Re-launching migration systems

Oliver Bakewell

Abstract

The concept of the migration system, first popularised in the 1970s, has remained a staple component of any review of migration theory. Since then, it has been cast somewhat adrift from its conceptual moorings; today in the literature migration systems are generally either conflated with migrant networks or elevated to the heights of macro-level abstraction which divorces them from any empirical basis. At the same time, by taking on board more sophisticated notions of agency, emergence, and social mechanisms, the broader concept of the social system has moved on from the rather discredited structural-functionalist marina where it was first launched. In recent years, having been rejected by many social theorists, the social system has been subject to major reconstruction prior to its re-launch as a respectable and valuable area of social enquiry. This paper argues that, for the most part, these developments in systems theory have been ignored by those applying the concept of systems to the analysis of migration. It addresses the question of how the concept of the migration system can be reformulated in the light of these theoretical advances and what implications this may have for our research and analysis.

Non-technical summary

In recent years debates about the idea of the 'social system' have been reinvigorated by accounts drawing on notions of *agency*, *emergence*, and *social mechanisms*. This paper argues that these developments in systems theory have largely been ignored by those applying the concept of systems to the analysis of migration. The paper addresses the question of how the concept of the migration system can be reformulated in the light of these theoretical advances and what implications this may have for our research and analysis.

Author: Oliver Bakewell, Co-Director, International Migration Institute, University of Oxford; email: oliver.bakewell@qeh.ox.ac.uk

THEMIS

Theorizing the Evolution of European Migration Systems

Contents

1 Introduction

This paper sets out to recast the notion of migration systems in the mould created by recent refinements of the more general theories of social systems. I start by examining the ways that different notions of migration systems have been used in research over the last few decades. For the most part, the concept is not clearly elaborated, the different uses are far from coherent, and in some cases, it appears to be little more than a heuristic device or simply a shorthand term to tie together different aspects of migration – origin and destination countries and transnational ties – in one handy phrase. While many researchers may pay little more than lip service to the idea of the migration system, it seems to retain a recurrent appeal that has sustained its appearance in the migration literature over many years. I discuss some of the attractions of migration systems in Section 2, but argue that their tantalising promises tend to be only partially realised in much of the literature.

While migration scholars have attempted to keep migration systems afloat over the last few decades – with somewhat limited success – they do not appear to have kept pace with debates on social systems in the social theory literature. In this arena, general systems theory, which lay at the root of migration systems, was widely discredited and the notion of systems was largely abandoned for some time. However, in the last five years, it appears to have been re-launched with major conceptual refinements. In particular, I point to current debates about emergence, causality and agency. In Section 3, I briefly trace out these shifts in broader social theory as a precursor to Section 4, where I tentatively suggest how these might be usefully incorporated into migration systems theory.

I am therefore attempting to bring together the ongoing literature on migration systems and the sociological literature on systems theories. For some, these may be working at rather different levels where migration is seen as an outcome of the working of broader social systems. From this perspective, we should not attempt to understand migration by focusing on migration; instead we must examine the underlying social system at play. While this may have some validity – and certainly we must be very cautious about any suggestion that migration processes are special and lie outside the broad sweep of 'normal' human society – my claim here is that we can usefully examine migration systems as distinctive, emergent social entities. This paper is exploratory and while I argue that a re-launch of migration systems is a worthwhile endeavour, I make no claim to complete the job here. I hope that this paper will raise points for fruitful discussion and debate. I would welcome feedback as I look to develop it further, taking it beyond its purely theoretical scope to draw on empirical findings to give more substance to the reformulated notion of migration systems that I present here.

2 Systems in migration theory

Systems are regularly invoked within the migration literature but here, perhaps more than many other areas of study, there has been little attempt to reflect on the theoretical basis for referring to a particular configuration of elements and relationships as a system. Often, the migration system is presented as a taken-for-granted entity which needs little further explanation. Hence, we never really get to understand precisely what is meant by a migration system in any particular context, let alone have any chance of working out how one system may compare to another. Nevertheless, it is possible to suggest a number of broad ways in which the notion of the migration system is used. In the following paragraphs

I refer to these different forms as *embedded functionalist*, *defined functionalist*, *skeletal*, *feedback*, and *abstract systems*.

The *embedded functionalist form* can be seen where the migration system is presented as a self-regulating apparatus within a wider social system. This appears to be the form in the earliest appearance of the term 'migration system' in the literature. For example, there are many references to the labour migration system of West and Southern Africa (Arrighi and Saul 1968; Gutkind 1962; Richards 1973 [1952]). Here the term is used as a system of organising society, often imposed by external forces, in particular capitalism. Portes and Böröcz (1989) refer to the *gastarbeiter* (guest-worker) system in a similar way. Others refer to migration embedded in world system theory. For example, Simmons and Guengant (1992) analyse how changing patterns of migration over time (1650–present) have been driven by changes in various 'historical-structural' features such as labour demand, culture, and the economic base in origin and destination countries.

Such systems tend to be qualified by the nature of the operating logic: the labour migration system, the guest-worker system. To a large extent these authors appear to take a systems perspective as a shorthand for drawing on world-systems theory or similar global level theory. These tend to be set at rather an abstract level and have very little to say about the people who move.[1] Such discussions make little attempt to draw on empirical data for support – and indeed it is difficult to envisage what data might be useful for it.

Hoffmann-Nowotny (1981) also considers migration as one process within a larger societal system. Migration arises as a response to tensions originating within a system element (individual or sub-system). Power and prestige are two central concepts within his theory: the former defined as the capacity to maintain or improve its position; the latter defined as the extent to which power is regarded as legitimated within the culture. Tensions arise when power and prestige are not balanced, and if responses within the system do not lead to a solution then migration outside the system is the likely outcome (Hoffmann-Nowotny 1981). Although this theory does raise the issue of power, it is as something to be exercised in response to systemic stimuli rather than the result of human agency. The system is thus still immune to the influence of human interests outside its own behavioural assumptions.

Mabogunje's approach (Mabogunje 1970) represents a second form of system theory; the *defined functionalist form*. Here we have the migration system as a self-perpetuating and regular pattern of exchanges between particular localities: a set of relationships across time and space. Rather than having the migration system as part of a larger system, now there is some attempt to define it and identify it as an object of study:

> A system may be defined as a complex of interacting elements, together with their attributes and relationships. One of the major tasks in conceptualizing a phenomenon as a system, therefore, is to identify the basic interacting elements, their attributes, and their relationships. Once this is done, it soon becomes obvious that the system operates not in a void but in a special environment. … [A] system with its environment constitutes the universe of phenomena which is of interest in a given context. (Mabogunje 1970: 4)

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[1] It is important to note that here I am only referring to their use of the concept of the 'system'. Of course, authors such as Portes and Böröcz have plenty to say about the migrants as social actors elsewhere.

Borrowing from general systems theory (Bertalanffy 1950), Mabogunje stressed the role of feedback mechanisms in shaping migration systems. For example, information about the migrants' reception and progress at the destination is transmitted back to the place of origin. Favourable information then encourages further migration and leads to situations of:

> almost organized migratory flows from particular villages to particular cities. In other words, the existence of information in the system encourages greater deviation from the 'most probable or random state'… [The] state of a system at any given time is not determined so much by its initial conditions as by the nature of the process, or the system parameters … since open systems are basically independent of their initial conditions (Mabogunje 1970: 13–14).

Migration systems link people, families, and communities over space in what today might be called transnational or translocal communities. This results in a geographical structuring and clustering of migration flows, which is far from a 'random state':

> formal and informal subsystems operate to perpetuate and reinforce the systematic nature of international flows by encouraging migration along certain pathways, and discouraging it along others. The end result is a set of relatively stable exchanges … yielding an identifiable geographical structure that persists across space and time (Mabogunje 1970:12).

By advancing the systems approach, Mabogunje is concerned with recognising migration as a process with feedback mechanisms that change the future patterns of migration. He applies the systems approach to rural–urban migration within the African continent as a way of explaining why and how a rural migrant becomes a permanent urban dweller (Mabogunje 1970: 5).

Mabogunje was not the only migration scholar[2] applying general systems theory to the analysis of migration, but he provided the clearest explanation of how the system dynamics change the pattern of movement over time. For example, Mangalam and Schwarzweller write of a migration system 'consisting of a donor subsystem and a recipient subsystem, linked by the subsystem of the migrating collectivity' (Mangalam and Schwarzweller 1970: 19). They focus on the impact of the ongoing interactions between migrants and their places of origin on the social organisation. However, they do not consider the impact of migration at one time on subsequent movement. Their migration system is one piece in a rather static collection of social systems that order the world; this reflects the functionalist tradition out of which they were writing:

> we conceive of migration as an adaptive process for maintaining the dynamic equilibrium of the social organization at the place of origin (Mangalam and Schwarzweller 1970: 15)

It is Mabogunje's approach that has been regularly cited by subsequent researchers as the foundation of migration systems theory (or approach). In particular, it was taken up in the 1990s for the analysis of international migration rather than just rural–urban movements, most notably in the volume *International Migration Systems: A Global*

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[2] Mabogunje is only classed here as a migration scholar as a result of his one paper on migration systems; the vast majority of his work has been on urban planning rather than migration.

Approach (Kritz et al. 1992). International migration systems consist of countries—or rather places within different countries – that exchange relatively large numbers of migrants, and are also characterised by feedback mechanisms that connect the movement of people between particular countries, areas, and even cities to the concomitant flows of goods, capital (remittances), ideas, and information (Fawcett 1989; Gurak and Caces 1992). The end result is 'a set of relatively stable exchanges of people between certain nations...yielding an identifiable geographic structure that persists across space and time' (Massey et al. 1998: 61).

While the idea of the migration system may have been adopted with some enthusiasm, the attempt to pin it down with empirical findings has tended to result in truncated versions of the approach. Zlotnik's effort to elaborate principles for the identification of migration systems (Zlotnik 1992) suggests what I will refer to as a *skeletal form* of system. She focuses on the challenge of recognising the boundaries of a migration system, noting that without them one ends up with a global system, which does not get us very far.[3] She notes that the existence of a flow of migrants between locations is a necessary condition for the existence of a system but stresses that it is not sufficient (Zlotnik 1992: 19). However, her five principles for identifying a migration system are concerned with the scale and duration of the flows between states and their political and economic relations.

> If international migration were perfectly measureable, migration systems might be identified by examining the matrices of in-flows, out-flows, and net-flows between all countries as they evolved through time. …

> Countries in a given geographical region would give rise to a single migration system if they had similar patterns of migration linkages, comparable levels of development, and a high degree of cultural affinity (Zlotnik 1992: 20).

She uses these principles to identify migration systems in the Americas and Western Europe, by highlighting the importance of flows centred on particular countries (US/Canada, Argentina, Brazil, Venezuela in the Americas; 'continental Europe', UK and Scandinavia in Europe). What emerges is a rather static picture with little sense of the operation of feedback, let alone the agency of migrants. In a recent paper, DeWaard et al. used recent advances in the estimation of data on flows and stocks of international migration to identify systems on the basis of thresholds of movements drawing on Zlotnik's formulation (DeWaard et al. 2009).

The trouble with this approach is that the system becomes little more than a summary of flows. This sort of system tends to be described by reference to particular geographical areas – the North American, the European, the SE Asian migration system. It offers no explanatory power: it merely says that a system exists but says nothing about how it develops (de Haas 2010). If the scale and regularity of the exchanges becomes the marker of the system, we know little about its internal workings; in particular, we lose sight of feedback, which is the defining feature in Mabogunje's conception.

Other migration scholars examine the operation of feedback within migration systems in much more detail – perhaps a *feedback form*. In particular, Massey's concept of

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[3] Zlotnik claims the challenge is reduced for internal migration as discussed by Mabogunje as she suggests his system includes all the internal migration within a country, so the boundaries are simply the border; I do not see this in Mabogunje's article and I think he faces the same boundary problems.

cumulative causation (Massey 1990) has offered an explanation of how migration systems become established. However, the primary driver for cumulative causation – the feedback mechanism of choice – is almost invariably the migrant network. As a result, there is some elision between the migration system and the migrant network to the extent that the former is identified with the latter. As de Haas (2010) has argued, this is only a partial account as it neglects both other internal or 'endogenous' feedback mechanisms that are not related to social networks and also more extended (or 'contextual') feedback in which migration at one time changes the broader environment for subsequent migration.

Faist suggests a more refined notion of cumulative causation that appears to address some of de Haas's objections, in particular acknowledging the potential negative role of feedback dampening down the operation of migration systems.

> The concept of cumulative causation focuses on the very context and mechanisms that make spiraling effects possible. It is a specific form of analyzing presumed causalities. The presence of influences in both directions between two or more factors does not necessarily imply mutual or cumulative causation. There is no mutual causation if the size of influence in one direction is independent of the size of influence in the other direction, or if their apparent correlation is caused by a third factor (Maruyama 1963, p. 175). Instead, cumulative causation can be said to exist if each of the factors identified has an influence on all other factors either directly or indirectly, and each factor is influenced through other factors. There is no hierarchical causal priority in any of the elements (Faist 2004: 345).

What is lacking is any clear theory of how this cumulative causation starts up. This notion of feedback rests on the rather vague concept of the threshold beyond which movements become self-sustaining. However, we cannot tell for any migration flow when that threshold might be reached, or indeed whether it ever will be (c.f. de Haas 2010).

In this range of forms of migration systems discussed so far, we see the focus shifting to different elements of Mabogunje's definition – from the environment and boundaries to the inner workings. Before moving on to discuss why systems approaches have proved so beguiling for migration researchers, we should take note of yet another form that approaches the concept of systems from a rather different angle. This *abstract systems form* analyses the migration system as a network of countries exchanging populations, which can then be subject to formal network analysis. It is important to note that here the system is identified with a migration network (a set of countries connected by migration flows) as opposed to migrant networks (the sets of migrants within the system making transnational flows of resources).[4] Nogle employs this approach to examine the development over time of ties between 12 EU member states (nodes) and the influence of external (macro) factors on their international migration flows (Nogle 1994: 330).

For this discussion, I have only drawn on studies where migration systems in some form are a substantive part of the theoretical framework adopted. The term 'migration system' appears in a much broader swathe of the literature than I have touched on here. However, in many cases it seems to serve little purpose beyond offering a convenient metaphor to illustrate migration processes. The migration system is mentioned briefly and then makes no further clear contribution to the analysis.

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[4] I am grateful to Valentin Danchev for drawing my attention to this distinction.

In summary, I have argued that migration systems as they are used in the migration literature seem to be either a thin conception with little theoretical meat, or a rather incomplete idea leaving many gaping conceptual holes. The question is what can be gained by beefing up these systems or filling the holes? What are the advances in general social theory on systems that might enhance our understanding of migration systems and develop a more 'useful' concept? Before addressing this, it is useful first to reflect on the enduring attraction of the concept of the system for migration scholars which permeates most of these different 'forms' outlined above. Why has the idea of the migration system become so compelling for migration scholars over the years?

First, simply by describing a system, the approach immediately draws attention to its constituent parts. There have been recurrent complaints about the focus of research on areas where migrants settle with much less attention paid to their areas of origin. Not only does this skew research towards the causes and consequences of migration only in the destination areas, but more fundamentally, such research introduces a scientific bias when it only includes those who migrate. The system approach demands the analysis of both origin and destination areas.

Second, the system approach looks at the dynamic links between contexts of both destination *and* origin contexts and migration decisions and flows. It is therefore not satisfied with simplistic push-pull models of migration, where we look only at the conditions on both sides. It is hard to deny that there are factors which may encourage someone to leave one area, and potentially push factors which attract to another – so I am not convinced we can completely write off such push-pull analyses. However, a system approach demands more, as it also asks about intervening factors (such as migration institutions or policies) and the ways in which experiences of migration in one period may shape the conditions for future movements. This notion of feedback is one of the defining characteristics of the concept of a system.

Not only does the system approach look at the dynamic relationships between origin and destination, but it also draws attention to the relationships between different levels of social analysis. The collective behaviour of individual migrants in moving and transferring remittances and information may serve to facilitate further migration and also build up more meso- or macro-level entities (perhaps we should call them structures) that help shape the conditions for subsequent migration. The systems approach tantalises with the promise of tying together the action of individual migrants and the changes in the wider systems. For the most part, this promise has not been realised.

Although the concept of the migration system appears to break away from the stultifying restrictions (and pessimism) of structuralist approaches and re-introduce the possibility of human agency while recognising structural conditions driving migration, the mechanism by which agency is made manifest is never made clear. In system accounts, migrants tend to be identified as undifferentiated actors whose aggregate action delivers change – but there is little room for recognising their agency here. Migrants become an element in the system subjected to its vagaries. If anything, the adoption of systems approaches was a step back for the recognition of migrants' agency. It could be argued that this is precisely the strength of the system approach as it takes us beyond the individualist accounts of neo-classical rational choice models. However, this gain is soon negated if we are left with determinism. What is required is a better understanding of how the agency of social actors shapes the system: what is the place of individuals' agency in the development

of migration systems? The importance of this question is made clear when we think about the origins of a migration system. This is premised on the exercise of the agency of the 'pioneer' migrants who get the whole thing started (Bakewell et al. 2011).

3 Systems in social theory

While many migration scholars have muddled along with the somewhat amorphous set of ideas about migration systems outlined above, the concept of the social system largely fell out of favour among many more general social theorists. By the mid 2000s, academic work on social systems had come to be dominated by Luhmann's constructivist approach (Luhmann 1995), but in recent years there has been a resurgence of academic publications that have broken this monopoly and started a vigorous new debate (Elder-Vass 2007b; Pickel 2007; Wan 2011b).

The early approaches to systems theory in the 1950s attempted to integrate the approaches of the natural and social sciences. The understanding and interpretation of `a system' as a complex of interacting elements (Bertalanffy 1950, p. 143) was often used in analogy to a biological organism with the stress on wholeness, sum, mechanisation and centralisation (Bertalanffy 1950, p. 143). Bertalanffy argued that it was possible to identify isomorphisms in the patterns of behaviour of various phenomena in completely different fields, ranging from biology, mechanics, demography to economics. He laid out the broad principles of general systems theory as a contribution to the development of a new formal 'logico-mathematical discipline' which applies to 'any system of a certain type irrespective of the particular properties of the system or the elements involved' (Bertalanffy 1950: 138).

Writing in the same era, Parsons also attempted to integrate all the social sciences into an overarching theoretical framework, that could be applied to every society and historical epoch, and address every aspect of human social organisation and culture. He examined the relationship between the whole of a social system (the society, a group) and its parts (area of activity, members of a group). In *The Social System,* Parsons (1951) argued that human societies can be analysed as systems whose parts can be understood only in terms of the whole. The crucial feature of the social system, as in biological organisms, is its self-equilibrating properties which enables it to achieve *homeostasis* (maintaining a stable state). Four functional imperatives must be solved in order to continue existence – adaptation, goal-attainment, integration, and pattern maintenance.

The rise of structural functionalism was largely reversed by attacks first from structuralists (in particular Marxists) who challenged its conservative assumptions and the absence of any theory of social change, and then from constructivists who argued against the reification of social structure. As a result, systems theory, on which Mabogunje based his migration systems approach, came to be largely discredited by many social theorists due to its being irredeemably tainted by its association with structural functionalism and the whiff of metaphysics (as its origins appeared to lie beyond human action, which took it to some mysterious other realm).

While many abandoned systems theory, Luhmann set out to rebuild it on constructivist foundations. Like his predecessors, his theory was based on a concept developed in the natural sciences: *autopoiesis* or self-reproduction. Originating in the

biological sciences, this was a way of describing how cells in a living organism interact to reproduce the different cells to sustain the organism; as long as this process continues, the organism has life. Luhmann adapted this concept to social sciences by suggesting that autopoiesis can be seen at work whenever the elements of a system are reproduced by elements of that system. Departing from the biological concept which proposed that the elements are relatively stable, for Luhmann the elements in the social system have no substantive existence outside the system. On the one hand they exist only momentarily and must be constantly reproduced through autopoiesis:

> All elements pass away. They cannot endure as elements in time, and thus they must be constantly produced on the basis of whatever constellation of elements is actual at any given moment. (Luhmann 1995: 49).

On the other hand, system elements have no existence except in as far as they are reproducing the system. 'The element is constituted as a unity only by the system that enlists it as an element to use it in relations' (Luhmann 1995: 22).

> It is not that we first have the element and, then, the system makes use of it, but only by making use of the element, i.e. by relating it to other elements, it becomes an element. Thus, one can say: the element is produced as a result of being used (Luhmann 1997: 65–66). One can, of course, analyse the substratum, on which an element rests, and find a whole range of causal factors which are involved in bringing it about, but the particular unity as which the element functions in the system, i.e. the characteristics that make it an element of the system, can only be produced by the system itself (Seidl 2004: 6–7).

This ontological stance brings Luhmann to argue that the basic element in his theory of social system is communication. In his autopoietic systems, there is no place for persons or actions – the basic elements proposed by earlier systems theorists – because this would be incompatible with his 'de-ontologised' elements. As a result, he replaces 'the traditional difference between *whole and part* with that between *system and environment*' (Luhmann 1995: 6–7).

In recent years, Luhmann's domination of social systems theory has been challenged by a growing number of social theorists, in particular realists, who reject his rather abstract and virtual notion of the system (Bunge 2004; Elder-Vass 2007b; Pickel 2007; Walby 2007; Wan 2011b). Their main charge is that by disregarding the distinction between the elements and the whole system, Luhmann ends up with holism, where the whole is more important than the parts (Wan 2011a: 40). Ironically, despite his constructivist ontology, Luhmann's systems appear to take on an existence beyond the reach of human agency and hence he slips back into reification of the system. People are either observers of the system, or subject to it (sometimes as its victims). This tendency to depersonalise, and thereby depoliticise social systems renders them devoid of agency. While acknowledging the importance of communication in determining the nature of the social system, Luhmann's realist critics lament the absence of people:

> Communication is certainly an important element of endostructure [i.e. the set of all the relations among the components] of the social system, but communication is a relation, and relations do not exist without *relata* – in this

case human individuals. A humanless [*menschenlose*] theory of social systems is completely inappropriate if not reprehensible regarding possible socio-technological consequences (Bunge and Mahner 2004 cited in Wan 2011b: 354).

These authors all refer to the need to rehabilitate system theory. Walby notes that even when system theory was being explicitly rejected, many of its basic ideas were smuggled back in with notions such as 'social relations', 'networks' and other concepts which are concerned with social structures that are not reducible to individuals (Walby 2007: 455). Bunge's disillusionment with way the term 'system theory' has been used in the past leads him to use the term 'systemic approach' in its place (Bunge 2004: 191).

While rejecting many aspects of Luhmann's systems theory, Elder-Vass acknowledges that his application of autopoiesis to the social world makes a valuable contribution to the analysis of how systems can evolve and change (Elder-Vass 2007b: 420). Mingers draws attention to the parallels between Luhmann's explicit evocation of autopoiesis in his system theory and its use by the realist Bhaskar, and Giddens, who some would claim as a realist and none could mistake for a constructivist (Mingers 2002; 2004).

Among those calling for a decisive break with earlier systems theory, there are many differences and points of heated debate. Nonetheless, there is sufficient common ground to suggest an overall direction for this re-launched systems theory (Pickel 2007: 394). First, as noted above, there is a shift towards a realist ontology. A major concern among proponents of new systems theories is to resist the claims of methodological individualists that any explanation of social phenomena can be expressed in terms of the outcome of individuals' actions. For realists, the new systems theory must find a path between this individualism and the holism of earlier systems theory, including that of Luhmann.

The response is to argue that 'any system has characteristics that are the result of its structure and environment (emergent properties), which is why we can speak of a system as a separate entity in the first place' (Pickel 2007: 400). The emergence of distinctive properties of collective entities that cannot be reduced to their constituent parts is fundamental to realist system theory (Elder-Vass 2010; Sawyer 2005; Wan 2011a). Crucially, these emergent properties can include causal powers (Sawyer 2003). Where causality lies remains an area of much debate. For example, Wan argues that 'supra-individual' or social entities can possess emergent causal powers that are derived from the structured circumstances of agency of the individuals that make them up, the 'we-mode thinking and acting' (citing Tuomela 2007) where members of a group act in particular roles for the group (Wan 2011a: 130–8). However, while it may be reasonable to argue that impersonal social entities do not have causal powers, in the sense of exercising agency, they may have causal powers in the sense that they can be cited as causes of action (if not purposively driving it). Here, we can think perhaps of the demographic imbalance which means that the chances of finding a spouse are much reduced without migration (perhaps we always have to turn this round to examine individuals' exercise of agency in response to this structural constraint). Jepperson and Meyer (2011) take this further to recognise causal influences at the individual, socio-organisational and institutional level.

This points us towards another distinctive characteristic of this realist social system theory: a concern to understand the inner workings of the system – its *mechanisms,* elaborated in most detail by Bunge (2004; see also Aus 2007; Elder-Vass 2010; Gross 2009; Hedström and Ylikoski 2010; Little 2007; Sawyer 2003). Mechanism-based explanations

propose causal pathways by which the phenomenon X may result in outcome Y. Such mechanisms are likely to be abstract and not directly observable; but once hypothesised we can look for evidence of their operation (Bunge 2004; Gerring 2008; Mahoney 2001).

In order to take seriously the questions of emergence, causality and causal mechanisms, the new systems theory needs also to take account of the agency of the social actors within the system. After all it is the absence of agency that is one of the main charges against earlier systems theories. Again, this is an area of great debate among the realists, sometimes represented on the one extreme by Archer's morphogenetic theory (Archer 1982; Archer 1995) and on the other by Giddens' structuration theory (Giddens 1984). For some these differences are profound (Elder-Vass 2007a; Elder-Vass 2007c), whereas others argue they can be readily reconciled (Mingers 2004; Stones 2001). Summarising these debates is beyond the scope of this paper. Suffice it to say that any re-launched formulation of system theory must include a clearly articulated notion of agency that allows the social scientist to surmise how systems develop, reproduce themselves and dissolve.

In this section, I have attempted to summarise the evolution of system theory in the social sciences and give a brief sketch of the current debates that are focused around realist approaches. I make no pretence of having offered a comprehensive account of such a broad and complex literature. My aim has been to provide sufficient general theoretical background to turn back to the analysis of migration and explore how these advances can be applied in that field.

4 What do new advances in systems theory have to offer migration systems approaches?

Keeping in mind these current debates on social systems, I return to the narrower theme of migration systems. My aim is to provide a refined notion of the migration system which takes advantage of these theoretical advances in order to address the critiques of earlier versions outlined above. In particular, a re-launched conception of migration systems needs to take account of the new thinking on emergence, agency and causality. This is a first attempt, at this stage little beyond a thought experiment, and it is almost inevitable that I may stumble into some of the same traps.

At least I can start by declaring my ontological stance: I am inclined towards the critical realist perspective represented in the work of Bunge (Bunge 2004), Elder-Vass (Elder-Vass 2007b) and Wan (Wan 2011a), and reject the constructivism of Luhmann and the earlier structuralist meta-narratives. From this perspective, while I do not think of migration systems as anything 'real' to be discovered (so would avoid such metaphors as Mabogunje's 'control sub-system'), the configurations of relationships and power, which might be called a system, have very real impacts on the lives of those involved in them.

Despite such cautions about Maobogunje's formulation, he does give us a good start by distinguishing between the system elements and their attributes and relationships. This could be adapted to provide a more abstract idea of the system as follows:

A migration system is defined by i) a set of interacting *elements* – including *flows* of people, ideas and goods, *institutions* in the sense of discourses and associated practices (e.g. 'culture of migration', smuggling, inequality…), and *strategies* as in plans for action by

particular actors (e.g. individual and household strategies; policies of governments, private businesses, and civil society organisations) – which relate to the migration between localities; and ii) the **dynamics** governing the way in which the elements (flows, institutions and strategies) change in relation to changes in both these system elements (*feedback mechanisms*) and in the wider **environment**.

As a starting point, perhaps we can think of three different types of elements which might be further distinguished by the locations with which they are mainly associated. In Table 1 below, I suggest a very limited set of plausible elements but many more could be added. Of course we may see ways in which some of these elements are products of the system – such as migration policy. They may be the outcome of relations between other system elements or shaped by feedback mechanisms within the system. Nonetheless, when one comes to analyse any system at any time, such elements will be perceived as real social entities that can cause change. I would not claim that such elements are fundamental; they are not akin to the fundamental particles that resist reduction in physics. I suspect that attempting to reach more fundamental elements would require such a level of abstraction as to make the notion of a migration system unusable. Hence, I suggest that we start by adopting a parsimonious approach to listing system elements.

Table 1: Some plausible elements in a migration system

Location	Flows	Institutions	Strategies
Origin	Information (labour sources)	Income distribution	Household livelihood strategies
		Land distribution	Emigration policies
		'Migration culture'	
		Marriage practices	
		Labour market structure	
Between	Migrants	Migrant networks	Migration industry – travel agents
	Information		Transnational identities
	Goods		
	Services		
Destination	Social remittances	Segregated labour market	Immigration policies
	Financial remittances	Asymmetric assimilation	Visa regulations
			Migrant niche businesses – e.g. restaurants
			Labour recruitment

When it comes to dynamics, we may initially focus on feedback mechanisms, whereby migration induces changes in other elements of the system, which in turn induce changes to future migration patterns. De Haas (2010) argues that the analysis of feedback mechanisms must reach beyond the 'first-order' impacts of remittances and migrant networks, that he refers to as 'endogenous feedback'. We also have to take account of the second order effect of 'contextual feedback' such as changes in the labour market or transnational identities induced by migration. While accepting the importance of looking beyond 'first order' feedback, I am cautious about adopting de Haas's terminology of 'endogenous' and

'contextual' as it may create confusion between changes within the system and those in the wider environment. All the feedback that he refers to should be seen as part of the system. It is important to analyse the dynamic relationship between the system elements and this environment, but we need to clearly define the boundaries of the system. This is made easier if the notion of feedback is reserved for changes within the system.

Establishing these boundaries is a critical issue for any definition of a system: what is part of the system and what is part of the wider environment? Mabogunje took the environment to be all objects which both change and are changed by the behaviour of the system. This is problematic as the elements within the system will change and be changed by the behaviour of the system. Instead, I take the wider environment to be those objects or factors for which feedback mechanisms *cannot* be (plausibly) identified. Establishing these system boundaries will be the subject of much debate, but it may be possible to identify some likely environmental factors: e.g. rainfall, disease, political conflict, technology etc. These may affect the movement of people or their strategies. Likewise, the movement of people may affect them. However, it is unlikely that we can establish a feedback mechanism as we can with system elements.

Hence, in order to define the system dynamics, it necessary to specify *both* the (internal) feedback mechanisms and relationships between changes in the system elements and the environment. Of course these multilayered system dynamics may operate in non-linear, potentially chaotic ways; they serve not to regulate the system – maintaining its equilibrium – but rather change both its composition (continually blurring the system/environment boundary) and its dynamism (Walby 2007). For example, the securitisation of migration since 2001 shows how what may once have been seen as a factor external to any migration system between West Africa and Europe, is now incorporated within it.

In contrast to Mabogunje's system, which envisaged an 'identifiable geographical structure that persists across space and time' (Mabogunje 1970:12), here the stability is to be found primarily in the dynamics, where the same (or isomorphic) relationships between different elements persist over time. In other words, we are more concerned with identifying rules of the game that govern the emergence (and reduction) of new elements in the system, rather than just the flows. For example, the decline in the economy which results in the tightening of visa regimes, which in turn results in the reduction of migration, may not be evidence of system decline, but simply system dynamics at work. Of course, if the visa regime changes to the extent that nobody moves any more, we will see the system collapse. To some extent, such a system is autopoietic.

A critical test for any new account of the migration system is how it conceptualises the emergence of the system. As noted before, in earlier migration systems literature, this question has hardly been addressed except by scant reference to the pioneer migrants who set things in motion and the threshold beyond which they become self-sustaining and migration flows increase. However, under the definition offered above, we cannot determine the existence of a migration system by virtue of substantial migration flows between localities. From an emergentist perspective it is only a system when it has properties which cannot be reduced to individuals. Hence, a migration system demands that we also have evidence of system dynamics at play, operating at the level beyond the individual. For example, the fact that there is substantial migration from the UK to the US (and vice-versa) probably has more to do with job opportunities and matrimonial unions of

individuals than with the potentially migrant-facilitating function of networks, remittances, or ethnic businesses; this may call into question the extent to which it is useful to refer to a US-UK migration system.

In another recent paper (Bakewell et al. 2011), there is an attempt to provide a much richer analysis of how the exercise of agency by pioneers is related to the subsequent development of migration systems. This faintly echoes the earlier and much more detailed account provided by Morawska (2011), which also draws on Emirbayer and Mische's conceptualisation of agency oriented to the past, present and future (Emirbayer and Mische 1998).

5 Conclusion

In this paper, I have outlined the different ways in which system approaches have been invoked by migration scholars over the last forty years. In this same period, more general social system theory has been widely rejected and then rehabilitated in a new flurry of systemism, led by researchers coming from a (critical) realist perspective. As a result system theory has been reworked with a particular focus on emergence, causal mechanisms and the exercise of agency. I have attempted to incorporate these developments in a reformulation of migration system theory.

There are many aspects of these re-launched migration systems that have not yet been discussed here. In particular, what are the implications for empirical research? How do we research and articulate the causal mechanisms that govern the system dynamics? As Bunge (2004) notes, these mechanisms may be unobservable (as gravity or mass are unobservable) but once hypothesised we can look for evidence of their operation. These will have to wait for a further iteration of this paper.

An immediate tangible benefit introduced by adopting a 'systems approach' is that it forces the researchers to consider both origin and destination contexts and the relationship between them. It throws up many valuable insights to explain changing migration patterns. Some may object that this can be achieved without drawing on systems theories. However, the patterning of migration which emerges over time in many case studies suggests that there is some social entity that appears to exert causal power over the future behaviour of individuals. These emergent patterns may be all the more clear in a migration compared to another type of social action, as migration can be so readily mapped. We may resist the terminology of the system as something too closely tied to Luhmann, but as I have argued, the recent work from realist perspectives suggests that the notion can be usefully redeemed. The next task is to prove this by moving beyond the abstract discussion of this paper and tying it to empirical observations of migration systems emerging and shaping social action in the 'real world'.

References

Archer, M. S. (1982) 'Morphogenesis Versus Structuration – on Combining Structure and Action', *British Journal of Sociology* 33: 455–83.

Archer, M. S. (1995) *Realist Social Theory: the Morphogenetic Approach*, Cambridge: Cambridge University Press.

Arrighi, G. and J. S. Saul (1968) 'Socialism and Economic Development in Tropical Africa', *The Journal of Modern African Studies* 6: 141–69.

Aus, J. (2007) 'Conjunctural causation in comparative case-oriented research', *Quality and Quantity*.

Bakewell, O., H. de Haas, and A. Kubal (2011) 'Migration systems, pioneers and the role of agency', IMI Working Paper 48, International Migration Institute, University of Oxford.

Bertalanffy, L. Von (1950) 'An outline of general system theory', *The British Journal for the Philosophy of Science* 1: 134–65.

Bunge, M. (2004) 'How does it work? The search for explanatory mechanisms', *Philosophy of the Social Sciences* 34: 182–210.

de Haas, H. (2010) 'The internal dynamics of migration processes: a theoretical inquiry', *Journal of Ethnic and Migration Studies* 36: 1587–617.

DeWaard, J., K. Kim, and J. Raymer (2009) 'International Migration Systems: Evidence from Harmonized Flow Data', Center for Demography and Ecology, University of Wisconsin-Madison, Madison.

Elder-Vass, D. (2007a) 'For emergence: Refining Archer's account of social structure', *Journal for the Theory of Social Behaviour* 37: 25–44.

Elder-Vass, D. (2007b) 'Luhmann and Emergentism', *Philosophy of the Social Sciences* 37: 408–32.

Elder-Vass, D. (2007c) 'Reconciling Archer and Bourdieu in an Emergentist Theory of Action', *Sociological Theory* 25: 325–46.

Elder-Vass, D. (2010) *The Causal Power of Social Structures: Emergence, Structure and Agency,* Cambridge: Cambridge University Press.

Emirbayer, M. and A. Mische (1998) 'What is agency?', *American Journal of Sociology* 103: 962–1023.

Faist, T. (2004) 'Towards a political sociology of transnationalization. The state of the art in migration research', *European Journal of Sociology / Archives Européennes de Sociologie* 45: 331–66.

Fawcett, J. T. (1989) 'Networks, linkages, and migration systems', *International Migration Review* 23: 671–80.

Gerring, J. (2008) 'The mechanismic worldview: thinking inside the box', *British Journal of Political Science* 38: 161–79.

Giddens, A. (1984) *The Constitution of Society*, Cambridge: Polity Press.

Gross, N. (2009) 'A pragmatist theory of social mechanisms', *American Sociological Review* 74: 358–79.

Gurak, D. T. and F. Caces (1992) 'Migration Networks and the Shaping of Migration Systems', in M. M. Kritz, L. L. Lim, and H. Zlotnik (eds.), *International Migration Systems: A Global Approach*, *International Studies in Demography*, Oxford: Clarendon Press.

Gutkind, P. C. W. (1962) 'African urban family life: comment on and analysis of some rural–urban differences', *Cahiers d'Études Africaines* 3: 149–217.

Hedström, P. and P. Ylikoski (2010) 'Causal mechanisms in the social sciences', *Annual Review of Sociology* 36: 49–67.

Hoffmann-Nowotny, H. J. (1981) 'A Sociological Approach Toward a General Theory of Migration', in M. M. Kritz, C. B. Keely, and S. M. Tomasi (eds.), *Global Trends in Migration: Theory and Research on International Population Movements*, New York: Centre for Migration Studies.

Jepperson, R. and J. W. Meyer (2011) 'Multiple levels of analysis and the limitations of methodological individualisms', *Sociological Theory* 29: 54–73.

Kritz, M. M., L. L. Lim, and H. Zlotnik (1992) 'International Migration Systems: A Global Approach', in M. M. Kritz, L. L. Lim, and H. Zlotnik (eds.), *International Migration Systems: A Global Approach*, *International Studies in Demography*, Oxford: Clarendon Press.

Little, D. (2007) 'Levels of the Social', in S. P. Turner and M. W. Risjord (eds.), *Philosophy of Anthropology and Sociology*, Amsterdam and Oxford: Elsevier.

Luhmann, N. (1995) *Social Systems*, Stanford: Stanford University Press.

Mabogunje, A. L. (1970) 'Systems approach to a theory of rural–urban migration', *Geographical Analysis* 2: 1–18.

Mahoney, J. (2001) 'Beyond correlational analysis: recent innovations in theory and method', *Sociological Forum* 16: 575–93.

Mangalam, J. J. and H. K. Schwarzweller (1970) 'Some theoretical guidelines toward a sociology of migration', *International Migration Review* 4: 5–21.

Massey, D. S. (1990) 'Social structure, household strategies, and the cumulative causation of migration', *Population Index* 56: 3–26.

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

Mingers, J. (2002) 'Can social systems be autopoietic? Assessing Luhmann's social theory', *The Sociological Review* 50: 278–99.

Mingers, J. (2004) 'Can social systems be autopoietic? Bhaskar's and Giddens' social theories', *Journal for the Theory of Social Behaviour* 34: 403–27.

Morawska, E. T. (2011) *A Sociology of Immigration: (Re)Making Multifaceted America*, Basingstoke: Palgrave Macmillan.

Nogle, J. M. (1994) 'The systems approach to international migration: an application of network analysis', *International Migration* 32: 329–37.

Parsons, T. (1951) *The Social System*, London: Routledge & Kegan Paul.

Pickel, A. (2007) 'Rethinking systems theory', *Philosophy of the Social Sciences* 37: 391–407.

Portes, A. and J. Böröcz (1989) 'Contemporary immigration: theoretical perspectives on its determinants and modes of incorporation', *International Migration Review* 23: 606–30.

Richards, A. I. (1973 [1952]) *Economic Development and Tribal Change: a Study of Immigrant Labour in Buganda*, Nairobi and London: Oxford University Press.

Sawyer, R. K. (2003) 'Nonreductive individualism part II – social causation', *Philosophy of the Social Sciences* 33: 203–24.

Sawyer, R. K. (2005) *Social Emergence: Societies as Complex Systems*, Cambridge: Cambridge University Press.

Seidl, D. (2004) 'Luhmann's theory of autopoietic social systems', Ludwig-Maximilians-Universität München, Munich.

Simmons, A. B. and J. P. Guengant (1992) 'Caribbean Exodus and the World System', in M. M. Kritz, L. L. Lim, and H. Zlotnik (eds.), *International Migration Systems: A Global Approach*, *International Studies in Demography*, Oxford: Clarendon Press.

Stones, R. (2001) 'Refusing the realism–structuration divide', *European Journal of Social Theory* 4: 177–97.

Tuomela, R. (2007) *The Philosophy of Sociality The Shared Point of View*, New York: Oxford University Press.

Walby, S. (2007) 'Complexity theory, systems theory, and multiple intersecting social inequalities', *Philosophy of the Social Sciences* 37: 449–70.

Wan, P. Y. (2011a) *Reframing the Social: Emergentist Systemism and Social Theory*, Farnham and Burlington: Ashgate.

Wan, P. Y. (2011b) 'Systems theory: irredeemably holistic and antithetical to planning?', *Critical Sociology* 37: 351–74.

Zlotnik, H. (1992) 'Empirical Identification of International Migration Systems', in M. M. Kritz, L. L. Lim, and H. Zlotnik (eds.), *International Migration Systems: A Global Approach*, *International Studies in Demography*, Oxford: Clarendon Press.