typologies as a framework, this sec-

[20] For example, Vikram Kolmannskog has stated that Myers' work can be 'criticized for being inconsistent, impossible to check and failing to take proper account of opportunities to adapt' (Kolmannskog 2008: 9).

tion aims to indicate how each is demonstrably unsound. This critically analysis will judge the efficacy of the 'EM' concept in each context in relation to the both its ability to be substantiated, and the usefulness of each context for arriving at the necessary general understanding.

i) Migration induced by natural disasters

Hugo states that the 'most dramatic' 'EM' is in response to the onset or fear of natural disasters such as floods, earthquakes, volcanic eruptions and tsunamis. However, he goes on to state that the social contingencies of such movement are important, such as state capacity and resources to mitigate the impact of a given natural hazard. Moreover, he acknowledges that many so-called natural disasters may find their origin or root cause in 'long-term political, social, economic or agricultural policies which have disturbed environmental balance' (Hugo 2008: 19). This reconciles with the words of Anthony Oliver-Smith:

> What really constitutes a disaster…is the combination of a destructive agent from the natural and/ or man-made environment and a group of human beings living in a specific local socio-cultural context in addition to regional, national and international spheres as well. (Oliver-Smith 1986: 8)

Oliver-Smith goes on to cite proponents of Marxist dependency models[21] who hold that disasters do not just simply occur - they are caused:

> The high correlation between disaster proneness, chronic malnutrition, low income and famine potential leads to…the conclusion that the root cause of disasters may well be attributable to the structural imbalances between rich and poor countries. (Oliver Smith 1986: 18)

As such, we can see that natural hazards themselves do not kill *per se*, but rather the degree to which the hazard has disastrous outcomes is dependent on the social, economic and political context.[22] Therefore isolating the 'environmental' stratum fails to deal with the specificity of the event. Furthermore, the possibility of social contingencies eviscerates the 'EM' typology of any generalisablity. This type of 'EM' therefore cannot give us a stable understanding of the role of the 'environmental' as an independent variable in each case, and also fails to

[21] Such as O'Keefe et al. 1976; Richards 1975.

[22] For example, an earthquake in a poor urban area will likely have more lasting consequences than one of the same magnitude in an advanced economy.

substantiate any generalizable understanding of an 'EM' causal nexus. It thus fails to qualify as a context in which 'EM' can be applied or in which the concept can be seen as manifest.

ii) Migration as a result of large-scale projects

The second form of environmentally induced migration, according to Hugo (2008: 41-42), is 'displacement by large projects'. He includes both 'planned' forced migration and 'unintended environmental consequences' which 'force environmental migration' (2008: 42). An example of the former is the Three Gorges Dam Project in China. The latter is instantiated by the drilling of a wild-cat well in Indonesia in 2006, which caused a huge mud flow from a fissure that has engulfed more than ten towns and displaced 16,000 people (Montlake 2008: 16). However, it is clear that, in both these cases, there is a political or economic prime mover. As such, 'EM' is not relevant to this typology, as it neither gives us an understanding of the intrinsic importance of 'the environmental' in context, nor a generalizable understanding of the 'EM' causal nexus that can be useful as a guide to policy action.

iii) Migration due to environmental degradation

'Environmental degradation' is a broad category. It can include - among other miscellaneous concerns - deforestation, droughts, desertification, salination and crop failure. Three comments are worth making.

First, conventional wisdom regarding many forms of degradation, including deforestation and desertification, has, over the past two decades, been shown to be conceptually problematic by a range of scholars.[23] Although this literature will not be leant on to bolster the argument made here, it is nonetheless important.

Second, as with 'natural disasters', the degree to which any form of degradation is meaningful and consequential is contingent on the relevant social, political and economic circumstance. As Gunvor Jonsson argues in relation to supposed climate-change impacts in the Sahel, Africa:

[23] On environmentalists' construction of soil erosion: Stocking 1996; on deforestation: Fairhead & Leach 1996, Stott 1999; on overgrazing: Behnke et al. 1993, Scoones 1996; on desertification Thomas & Middleton 1994, Swift 1996; on global warming: Moore et al. 1996, Bradnock and Saunders 2000; Himalayan degradation as a cause of downstream flooding: Ives & Messerli 1989, Hofer & Messerli 1999.

> Socio-political factors such as misguided development strategies, unequal distribution of power and resources, conflict and lack of rights are part of the explanation for why people have been victims of drought and famine. (Jonsson 2010: 4)

Third, there is a methodological problem that should be borne in mind, given the previous two points, which is that, in the words of Oliver Brown, 'the complex interaction between different meteorological and social factors make cause and effect models tricky and often inappropriate' (2008: 24). In other words, the relationship between 'environmental degradation' (however it is defined) and migration cannot be modeled, and as such the 'EM' concept does not aid us in achieving any operable understanding in this context. However, the notion of 'environmental degradation' might - in principle - be general enough to ensure that the concept is *hypothetically* useful in establishing a *generalizable* typology, assuming that it was possible to isolate the role of the 'environment' without social, political and economic mediation. But, without both a substantive basis and clear usefulness, the 'EM' concept cannot be efficaciously applied to this context.

iv) Migration due to climate change

The analysis of these first three contexts, in which 'EM' is often thought to apply, demonstrates that it is analytically meaningless to talk of the 'environment' as an independent variable, as any configuration of 'environmental' factors in terms of their societal implications are fundamentally structured and inflected by social, political and economic conditions. However, there are certain cases that are often seen as remaindered from such a critique, and these are migration from certain consequences of climate change.[24] Specifically, this will be sea level rise (SLR) and the particularly emotive case of 'sinking islands'.

a) Generic 'sea-level rise migration'

SLR is often framed as an indisputable cause of 'EM', and is therefore often perceived as a particular cause for alarm. In one of the 'worst-case' enumerations, Myers (2002) has said that 162 million people will be at risk by 2050 (Adamo 2009: 18; Hugo 2008: 32) from SLR.

However, we need to gain some perspective on these figures and the understandable concerns that they trigger. First, the numbers are relatively insignificant compared to projected increases in global rural-urban migration over the same period, as well as actual world popu-

[24] Various consequences of climate change, such as land degradation, can be subsumed under the previous three themes, leaving only sea-level rise outstanding.

lation growth. Furthermore, these numbers – even if they were substantiated, which they are not – are aggregations of migrations over large swathes of the planet, and over half a century. When we see the total figures from this perspective, we see that the numbers are not themselves particularly problematic, if problematic at all. Rather, these figures are perceived as problematic due to implicit assumptions that provide fertile (but unstable) ground on which concern can grow.

First, the assumption at the root of the concern with the 'SLR migration' nexus is that society is static, and with little excess carrying capacity for maintaining a sudden (or gradual) rise in population or a concomitant intensification of land use. But we must remember that the concept of regional carrying capacity was originally developed to model animal populations. According to Ester Boserup (1965), the concept has no relevance to human populations. Humans differ from other animals in two ways that complicate the notion of carrying capacity with regard to people: first, we have an ability to innovate and use technology which allows us to raise the limits of possibility; second, humans, unlike other animals, depend on the environment for resources far beyond simple food and water, but we are not dependent solely on our own region for necessities.

Although the notion of carrying capacity is theoretically indeterminate, there is ample empirical evidence from around the world, chiefly (but not exclusively) detailed in the literature on urbanisation,[25] which indicates that urban areas have a remarkable capacity to absorb large numbers of newcomers. The evidence of this is all around us. But the fear of 'SLR migration', which is often seen as one of the main corollaries of climate change that will pose a challenge to societal stability and, more grandly, the geopolitical status quo, is often based on an assumption of 'tipping points'. This phrase is often used to suggest the limits of 'carrying capacity': 'environmental migrants/ refugees' will 'flood' the cities, overwhelm infrastructure, establish slums and generally cause chaos and anarchy. However, all the evidence suggests that this is simply based on a static model of society which simply can't be squared with the complex reality. Cities thrive on immigration, as every newcomer is both a potential worker *and* consumer. Modern Chinese cities such as Shenzhen are clear examples of this. The degree to which a city suffers infrastructural stress or rising crime is due more to context-

[25] Interestingly, according to Lezlie Moriniere (who has conducted a systematic review of 321 works that pertain to the 'EM' nexus) only one paper has used the term 'urbanization' in the title, and only eight used the term in the keywords of abstract (2008).

specific degrees of incompetent governance or corruption than it is due to some intrinsic quality of immigrants themselves, whatever their origin or 'driver'.

Second, there is an assumption that we can isolate 'EM' from other forms of migration[26]. However, most predictions indicate that the impact of SLR - if it occurs - will be gradual, and as such migration would also occur gradually, and would ultimately be economic migration, as it would be in response to diminishing livelihood opportunities in the regions of origin.

This suggests that the alarmist terms on which the discussion of apparent potential 'EM' has taken place are at odds with the evidence of actual societal formations and dynamics 'on the ground', and is underpinned by simplistic and erroneous conventional wisdoms on the nature of society itself. The concern about 'SLR migration' is thus overblown, even if SLR occurs: it assumes that migration is something intrinsically problematic for any receiving context, which is itself assumed to be static and averse to and threatened by change. Such concerns also neglect to note that migration will be diffused over both time and space. It is therefore clear that, although one might be able to draw a general correlation between SLR and migration, it is nevertheless not useful for understanding causality and consequence in context.

b) The case of 'sinking islands'

The particular and emotive case of 'sinking islands' is often held up as the 'canary in the coalmine' with regard to migration as a consequence of climate change. Myers & Kent (1995: 146) state that the island nations at risk, in the Indian and Pacific Oceans, include the Maldives, Kiribati, Tuvalu and the Marshalls, as well as a number of Caribbean states. The Maldives, with 1190 atoll islands, is at no point more than two metres above sea level. The combined population of these island states in 1995 was estimated at 25 million, and was projected to surpass 50 million by 2030. The IPCC have stated that 'sea-level rise is expected to exacerbate inundation, storm surges, erosion and other coastal hazards, thus threatening vital infrastructure, settlements and facilities that support the livelihood of island communities' (IPCC 2007: 689). According to Myers & Kent, up to one million people might be forced to migrate permanently (Myers & Kent 1995: 146). More conservatively, the CIA (2005) put the population of island states at risk of inundation at 500,000. The first case of 'sea-level refugees' is said to have taken place in December 2005 on Vanuatu, when increased frequency of storm surges necessitated the relocation of the village of Lateu (UNEP 2005).

[26] It is worth noting that analytically distinguishing between different migration typologies, such as 'forced'/ 'voluntary' and 'economic/ education' has long been noted as being deeply problematic. See Turton (2003) for an excellent discussion of this.

For Roger Zetter (2009: 428), the case of sinking island states raises two specific concerns: the higher predictability of the outcome and the fact that people will not be able to migrate to higher ground in their own or contiguous countries.

Assuming, for the sake of argument, that sea-level will rise and the islands will be inundated, we must then ask what the concept of 'EM' brings to the discussion as a guide to understanding and for crafting policy responses.

Zetter has made the case that in the exceptional cases of 'sinking islands', bespoke legal frameworks are not necessary, as *ad hoc* measures and legal responses could suffice, stating that:

> "A combination of extant norms and frameworks of humanitarian, refugee, human rights, environment law and regional and *ad hoc* measures offers the most promising path to developing a protection regime in respect of environmental migration." (Zetter 2009: 421).

He notes that while specific protection does not exist in, for example, France, exceptions have been made for victims of disasters. He argues that Special Decree powers might be used to facilitate the accommodation of those affected by rising sea levels, or who hail from 'sinking island' states.

Zetter's points suggest that even if a rise in sea level does give rise to an unequivocal case of environmentally driven migration, nothing is gained by classifying the victims as 'environmental migrants'. Even in such a worst-case scenario, the circumstances do not require a new typology, and nothing can be gained by describing these as cases of 'EM', rather than assigning them to more general categories. The concept is therefore of little analytical or pragmatic value in these instances, and is thus extraneous.

We can therefore see the relevance of 'EM' assessed in the following matrix. The top line is defined in terms of whether it is possible for an environmental factor to be discerned from other drivers and identified as the analytically unambiguous 'prime mover'. The column on the left indicates whether the concept applied in each context is useful for arriving at a operable understanding that can lead to predictive models and legal and normative frameworks that can be valid more generally.

	Environmental factor not a clear-cut prime mover	**Environmental factor** a clear-cut prime mover
Not useful for building a general operable typology	**Natural disasters** **Man-made projects**	**Sinking islands**
Useful for building a general operable typology	**Envir. degradation** **Sea-level rise**	**?**

Figure II: matrix categorizing the validity of 'EM' in various contexts. To be valid, a category would have to fall in the lower right hand box. None do.

For the 'EM' concept to be valid, a proven substantive basis for causality must be clearly established, and there must also be a proven and useful typology for achieving a general understanding which can guide the construction of predictive models and legal and normative frameworks. It is clear that there is no context in which 'EM' has been applied that is valid on both axes, and thus 'EM' has no capacity to be an operable concept for policy makers.

We can therefore see that to deny the validity of 'EM' as an operable category is not to deny that there are problems 'out there'. Rather, we can say that our understanding of the real problems and threats people face is not in any way aided by a general concept of 'EM'.

4. The conundrum

It is at this point that an interesting conundrum arises. As we have noted, the conceptual basis for 'EM' has been subjected to insistent critiques. Although these critiques are widely acknowledged by most research papers, and although there is still no analytically valid definition of 'EM', the term nevertheless maintains significant and growing currency. Indeed, there is what can be termed an *intrinsic dissonance* in much of the literature. That is, many contemporary policy makers and researchers who are attempting to enumerate 'environmental migrants', and to scope the 'phenomenon', do acknowledge that no definition has been agreed on, and generally accept that the very idea of 'environmental refugees/migrants' is problematic due to the difficulty in isolating causality. However, they almost invariably go on to talk of 'EM' as if - despite the failure to adequately define and conceptualise the idea itself

- it is a self-evident fact that is 'out there', simply waiting for the correct definition to fall into place. No paper has as yet provided any definitive understanding or evidence of 'EM', but many have reviewed the literature on the topic, often concluding that 'more research is needed'.

Hugo (2008) is a good example of the dissonance evident in much of the policy-relevant research. In the introduction to his 2008 paper, Hugo notes that 'our knowledge of the complex two-way relationship involving environmental change as both a cause and consequence of migration remains limited'. However, in the next paragraph he incongruously goes on to state that:

> "Historically, the vast bulk of migration caused by environmental change has occurred within national boundaries, as have the environmental effects resulting from population movements". (Hugo 2008: 7).

Later in the same paper, he states that:

> "Regardless of "conceptual fuzziness" and [the fact that] the concept of environmental migrants remains contested…in academic circles…[it is clear that the] environment is an important cause…of migration." (Hugo 2008: 49).

Hugo further states that 'environmental factors are increasingly significant in…inducing migration' and that it is therefore 'difficult to disagree with Fabrice Renaud et al. (2007) that there is a need to consider environment and migration from a policy perspective' (Hugo 2008: 49). These statements are typical of much of the literature – mobilising the concept of 'EM' despite acknowledging that it is an empty signifier. Much like other policy-relevant literature, Hugo then goes on to make five policy recommendations: facilitate a better understanding of the cause-effect mechanisms between environmental degradation and forced migration; raise worldwide public and political awareness of the issue; establish legal and normative frameworks for recognizing 'environmental refugees' ('ERs'); empower relevant entities of the UN to provide 'ERs' assistance; strengthen institutional support at all levels to aid 'environmental migrants'.[27]

What is interesting about this list is that it both encourages further research to examine the validity of the nexus *and urges the elaboration of a public and political discussion about nor-*

[27] Drawn from Hugo 2008: 48.

mative responses before the 'phenomenon' itself has been established. The implicit assumption is that it is a useful category. This is a common (if often subtle) trend in the contemporary[28] debate: writers first acknowledge the critical insights that the 'EM' concept is irredeemably problematic, yet continue to use it to orient their discussion thereafter. Another example of this intrinsic dissonance is found in this quotation from Renaud et al.:

> "There is a broad scientific consensus compelled with a concerned public expectation that the phenomenon on environmental migration, ill-defined as it may be, would turn worse in the years to come." (Renaud 2007: 6).

Renaud et al. go on to state that:

> "A point has been reached at which it is important to investigate the extent to which environmental degradation is a root cause for migration or displacement and moreover to urgently address the issue of environmental migration consistently through policies supported by rigorous scientific and academic research." (Renaud 2007: 10).

Similarly, when the IOM reviewed the issue of 'EM' in a recent publication (2009), it began by emphasising that the subject is a 'complex nexus' and acknowledged the difficulties in establishing the relationship between environmental change and migration. However, it then goes on to quote the long-since dismissed figures on the potential number of 'environmental migrants' in order, perhaps, to indicate the need for the IOM to engage with the 'issue'.

These examples indicate that the authors assume the existence of a meaningful causal relationship to be self-evident, with the challenge lying in establishing a definition, which may be achieved through further positivist research. This general pattern in the literature brings to mind the words of Andrew Abbott. Referring to the hegemony of causal explanation among much sociology, he stated that 'action and contingency disappear into the magician's hat of variable-based causality, where they hide during the analysis, only to be reproduced with a flourish in the article's closing paragraphs' (Abbott 1998: 3). In the case of the discussion of 'EM', the flourish happens in the introductions, and these acknowledgements having been made, the assumption of the validity of the causal nexus then continues regardless. Even critical researchers can't help but say the term has validity. So, despite the 'maximalists' claims of the 1990s and early 2000s having been silenced, or at least marginalised from the

[28] Renaud 2007: 10; Hugo 2008; Kniveton *et al*. 2008: 30-3; Adamo 2009; Afifi & Warner 2008: 20; Gemenne 2009: 45; Warner *et al*. 2009: 2.

core of the debate among serious researchers, the concept of 'EM' itself has remained in circulation, and arguably increased in its use and supposed validity.

So how do we account for this intrinsic dissonance in the literature? How do we explain the continued currency of the concept despite the fact that it has been shown to be analytically nonsensical in the contexts in which it is applied? A tentative explanation, if not a definitive answer, might be found in examining two closely linked objections frequently raised if one takes a critical perspective and attempts to interrogate the validity of the 'EM' concept. We can here term these the 'strategic essentialism' objection and the 'semantic games' objection.

i) The 'strategic essentialism' objection

The 'strategic essentialism' objection is typically phrased as: 'Well, the term may not itself have much analytical integrity, but at least it helps us draw attention to people's plight in the face of environmental problems'. In response to this, it is important to point out that a concept, if left as an ill-defined 'empty signifier', may be instrumentalised by actors with their own agendas. It is clear that the term itself can achieve nothing in providing an operable understanding of the relationship between environmental factors and human migration. But by its use, it absolutely *can* be subject to expedient manipulation. This point is worth demonstrating in some detail.

Vikram Kolmannskog has suggested that:

> "The concept of environmental or climate refugees, including speculations on their numbers and the threat they pose, can be instrumentalised for purposes other than the protection of and assistance to the forced migrants." (Kolmannskog 2008: 10).

Drawing on James Ferguson, who was discussing 'development', we could argue that the concept 'EM' has the effect of:

> "Depoliticizing everything it touches, everywhere whisking political realities out of sight, all the while performing, almost unnoticed, its own pre-eminently political operation of expanding bureaucratic state power." (Ferguson 1994: xv).

Indeed, Jeroen Warner has noted that 'in governance and international relations a key issue is that a successful 'securitisation' strategy helps legitimate state intervention and, as a consequence, the state' (Warner 2000: 248). It has been noted that the work of 'maximalists' such as Myers and Kent (1995) has helped those who have attempted to 'securitise environmental issues' (Goldstone 2001: 38). In practice, this all suggests that the concept has been subject to expedient manipulation by a range of actors to bolster the legitimacy of their

agendas, with often pernicious or at any rate iniquitous consequences for certain subject actors and stakeholders. This will be briefly explored here in the context of the anti-asylum lobby in the 'global north'; the internal policies of states in the 'global south'; and 'global' efforts to mitigate the impact of climate change in the global south.

a) The anti-Asylum lobby in the global north

According to JoAnn McGregor, anti-asylum lobbyists mobilised the term 'environmental refugee' in order to obtain stricter immigration policies (1994), built around the emotive concern with seemingly inexorable environmental collapse in the 'south' (O'Lear 1997). Gaim Kibreab has even argued that the term 'environmental refugee' was:

> "Invented at least in part to depoliticise the causes of displacement, so enabling states to derogate their obligation to provide asylum. The rationale is that states have no obligation to provide asylum to those who flee their homes because of environmental deterioration rather than political persecution. In international refugee law, environmental conditions do not constitute a basis for international protection." (Kibreab 1997: 21).

Similarly, Richard Black (2001) has made the point that anti-asylum lobbies in many northern states have used the concept of 'environmental refugee' to raise the profile of the idea of 'bogus-asylum seekers', claiming that most asylum seekers are in fact 'environmental refugees', and as such have no claim to asylum under the 1951 Geneva Convention.[29] It is clear that some are classifying certain migrants and refugees as 'environmental refugees' (and thereby not 'real' refugees under the 1951 Convention) without a shred of supporting evidence.[30] This is clearly an iniquitous state of affairs, and one compounded – even constituted – by the high currency of an insubstantial concept open to subjective and expedient interpretation by actors with their own agendas.

b) *Internal policies in the 'global south'*

There is also evidence of governments removing people from a given area because they were causing 'environmental stress'. China has a policy of *shengtai yimin* (ecological migration) which has led to the removal of nomadic herders in Inner Mongolia, a strategy legitimized by drawing its authority from environmental science. In 2001, the policy recommended

[29] As widely noted, the term 'environmental refugees' would also undermine the 1951 convention, and this would be to the detriment of refugees more generally.

[30] Myers (2005: 4) suggests that trans-Mediterranean boat-migrants are 'environmental refugees', in complete contradiction to the findings of migration studies scholars (cf. de Haas 2007).

the displacement of 650,000 herders from the steppe. It called for herders to be replaced by 'ranch-style intensive grassland management.' According to analysts, this had 'vast implications for ethnic relations, human rights, and environmental policy.'[31] This is an example of the 'EM' notion being instrumentalised to achieve longstanding political goals, in this case the destruction of livelihood strategies that conflict with the overarching strategy, *kexue fazhan* - 'scientific development' - designed to bring development of this particular area into harmony with eastern China.

c) Climate-change mitigation

Zetter has pointed out[32] that in the 'global north' the discussion of climate change is orientated to mitigation and adaptation, whereas in the 'global south' the response is consistently conceived as being in the form of migration or movement. This reminds us that the concept of 'EM' is discussed in relation to specific political-geographical contexts. It is worth considering that, implicitly, the discourse on 'EM' is an acknowledgement of a *failure* of adaptation. This is a discourse that could lead to an abandonment of mitigation policies and investment in adaptation in the 'global south', if environmental collapse is implicitly held in the 'EM' discussion as a foregone conclusion. There is international resignation to some notion that mitigation strategies will inevitably fail. This undermines collective efforts to improve governance structures that are key to ensuring that the 'global south' does not see deleterious outcomes, and structural contractions, negatively impacting upon people's ability to maintain their customary livelihoods.

With these three examples we have noted that it is important that the term 'EM' is not legitimized as a 'strategic essentialism'. The conceptual vagueness of the term can lead to expedient manipulation by actors with their own agendas, often with ethically questionable consequences.

More pressingly, we must ask why it is that a strategic essentialism such as 'EM' might be necessary. Surely, if people have challenges configured in a particular way, those problems should be able to attract international attention on their own terms, without recourse to a concept which bears little relationship to the complexity 'on the ground'. If we make the argument that 'EM' is a legitimate concept because, at the very least, it draws attention to problems in the world even if those problems do not fit the concept itself, we must then ask why

[31] AAS Annual Meeting, China and Inner Asia Session 187.

[32] Zetter, R., opening remarks at the Environmental Migration Workshop, RSC, Oxford, 8-9 January 2009.

the *real* situation cannot draw attention on its own terms. If it cannot, then surely the real issue is why the international community and institutions are not mobilized, and why they lack the incentives to engage with problems and issues as they are. The goal, therefore, should be to restructure institutions, and to reorder our frame of analysis, in order to be more directly and transparently efficacious.

ii) The 'semantic games' objection

This second objection is typically phrased as 'well, at the end of the day, aren't you just playing semantic games? You can critique the 'EM' concept, but aren't people still suffering? How do you deal with people forced to flee environmental problems?'

The dilemma here is that one can argue through each case of 'EM' in application, and demonstrate how in each case it is not a valid form of conceptualisation, is unable to provide us generalisable truths, and, ultimately, cannot help us understand what is going on. But any critique can only prove the concept nonsensical at the point of application; it cannot prove the 'EM' concept *intrinsically* false. This lack of falsifiability, due to the fact that the concept does not have a stable substance, makes it impossible to refute the context in any final sense, and so it continues to circulate, in search of substantiation.

Interestingly, when a variation of 'EM' is demonstrated to be irredeemably flawed, another similar term is often held up as an alternative. 'ER' gave way to 'EM', which has, in some circles, itself given way to 'climate-change migration'. As noted above, there are a number of substitutes that have, at one time or another, been in circulation. These concepts all hold implicit the same assumption of a determinable causal relationship, and thus, analytically speaking, have more in common than they have apart.

In explaining why this occurs, it is perhaps worth noting that the concept of 'environmental migration' does not exist in a vacuum. Rather, by unpacking and demonstrating the nonsensical and contradictory nature of the 'EM' concept, we thereby create a vacuum, one that requires filling for things to appear in order, and for our common sense to be satisfied.

But a vacuum in what, exactly? We could tentatively argue that the concept has *relational* meaning, and is a term suspended in discursive space between a constellation of other concepts and understandings, themselves constructed as issue-areas in rather nebulous terms, at least in so far as they are themselves operable understandings for epistemic actors. These include major themes such as 'security', 'development', 'climate change', 'desertification', 'governance', and even the understandings we hold of 'environment' and 'migration' themselves. There are also facilitating concepts such as 'capacity building', 'empowerment', 'stakeholder', 'tipping point' and the like that are equally nebulous.

For example, the belief in the potential analytical efficacy of the 'EM' concept is largely founded on a related assumption that one can, when all is said and done, isolate the 'environment' as a stable independent variable for understanding migration flows. There has however been a significant amount of work by 'critical political ecologists' who problematise the notion that we can truly isolate 'the environment' from 'society' in a way that would render it as a 'driver' of societal formations in any stable sense that could be analytically meaningful.

James Fairhead and Melissa Leach, for instance, have argued that the nature/society dichotomy is not an ontological truth, and in fact has its roots deep in 'western' epistemology:

> "Since the enlightenment, western science has conceptualised natural and social phenomena as being of a different order; as *a priori* separate. It is assumed that 'natural' phenomena can be investigated as separate from human society, except in as much as people and their social world are subject to 'nature' and act on 'it'." (Fairhead & Leach 1996: 5-6).

Indeed, they argue that nature has been reified as an 'essential reference point against which to discuss human impact' (1996: 6). They note that 'treating nature and people as opposed…does…structure the ways that such relationships are theorised' (1996: 6).

This view is also articulated by Arturo Escobar, who states: 'that nature came to be thought of as separate from people…is related to the view of "man" brought about by capitalism and modernity' (Escobar 1999: 1). He argues that the 'separation of nature and society is one of the basic features of modern societies' (Escobar 1999: 6). He goes on to argue that the dichotomous configuration of our understandings of nature and society have a 'long-held position of privilege in Western analyses', and, citing Raymond Williams (1980) and Marilyn Strathern (1980), suggests that "nature" has no equivalent category among many 'non-modern societies' (Escobar 1999: 4).

As such, this dichotomy, referred to by Bruno Latour as the 'infernal pairing of nature and politics' (Latour 2004: 31), may be understood as a hegemonic[33] understanding (Gramsci

[33] According to Raymond Williams (1977: 108), 'the hegemonic (is) a dominant system of lived meanings and values, relations and practices, which shapes experienced reality', having established themselves as 'historically true' and concretely 'universal' (Gramsci 1971: 644). Jean and John Comaroff have stated that 'we take hegemony to refer to that order of signs and practices, relations and distinctions, images and epistemologies, that come to be taken for granted as the natural and received shape of the world and everything that inhabits it' (Comaroff 1991: 23). According to Pierre Bourdieu, 'it consists of things that go without saying because, being axiomatic, they come without saying; things that, being presumptively shared are not normally the subject of explication or argument' (1977: 94). Hegemony 'hides itself in orthodoxy' (Comaroff 1991: 25).

1971) that has not only come to inform, but also to constitutively delimit our 'modern' engagement with the world. In short, these binaries are not empirical but ideational, and not neutral but rather act politically to inflect, order, and direct our ability to think about the world we live in.

This binary is therefore not imbued with a stable concrete essence; its meaning is entirely dependent on the actor in question.[34] In short, to draw on Akhil Gupta on 'the state', there is no Archimedean point from which to view 'the environment', only 'situated knowledges [*sic*]' (Gupta 1995: 392). Indeed, Barbara Bender has argued that people's experience of the environment 'is based in large measure on the particularity of the social, political and economic relations within which they live out their lives' (Bender 1993: 246). As such:

> "Elaborating how nature is constructed should help us to appreciate better the diversity of 'natures' and 'environments' that we carry around in our heads, in our policies and institutional structures." (Eden 2001: 82).

Critical political ecologists have thus demonstrated that conventional understandings of 'the environment' have been reified and imbued with authenticity as a stable independent variable, analytically distinct from - and indeed constructed in opposition to - 'society'. Once we see this, it becomes clear that the concern with arriving at an operable understanding of the relationship between 'environmental' factors and human migration is perhaps based on a misconception that the former is a distinct and analytically valid concept to begin with.[35]

It is in relation to a constellation of such nebulously constructed yet mutually constitutive concepts that 'EM' is itself constructed as a commonsensical 'issue-area'. As a consequence, when one critiques the validity of the 'EM' concept itself, we are left with a vacuum in an 'issue-area' that has been reified, delimited and, indeed, discursively necessitated by the broader configuration of our understanding of the world. This vacuum is then filled with some fresh, molten concept that we pour in to fill the commonsensical space, which might have a different label ('climate mobility' as opposed to 'environmental migration') and a slightly reconfigured definition. This argument finds support in the theoretical work of Jean Baudrillard,

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[34] Indeed, according to Arturo Escobar, 'nature is differently experienced according to one's social position and that it is differently produced by different groups or in different historical periods' (1999: 5).

[35] However this argument should not be confused with philosophical positions that deny the existence of the physical world itself. Rather, it is saying that the distinction between the 'environment' and 'society' is analytically problematic, particularly if the goal is to isolate 'the environment' as an independent variable from which we can isolate causal relationships with societal formations.

who, drawing on Ferdinand Saussure's work on the relationality of meaning and signification, presented a picture of society in which all understanding is suspended 'horizontally' in webs of meaning, as opposed to 'vertically' reflecting 'reality' itself. Where we strive for complete understanding where it does not exist, or at least is not possible, we then become enmeshed in these relationally constructed simulations of reality in order to arrive at some understanding that gives the impression of totality. Baudrillard termed this 'hyperreality' - that is, 'the simulation of something which never really existed' (Baudrillard 1981).

The point here is that the reason the argument 'well, you can critique the concept, but these problems still exist' has such traction is because our very understanding of the world, and its problems, is constituted by a broader constellation of conventional wisdoms and loaded empty signifiers – each themselves open to equivalent critiques.[36] Together, these structure our interest in 'EM'. When unpacked, they perhaps offer an explanation as to why, on the one hand, criticisms of the 'EM' concept are acknowledged, and yet, on the other hand, there perpetuates among the same actors a belief that some understanding of the 'environment-migration nexus' is nevertheless not only possible, but necessary. In philosophical terms, the problem is fundamentally one that stems from the nature of the theme: the term itself can and has been shown to be analytically nonsensical in relation to the objectives implicit in the policy interest in the issue, in all contexts in which it has been applied. However, we cannot prove it *intrinsically* false, as one cannot give a definitive response to a nonsensical proposition (Wittgenstein 2001: 4.003). All we can do is point out that it *is* nonsensical. But as we cannot declare it an intrinsically invalid proposition, it will, due to the relational construction of the epistemic perception of it as a valid issue-area, continue to be a term that circulates in search of an operable definition, a case of not only putting the cart before the horse, but assuming, without having confirmed, that the animal in question is in fact a horse at all. This perhaps accounts for the 'intrinsic dissonance' in much of the recent literature.

5. What role for social scientists?

It is clear that there are certain assumptions built into how we frame the 'EM' issue. In terms of our apparent inability to say anything substantive about 'EM', the focus has predominantly been on data sets, and our methodology for gathering data. However, it would appear that the more challenging obstacles are the ethical and normative frameworks that structure and

[36] On international development, see Ferguson 1994, Escobar 1995; On security, see Krause & Williams 1997. For critical perspectives on conventional narratives of environmental degradation, see **Footnote 23.**

condition how we have engaged the theme. These frameworks are not of peripheral relevance – they are fundamentally enrolled at the core of how we approach the concept itself (Williams 2005: 1). We therefore have need to reflect on how we have constructed 'EM' itself, particularly in relation to other issue-areas, which are themselves demonstrably ideational constructs that need to be unpacked.

Much social science, especially as it pertains to fields such as migration and development studies, has long been subject to the criticism that it is heavily inflected by methodological nationalism (Wimmer & Glick-Schiller 2003). In particular, much social science is implicitly orientated to the pursuit of truth, of the ideal, of totalising understandings. Social scientists are thus seen as contributors of substantive work of policy relevance. However, perhaps the only certainty, in its long history, that social science has been able to definitely demonstrate is that the world is various and complex, and that social theory is, in terms of the implicit goal to achieve tractable understandings that can lead to stable knowledge, an oxymoron. Through the sheer diversity of substantiated opinion to be found in social scientific literature, only one conclusion is obvious: human activities are *complex*, in the formal academic sense (Cilliers 2005; Gershenson & Heylighen 2005).

According to John Gershenson and Francis Heylighen, a complex system is one where:

> "The components are mutually entangled, so that a change in one component will propagate through a tissue of interactions to other components which in turn will affect even further components, including the one that initially started the process" (2005: 2).

Indeed, to Paul Cilliers:

> "There is no overarching theory of complexity that allows us to ignore the contingent aspects of complex systems. If something is really complex, it cannot be adequately described by means of a simple theory. Engaging with complexity entails engaging with specific complex systems." (Cilliers 2005: ix).

Based on this notion of complexity, it is clearly impossible to arrive at a stable understanding when one looks at something self-evidently complex, such as the 'environment', society, or migration. This impossibility is compounded in those cases where we are trying to understand the dynamics *between* these fields, because we cannot isolate inputs or outputs, or even the nature of a given process itself, as they all vary depending on myriad conditioning

factors, themselves each conditioned in the same manner, and all subject to feedback loops in the 'system'. The complex, in short, cannot be understood. Its *existence* can only be *grasped*, but nothing can be distilled from this, as an operable understanding requires a concept to be *tractable*. To be tractable, it may be either simple or even complicated.[37] It cannot, however, be complex, for complexity is not stable, and cannot be made tractable, and thus cannot be truly understood. *We can grasp its existence, but we cannot understand its nature*.

As we have seen, the 'EM' concept is pursued at the epistemic level with the objective of arriving at generalisable truths so as to achieve an operable understanding, facilitating the construction of some sort of predictive model, and legal and normative frameworks. But the 'relationship' (even if we could define it) will fundamentally and invariably be dependent on and conditioned by social, political and economic contexts. Thus the 'environment' (assuming we could isolate it from 'society'), cannot be seen as a valid independent variable making the nexus analytically useful. The 'EM' concept cannot therefore be operationalised, or used to identify policy recommendations. Like society, and 'the environment', the 'drivers' of migration are complex, and we cannot ever achieve a useful understanding of its drivers and dynamics in any general sense. Epistemic concern with the issue at hand is thus rendered mute; to continue to pursue a useful articulation of 'EM' is a Sisyphean task.

Given that arriving at an operable understanding of 'EM' is clearly impossible (one cannot say *demonstrably* impossible, as to demonstrate would require falsifiable propositions, and we have already established that the terms in question are analytically nonsensical propositions), we should reconfigure what we see as the goal of social scientists in this context (and perhaps in both equivalent and broader contexts). I would propose that the real goal of social science is not to *understand* complexity, but to *demonstrate* that an issue-area is complex. This is an important distinction.[38] For to understand would be to implicitly orientate social science towards some ideal, some sense that the 'truth is out there'. But to *demonstrate* assumes a different point of orientation, namely to critically engage with the simplistic understandings that underpin, constitute and drive decision making and action in the world, at all levels, from the personal to the governmental and institutional. Social science must, there-

[37] Paul Cilliers distinguishes between a system that is 'complicated', and one that is 'complex'. He cites an aircraft as a 'complicated system'. He states that 'if a system – despite the fact that it may consist of a huge number of components – can be given a complete description in terms of its individual constituents, such a system is merely complicated' (Cilliers 2005: x).

[38] It is encouraging to note that this is already the case with the best contemporary work in the social sciences, even if such critical work is not explicitly acknowledged in this way.

fore, see its role as being to '"slow down" reasoning and create an opportunity to arouse a slightly different awareness of the problems and situations mobilizing us' (Stengers 2005: 994). Indeed, given that social scientists will not be able to provide an operable understanding of 'EM', we should perhaps heed the words of Ludwig Wittgenstein, who famously concluded:

> "What can be said at all can be said clearly, and what we cannot speak about we must pass over in silence." (Wittgenstein 2001: 3).

What social scientists *can* do is break down the concept and unpack its conditioning influences, thus making the case for why there is simply no fundamental need for us to have an understanding of 'environmental migration' in the first place (beyond, of course, the need for some concept to fill the discursive 'vacuum' discussed above).

Given that we cannot say anything analytically meaningful about 'EM', it is then perhaps *not* that we need a more subtle and nuanced understanding of 'EM', but rather that we do not need an understanding at all. Our energies might perhaps be better spent examining other issues or layers – especially the political and economic[39] – where there is likely more scope for efficacious elucidation and subsequent policy action.

6. Conclusion

Often the problems that preoccupy social science can be revealed to be like a Gestalt image (see Figure III). By affecting a shift in our thinking, a change in the way of seeing, rather than a change of the facts, we can suddenly see that a particular construction of a problem dissipates. We must be careful not to become bewitched by the words we use and the concepts that structure our thinking. It is often they, rather than the facts, that prove the biggest obstacle to understanding. Our thinking can mislead us, not only if we simply fail to see the whole picture, but if we apply a reified set of ideational constructions to the facts. For like a gestalt image, when viewed with a different frame of analysis, we see that the 'issue-area' in question may have an entirely different configuration in terms of its significance.

[39] Specifically three things: corruption in all its forms; policy and institutional hypocrisy; policy and legislative overreach.

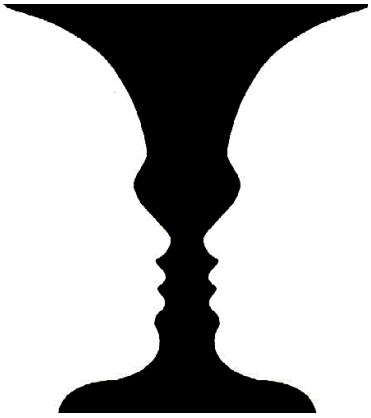

Figure III: A Gestalt image

So much of how we operate in the 21st century is oriented towards establishing a quasi-scientific 'world picture' that is harmonious and comprehensive, existing as a structure independent of the observer. The concept of 'EM' must be seen for what it is: one small field set among others, holding implicit such a totalised understanding that orientates and drives policy action. However, as Baudrillard has argued, these monolithic understandings are ideational constellations, and bear little operable relation to the reality 'on the ground'. They are self-sustaining and self-referential, and cannot be a clear guide to action. In fact, the elaboration of such understandings can play a part in constructing circumstance running counter to the humanitarian sentiments that gave impetus to their original construction. There is thus a danger in attempting to apply scientific methodology to arrive at an understanding of the world in a totalising sense. Isaiah Berlin made clear that the 'imposition upon humans of abstract schemas drawn from alien disciplines has been both the greatest stumbling-block to human self-understanding and one of the greatest sources of human suffering' (Hausheer, in Berlin 1997: xxxiii). Indeed, in his famous essay *The Pursuit of the Ideal*, Berlin argues that, in public policy:

> "The best that can be done, as a general rule, is to maintain a precarious equilibrium that will prevent the occurrence of desperate situations, of intolerable choices – that is the first requirement for a decent society; one that we can always strive for, in the light of the limited range of our knowledge, and even of our imperfect understanding of individuals and societies. A certain humility in these matters is very necessary." (Berlin 1997: 15).

As Wittgenstein so brilliantly argued, we do not need to explain everything. Furthermore, *we do not have a moral obligation to try to understand what cannot be understood*. From an institutional perspective, perhaps explanations are not possible, and if they are not possible, they then cannot be helpful or necessary. Our world has myriad problems. But if the goal of humanitarian-oriented social science is to provide a research basis for leaving human beings

less encumbered by the factors we *can* control[40], then we would make better use of our resources by limiting ourselves to more tractable subjects, such as exposing corruption in all its contingent forms, highlighting institutional hypocrisies and demonstrating policy and legislative over-reach where they exist. For the rest, efficacious efforts will be intrinsically lacking in auditable indicators of success, as they will always be context-specific, partial, *ad hoc* and incremental, and will exist not only without need for recourse to, but also in actual opposition to, abstractions such as 'EM' and other nebulously conceived concepts and narratives which together constitute any attempt at an 'operable' impression of the world which can be 'policy-relevant'.

Social scientists certainly have a role to play. But before we can know what that role may be, we must first distinguish those issue-areas where we are able to achieve a tractable and operable understanding from those where we can ultimately say nothing, and on which we must therefore fall silent.

[40] Control, of course, assumes that we have already achieved a stable understanding.

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Appendix

Typology of Research Methods on the relationship between environment and migration.[41]

1) Link climate/ environment models with migration models (Perch-Nielsen 2008)
2) Introduce environmental variables into geographic regression models (Neumayer 2005, Barrios et al. 2006, Afifi & Warner 2008)
3) Simulation with Agent based modelling (Smith and Kniveton 2008)
4) Panel Studies of the evolution of the environment and of migrant behaviour (Massey 2007)
5) Historical analogies (Arenstam Gibbons 2006, McLeman 2006)
6) Development of an index of vulnerability to localize 'hotspots' (Thow & de Blois 2008, Dasgupta 2007)
7) Frontline field/ case study approach (EACH-FOR)
    - **a.** Questionnaires (Van der Geest 2008)
    - **b.** Ethnographic Studies (Carr 2005)

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