The Restless Species and its Languages

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Introduction: movement and language in Deep Time

In a conference - and a volume - with the title *Inclusion, Mobility and Multilingual Education* it would seem appropriate to spend some time thinking about what we mean when we talk about 'movement' or 'mobility' (I use the terms interchangeably), specifically human movement, and how this movement relates to our languages. What follows may be rather eccentric, but if nothing else I hope that it will arouse some interest in the way that our species, *Homo sapiens*, has been moving around for the last 200,000 years and using language for some of that time.

There is a long and impressive literature on matters relating to mobility (specifically, migration) and language. Around the middle of the 20th century Joshua Fishman and his colleagues, using data from as early as the beginning of the century, investigated language maintenance and shift, 'when huge populations adopted a new language or variety into their repertoires, whether or not at the same time they also gave up a language or variety that they had previously used' (Fishman 1972, p.107). Migrant populations provided many instances of language shift and maintenance.

In the 1970s Tom Jupp and colleagues investigated 'communication breakdowns and inadequacies' which occurred between immigrants – particularly from South Asia - and their local colleagues in industrial situations in the UK (for example, Jupp and Hodlin, 1975). They developed language training and awareness raising materials aimed at alleviating miscommunication. In the early 21st century John Simpson, Mike Baynham and others studied language use in 'superdiverse' areas in British cities where migrants are concentrated (for example, Simpson, 2017).

Suresh Canagarajah's comprehensive edited overview of current work in language and migration reveals that the field has expanded to incorporate many new issues, including identity, human rights and official language policies (Canagarajah, 2017). Very recently, Tony Capstick's work has placed current issues of language and migration in an historical perspective; this brings into focus the roles that nation states play in 'shaping' migrant flows and responding to language matters (Capstick, 2021). Other papers in the present volume also make important contributions to the field of migration and language.

My intention here, however, is rather different from all of the foregoing. This is not a report on recent research, nor is it an account of successfully implemented language in migration policies. Rather, I wish to take a much broader view of human mobility in general - not only in the context of migration – and then consider implications for language. To do this, we need to decide first what perspective we are going to adopt. There are two concepts which may be of value here: Short-termism and Deep Time.

Short-termism refers to

> ... an excessive focus on short-term results at the expense of long-term interests. Short-term ... decisions can weigh against companies' development of sustainable products or investment in measures that deliver operational efficiencies, develop their human capital, or effectively manage the social and environmental risks to their business. (CFA Institute, 2021)

Deep Time, meanwhile, has been defined as 'the immense arc of non-human history that shaped the world as we perceive it' (Farrier and Aeon, 2016).

The first of these terms comes from the field of business management, but it can also be applied in other contexts. It is deceptively easy to look back to relatively recent events – an action taken by the present government, the most recent economic recession, the recent arrival of refugees from a foreign war - to seek simple explanations for current situations. But richer explanations may lie much further back in time. Similarly, policy planning may take place in a very narrow time frame, typically one year. More ambitiously, governments may announce Five Year Development Plans, but One Century or One Millennium Development Plans are unknown. ('Once in a century' is a term sometimes used to describe economic crises, pandemics or floods that nobody has prepared for.)

Deep Time offers an alternative to short-termism. The concept comes from the field of geology and was first proposed in 1788 by the Scottish geologist James Hutton (although he did not use the term Deep Time). Very recently, the concept and the term have been adopted by anthropologists, historians and others to help us to adopt a much broader perspective – both retrospectively (Deep History) and prospectively (Deep Time of the Future) – when looking at human affairs (Farrier, 2016). It is sometimes suggested that we live in a time of unprecedented human mobility. Is that really the case? It is also sometimes predicted that the number of human languages is declining catastrophically. How likely is it that this prediction will come true? And, if it does come true, does it really matter? These questions are discussed below.

This text is organised very simply. The second section looks at human movement in some detail followed by a closer look at language in the third section. Finally, there is a discussion of what we have found in the preceding sections, together with some conclusions. The paper looks at a number of concrete cases; several of these are taken from Indonesia, not because Indonesia is unique in any way but simply because this is the part of the world that I know best.

Human movement

Capstick also adopts a Deep History approach – though without using the term - in his work on language and migration. He notes 'human movement has always been an important feature of social life' (Capstick, 2021). Human movement is examined here in five different ways: movement which is fired simply by curiosity and the urge to explore; movement in Deep Time; movement in recorded history; movement at the present time (but before our world was turned upside down by the COVID pandemic); and efforts to stop movement.

Movement and human curiosity

From the first appearance of *Sapiens* in East Africa approximately 200,000 years ago (Harari, 2015) we have been on the move, sometimes for pragmatic reasons, sometimes for urgent reasons, but often simply out of curiosity, wanting to find out what lies beyond the next mountain, eager to discover the source of a river, anxious to know what Earth looks like from Space, keen to learn about how other peoples live their lives and how they see the world. Travel may be undertaken with spiritual objectives, to find new information, out of intellectual curiosity and to test hypotheses.

Movement in Deep Time

Let us go back in time, now, as far as it is possible to trace our ancestors. Linguistic evidence of human activity in ancient times is not available, of course. Archaeological evidence, in the form of human remains, is available but by itself is not always easy to interpret. In recent years, however, analysis of DNA (deoxyribonucleic acid) has enabled huge strides to be made in understanding how we evolved.

Autosomal DNA is contributed by all of our ancestors, both maternal and paternal. We all have 2 parents + 4 grandparents + 8 great-grandparents + 16 great-great-grandparents + 32 great-great-great-grandparents. Therefore over five generations (approximately 150 years, assuming that a new generation appears on average every 30 years), we have 2^(5) ancestors, a total of 62 people, all of whom have contributed something to our genetic make-up. According to my colleague Professor Dugald MacPherson, Professor of Mathematics at the University of Leeds, if we go back 1,000 years - approximately 33 generations (2^(33)) - the total number of an individual person's ancestors will be about 9 billion. He comments, 'This is more than the current global population, so vastly more than the global population 33 generations back.'

Going even further back, to the time when we began to move out of Africa, about 50,000 years ago, we have approximately 1,500 generations of forebears, which means that the total number of ancestors is 2^(1500). This is an inconceivable number. As Professor MacPherson points out, the number of atoms in the observable universe is 'only' about 2^(260). The conclusion must be that the same ancestors appear again and again at different points in our family tree. Our ancestry, therefore, is inextricably complicated.

Detailed analysis of our autosomal DNA is difficult because of the infinitesimally tiny contributions made by thousands and thousands of our ancestors. Broad patterns can be identified only over five or six most recent generations. For the purposes of this paper I have had my own genetic make-up analysed. The results show that 89 per cent of my autosomal DNA is shared with other people in the British Isles and 11 per cent with people in West and Central Europe. There is also a trace of under 1 per cent which is shared with people in Southeast Europe.

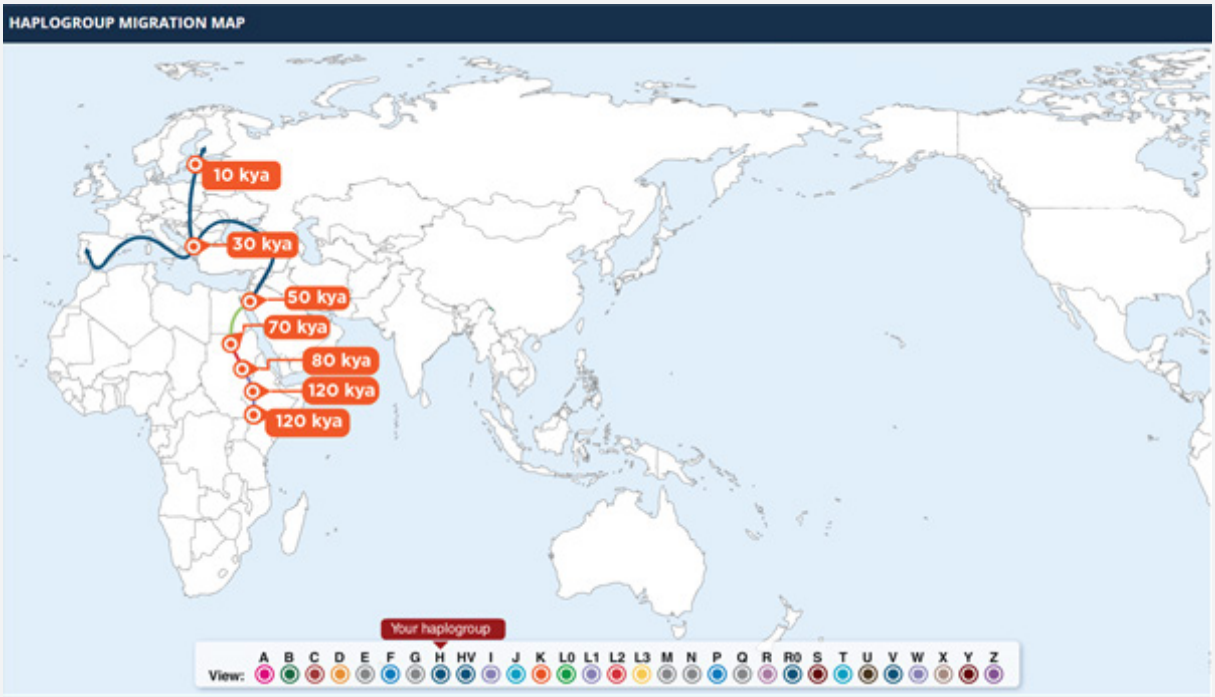
In contrast, far more information can be gleaned from our mitochondrial DNA and Y-DNA. *Mitochondrial DNA* (mtDNA) is passed down from mothers to their daughters and sons, but only the daughters pass it on to subsequent generations. It is essentially unchanged from generation to generation, although occasional mutations give rise to new sub-categories or 'haplotypes'. There are 30 principal mitochondrial haploytpes and all women in the world belong to one or other of these groups. Meanwhile *Y-DNA* is passed down through the generations from fathers to their sons. As with mitochondrial DNA, Y-DNA is unchanging from generation to generation, with occasional mutations. All men in the world belong to one or other of 20 Y-DNA haplotypes.

Genome analysis reveals that the genus *Homo* evolved in eastern Africa around 2.5 million years ago. About half a million years later *Homo* began to spread out of Africa into Europe and Asia. Approximately 500,000 years ago the species *Homo Neanderthalensis* (Neanderthals) and *Homo denisova* (Denisovans) evolved, the former in Europe and the Middle East, the latter in East Asia. Meanwhile, back in Africa the species *Homo sapiens* evolved, roughly 200,000 years ago. Although Neanderthals, Denisovans and modern humans evolved in different places and at different times, they had a common ancestor. Neanderthals are sometimes thought of as our primitive and brutish ancestors, but they are in fact our cousins, having developed earlier than but in parallel with Sapiens. They were bigger and stronger than us and they had larger brains. Whether they were more or less brutish than us is unknown, but in our history we have demonstrated that at times we can be uninhibitedly brutish towards members of our own species (Auschwitz, Hiroshima, and many other examples).

Some members of the Sapiens species moved around within Africa while others left, in waves, between 70,000 and 50,000 years ago. Those who left gradually occupied Papua and Australia, parts of Asia and parts of Europe and eventually colonised the whole world (Tucci and Akey, 2016). From the beginning the three cousin species moved restlessly across the globe. The three cousins were sufficiently closely related to be able to interbreed. Sapiens interbred with Denisovans, Denisovans with Neanderthals, and Neanderthals with Sapiens. In fact, all non-African humans alive today still carry traces of Neanderthal DNA, owing to pairings which happened around 50,000-60,000 years ago. Many people - especially in East and Southeast Asia - also have Denisovan genes in their make-up.

Two cases provide vivid illustrations of how our ancestors and those of our cousins moved around in prehistoric times. The first example is a female who lived in the Altai mountains - on the borders between modern-day Siberia (Russia), Mongolia and China - about 90,000 years ago. In a paper with the intriguing title 'Mum's a Neanderthal and Dad's a Denisovan' Warren (2018) reports that analysis of the genes in the remains of this individual show that her father was indeed a Denisovan and her mother a Neanderthal. Not only that, but her Neanderthal mother was more closely related to other Neanderthals in Croatia (approximately 5,000 km away) than to Neanderthals in the immediate environment in Siberia. This gives an indication of the extent to which our cousins were moving around even before Sapiens left Africa. Warren concluded 'Neanderthals didn't just stay in one place for thousands of years'. The second illustration comes from Indonesia, where extensive genetic variation in the current population has been found across the archipelago (Natri et al., 2020) and particularly in Papua (Pedro et al., 2020). In Papua, there is evidence that the Sapiens ancestors of today's inhabitants interbred with Denisovans not once but twice: approximately 46,000 years ago and again about 30,000 years ago (Jacobs et al., 2019). It remains unclear why there was apparently a gap lasting 16,000 years between their two encounters.

Analysis of my own mtDNA indicates that my mother's maternal haplogroup is H, specifically subgroup H1e1a. The migration map for this group (Figure 1) shows that its members began to move out of Africa approximately 50,000 years ago. The group expanded in the northern Near East and southern Caucasus between 33,000 and 26,000 years ago. It then split into two major branches, one going north towards Scandinavia and the other west towards the Iberian peninsula. Today, about 40 per cent of all mitochondrial lineages in Europe are classified as haplogroup H. There are also smaller populations in Siberia and Inner Asia (FamilyTreeDNA, 2019a).



Haplogroup migration map by FamilyTreeDNA, edited by David Fero
kya = thousand years ago

Figure 1: Author's mother's maternal ancestry (FamilyTreeDNA, 2019a)

Meanwhile, my father's paternal ancestors belong to Y-DNA haplogroup I, subgroup I-M170. The migration map for this group (Figure 2) indicates that this group split from an older group about 23,000 years ago. (The original group had left Africa between 50,000 and 45,000 years ago.)

Haplogroup I were one of the first peoples in Europe, but some branches can also be found in lower frequencies in northeast Africa, central Siberia and the Caucasus (FamilyTreeDNA, 2019b).

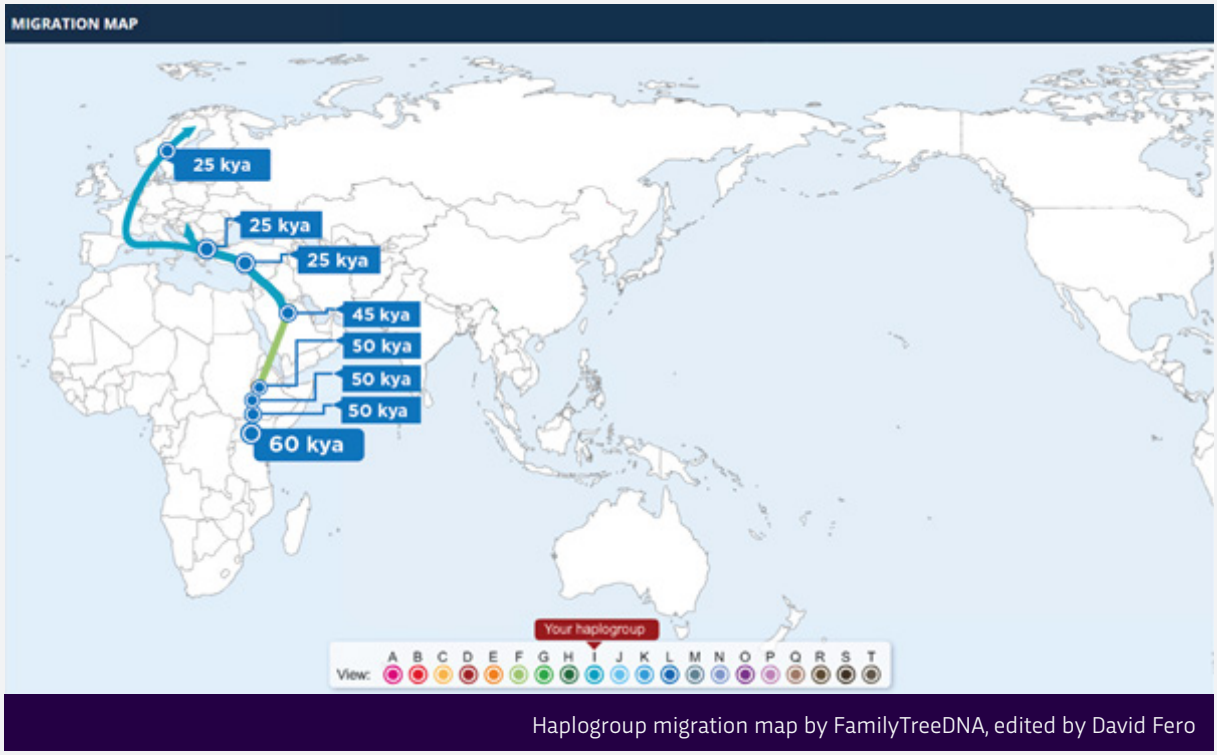


Figure 2: Author's father's paternal ancestry (FamilyTreeDNA, 2019b)

To conclude, analysis of our autosomal DNA provides limited information because of the vast number of ancestors who have contributed to it. On the other hand, the maternal and paternal lines in our ancestry can be traced back, with some degree of accuracy, to our origins in east Africa. It is clear that the 'wanderlust' (Tucci and Akey, 2016) which characterises our species has in fact been a dominant characteristic of Sapiens – and of our prehistoric cousins – from Deep Time to the present day.

Movement in recorded history

It is not difficult to find instances of large-scale mobility throughout recorded history. Again and again, conquering armies have moved vast distances. One example is the Roman Empire (27BC-376AD which built 80,000 km of roads throughout territories covering 2.7 km2 (History, 2009). Large populations have also moved in response to climate change, as in the case of the Bantu Expansions across Western Africa and Eastern-Southern Africa; this process lasted over 1,000 years (Eggerty, 2016; Ehret, 2001).

Leaping forward to the 16th and 17th centuries, we find that the transatlantic slave trade shipped between 12 and 13 million people from Africa to the Americas. (In addition, many millions died during these voyages and in camps on arrival, while waiting to be sold.) The principal traders were Portuguese, English, Spanish, French, Dutch and Danish (Emory University, 2018). Less well known is the fact that several European nations also carried out slave trading across the Indian Ocean. For example, in the 17th century the Dutch East India Company brought nearly 5,000 slaves from Africa and 100,000 from India to Indonesia and other parts of Southeast Asia. Not to be outdone, in the same period the English shipped large numbers of slaves from Africa and India to their own outposts in Java and Sumatra (Allen, 2020, p.33).

Moving forward again to the 20th century, more instances of large-scale movement, some voluntary and some compulsory, can be observed. In the Soviet Union, between 1935 and 1947, Josef Stalin moved tens of millions of people from one part of the country to another. Stalin was particularly concerned to move ethnic minorities away from border areas. For example, Koreans on the Soviet side of the border with North Korea were moved to Central Asia so as to keep them well away from their kinsfolk (Martin, 1998).

Adolf Hitler had his own mass transportation and ethnic cleansing programme. Between 1933 and 1945 millions of Jews, Roma, Poles, Afro-Germans, 'Asiatics', Soviet prisoners of war, handicapped people, gays, Communists, Jehovah's Witnesses and others from across the whole of Nazi controlled Europe were transported to concentration camps. The largest and best known of these camps were located in Poland, but in fact there were many smaller camps throughout Nazi territory (Jewish Virtual Library, 2021). Estimates of the total numbers of people involved in this genocide vary widely. Whichever figure is correct, what is clear is that millions of people were uprooted by the Nazi regime and transplanted to other parts of Europe before being killed.

Another example of large-scale movement of peoples occurred shortly after the Second World War, at the moment when India became independent. It had been agreed in advance that the British colony of India would become two separate nations, Pakistan and India. India was to be a Hindu majority nation and Pakistan would have a Moslem majority. Pakistan itself would consist of two portions, one in the west and one in the east. At the moment of Independence millions of Moslems who found themselves in the new India moved to Pakistan and similarly Hindus in Pakistan moved to India. The Partition of India became:

> ... the largest forced migration of people that has ever happened which was not [caused by] war or famine. (BBC, 2018)

Estimates of the number of people displaced during the Partition range from 12 million (BBC, 2018) to 14-16 million (Ansari, 2017).

A more peaceful example of mass migration can be found in the intermittent colonial and post-colonial populating of Australia, from the United Kingdom, over a period of almost two hundred years (National Museum Australia, 2020). This took place in four waves and continues today, now drawing in people from many different places of origin.

Movement at the present time (before COVID)

Coming up to date – at least as the world was before the onslaught of COVID – we begin by considering movement in the context of emergencies, as recorded by UNHCR. Then, concluding our survey, we look at the specific context of Indonesia to observe the ways in which many different forms of movement may co-occur in the same context and at the same time.

Movement and emergencies

In 2020, the United Nations High Commissioner for Refugees (UNHCR, 2020a) reported that there were 13 emergency situations worldwide in which large numbers of people were on the move, out to other countries and displaced within their own country.

Some countries, such as Eritrea, were receiving refugees from their neighbours (in this case from Tigray). In other cases, such as Yemen, refugees from elsewhere were entering the country but equally large numbers of Yemenis were leaving in search of security elsewhere. And, in other situations, some refugees were coming in, others were exiting and yet others were displaced internally, as in the case of the Democratic Republic of Congo (DRC).

The numbers involved are immense. By 2020 almost one million people had left the DRC, a third of a million had arrived from elsewhere and five million were forced to seek safety elsewhere in their homeland. In Syria, meanwhile, more than five million people left home and more than six million had to move around within their country.

So here we have another manifestation of human restlessness, in which vast numbers of people are forced by war, civil unrest, discrimination and other circumstances to abandon their homes.

Movement in Indonesia: A case study

This section takes Indonesia as an illustration of the ways in which many different types of movement occur simultaneously in the same context. (Needless to say, similar types and combinations of movement are experienced by most countries.) We look at movement into Indonesia, *within* the country and *out from* the country.

Several different categories of people come into Indonesia from other parts of the world – or at least they did before COVID. Foreign tourists are by far the largest category; in 2019 16 million holiday makers visited Indonesia (Badan Pusat Statistik, 2020a). There are also many registered migrants; these include expatriates working on fixed term contracts and foreign pensioners who have retired to Indonesia. There are smaller numbers of international students, refugees and asylum seekers, and an unknown number of unregistered migrants, many of whom are in transit, hoping that they will be able to make their way to Australia.

Within Indonesia people are also on the move for different reasons. The most striking phenomenon here is the drift (or, more aptly, the flood) of people from rural areas into the towns and cities of Indonesia. Comparing the country's demographic pattern in 1961 to that in 2019 we find that what was originally a largely rural population, with 80 per cent living in rural areas, has shifted dramatically to become a nation of city dwellers, where 56 per cent of the population live in the country's towns and cities (United Nations, 2020).

In 2019, a huge number of Indonesians travelled within the country for personal reasons. The National Statistics Board (Badan Pusat Statistik, 2020b) calculated that there were more than 280 million domestic tourists (defined as people who spend at least one night

away from home). Another significant contribution to in-country movement is made by *mudik*, the phenomenon of people from urban areas returning to their home villages to celebrate Idul Fitri (Eid ul Fitr) at the end of the fasting month of Ramadan. No definite figures are available, but it is estimated that 23 million people made the *mudik* journey in 2019 (Wijaya, 2019). Then, a few days after Idul Fitri, the same 23 million people returned to the cities. On their return journey many people brought with them younger relations in search of employment, and so the process of urbanisation continues.

Government transmigration programmes move people from densely populated rural areas in Java to more sparsely populated districts in the outer islands, such as Sulawesi and Sumatra. Transmigration was introduced by the Dutch colonial authorities almost a century ago and it continues to the present day. This has been described as a social engineering project of 'monumental proportions' and 'the largest voluntary resettlement scheme in the world' (Simpson, 2020). Official policy has waxed and waned over the years; the present government sees transmigration as an important element in achieving self-sufficiency in food production (Kemendes DTT, 2020). (Transmigration in present day Indonesia can be thought of as a contemporary equivalent of the 'Plantation of Ulster' carried out by King James I of England in the 17th century, when ten per cent of the population of Scotland were moved to the northern part of the island of Ireland; see French, 2015.)

Several kinds of movement by Indonesians out of the country can be identified as well. These include migrant workers, some of whom are registered but many of whom are not. It has been calculated that 'well over half of the two million irregular migrants in Malaysia are from Indonesia' (UNODC, 2018). More than 650,000 Indonesians made pilgrimages to Mecca in 2019; the Indonesian delegation to the Hajj is usually the second largest in the world (Hirschmann, 2020).

The Indonesian Diaspora Network Global (IDNG, 2020) claims that there are eight million Indonesians who are working and settled abroad. These are distinguished from migrant workers, who are likely to return to Indonesia. Many of the diaspora are professionals, such as academics and engineers. The Network and the Indonesian government would like to see these people making contributions to the development of the country.

In the case of this one country, then, we find many different forms of human movement, some voluntary (out of curiosity, in search of education and a better life), some organised or at least facilitated by the government (transmigration, tourism into the country), some illegal, some for spiritual purposes, some involving people who have no interest in being in Indonesia but who are trying to move on to another country, and so on. The numbers involved are huge: 16 million foreign tourists, 283 million domestic tourists, 23 million people making the annual return to their family home, more than five million migrant workers abroad, and so on. These lists are not exhaustive; nevertheless, it is clear that Indonesia can legitimately be called a 'restless' nation, with so many people moving around and with so many different purposes.

Stopping movement

Efforts to prevent movement have also been part of the human condition, at least as far back as can be seen in the historical record and probably even further back into Deep Time. These are manifested in bureaucracy, physical refusing of admission, deportation, and the construction of physical barriers.

Bureaucracy The most common method of controlling and preventing movement is through the imposition of legal restrictions on movement, immigration controls and the paraphernalia of passports and visas. This is a relatively recent development, introduced unilaterally by the United States in 1920. For the first time, all immigrants were required to be in possession of a passport issued by their country of origin. Other countries had no option but to come into line and issue passports. This document has become

> ... an object of freedom for the advantaged, and a burden for others. [It is] less about creating a more democratic society of world travelers than it is about control. (Pines, 2017)

Physical refusing of admission With increasing frequency governments of 'target' countries are taking steps to prevent people who are suspected of intending to reach those countries from completing their journeys. A UNHCR Press Release in 2021 reports:

> Some European states [are] restricting access to asylum, returning people after they have reached [their] territory or territorial waters, and using violence against them at borders. ... The pushbacks are carried out in a violent and apparently systematic way. Boats carrying refugees are being towed back (UNHCR, 2021a).

UNHCR also reports that, in the eight years from 2013 to 2021, more than 21,000 refugees died or were missing in the Mediterranean alone (UNHCR, 2021b). Of these deaths, an unknown number were the consequence of refugees being refused admission by physical means. Refusing admission includes denying assistance to people who need it and preventing others from providing such assistance. A factor contributing to the large numbers of deaths and disappearances at sea is the criminalisation by governments of search and rescue activities by humanitarian NGOs (Lloyd-Damnjanovic, 2020).

Deportation One of many examples of deportation – i.e. capturing and expelling unwanted people – is provided by the notorious Nunukan case in 2002, when without notice the Malaysian government rounded up 400,000 undocumented Indonesian migrant workers and dumped most of them on the small Indonesian island of Nunukan. The island was home to a small community of 40,000 people and was completely unable to accommodate this influx; this led to a major humanitarian crisis (Ford, 2006).

Physical barriers Throughout history barriers in the form of walls, fences and other obstacles - from the Great Wall of China (Lovell, 2006) to Trump's Mexican Wall (Dinan, 2020) - have been erected with the intention of preventing movement in or out. Barriers become hated symbols of despotic governments' attempts to control the mobility of their populations. Nevertheless, the effectiveness of such barriers is not guaranteed:

> ... no matter how many walls and fences we build, desperate people will always find a way through. (Harari 2018, p.145)

In time, ironically, physical barriers intended to prevent movement become tourist destinations, stimulating the movement of large numbers of visitors.

Bluntly put, a common characteristic of all these efforts to inhibit movement is their cruelty. Bureaucratic obstacles prevent refugees from having access to essential services. Children are separated from their parents. Boats carrying refugees are pushed back out to sea. Migrants are rounded up and dumped in isolated islands. In extreme cases, people are shot and killed by border guards.

But there are also cases where refugees receive humanitarian assistance from local populations. In Aceh, the westernmost point of Indonesia, local fishermen have frequently rescued boatloads of Rohingya refugees escaping from Myanmar (Suryono, 2018). In one particularly harrowing case a boat with 293 people on board was rescued after spending seven months at sea (UNHCR, 2020b). The refugees had moved from place to place in the Andaman Sea and the Malacca Straits but had repeatedly been denied permission to disembark. Thirty people had died during the journey and more died after arrival; the survivors were severely traumatised. Fortunately, the Indonesian authorities were sympathetic and UNHCR was able to take appropriate action.

All these deliberate - but only partially successful - attempts to prevent and disrupt human movement contrast with the extraordinary impact of COVID-19. Since the worldwide appearance of the virus early in 2020, movement has been constrained and in many contexts halted completely. An unpredicted impact of isolation and the inability to move in the ways with which we were accustomed has been severe stress. In England, for example, suicide-related calls to a helpline have increased by 33 per cent while in the UK generally helpline calls relating to children in contexts where domestic violence occurs have increased by 53 per cent. In Jakarta a women's rights NGO recorded 700 per cent more cases of online gender-based aggression. Meanwhile, in the USA, the percentage of adults who said that they were experiencing anxiety or depression increased almost fourfold.

Similar increases in domestic violence, other forms of aggression, loneliness, suicide and other manifestations of stress have occurred throughout the world. These statistics are a stark illustration of the extent to which mobility is in our genes. We are restless by nature and, denied opportunities to move, we suffer.

Language

In the light of this restless propensity to move across the globe, what can be said about language? It is impossible to know precisely where, when and how human language(s) originated. The *monogenesis* hypothesis states that all languages derive from one common ancestral language (in the same way that, ultimately, we are all descendants of shared ancestors). An implication of this hypothesis must be that the shared ancestral language was in existence *before* some members of the Sapiens species moved away from their homeland in eastern Africa and began travelling (Santa Fe Institute, 2014). An alternative argument is that language began to develop only about 30,000 years ago. But by that time Sapiens was already spread across parts of Africa, the Middle East, around the Mediterranean and across southeast Asia as far as Papua and Australia. This *polygenesis* hypothesis states that human languages developed spontaneously in different parts of the world *after* some members of the Sapiens species had left Africa.

The archaeologist Steven Mithen argues in favour of monogenesis. He believes that a 'radical break' in human development occurred

> … with the emergence of *Homo sapiens* or rather later, at 70,000 years ago … - just prior to the great diaspora – the populating of Asia, Europe and eventually the Americas by *Homo sapiens* from its African home. … My guess is that 70,000 years ago was most likely the time when the final stages of the evolution of language occurred. (Mithen, 2008)

What is clear is that languages are not static. We know that language change is taking place constantly, as new natural phenomena are discovered, as the climate changes, as new objects are invented, as new processes are developed, as contacts are made with other languages, and as languages acquire or lose prestige. Mithen believes that particularly significant changes in human languages occurred at the start of the Neolithic Age,

the transition point when many humans gave up their mobile hunter-gathering way of life in favour of 'sedentary farming and herding communities':

> [T]he formation of new words required for that new lifestyle was as much a driver as a consequence of the Neolithic transition … Such words … helped to establish new concepts in the mind, shaped thought, influenced perception and ultimately the human deeds in the world that left an archaeological trace. (Mithen, 2019)

The transition from hunter-gathering to agriculture occurred at different times in different parts of the world. Consequently, this radical change in mind, thought and language which Mithen has proposed must have taken place at different times as well.

It is not always easy to appreciate the scope of language variety, both diachronically (over time) and synchronically (from one context to another). One problem is that the same name may be used for a language over an extended chronological period, even though the form of the language changes radically during that time. Take the 'English' language as an example:

> 1) Hwæt, we gar-dena in geardagum,
> Þeodcyninga þrym gefrunon
> Hu ða æþelingas ellen fremedon!
>
> 2) Whan Zephirus eek with his sweete breeth
> Inspired hath in every holt and heeth
> The tendre croppes, and the yonge sonne
> Hath in the Ram his halve course yronne …

Apart from the words 'we' and 'in', the language of the first extract is unrecognisable as English. The second extract uses several words which are recognisable although the overall meaning may still be difficult for us to grasp. Yet both are in 'English', the language in which I am writing this paper. The first is taken from ***Beowulf***, the anonymous epic poem written approximately 1,300 years ago in Late West Saxon, a variety of Old English (Klaeber, 1950). The second extract comes from the opening of the ***Canterbury Tales,*** written in Middle English by Geoffrey Chaucer about 630 years ago (Robinson, 1957).

As an example of synchronic or geographical variation we can think of Darija, Kinubi, Hassaniyya and Kalam (and others), all of which are varieties of Arabic spoken in different parts of Africa. These 'Arabic' languages are mutually incomprehensible.[1]

Given these chronological and geographical language variations, it becomes extremely difficult to determine how many languages are currently spoken in the world. The current edition of ***Ethnologue*** (Eberhard et al., 2020) claims that there are 7,117 known living languages, while an earlier edition (Grimes, 1992) gave a total of 6,528 languages. We need not take the apparent precision of these numbers too seriously; it might be more realistic to say that the true number lies somewhere between 6,000 and 7,500.

The most recent edition of ***Ethnologue*** estimates, gloomily, that 2,926 languages are endangered. Meanwhile, research by UNESCO a decade ago found that 2,464 of the world's languages were 'in danger' (Moseley, 2010). How worried should we be by these figures?

Adopting a Deep History perspective, it would be interesting to know how many languages have existed since Sapiens began speaking. It is impossible to find the answer, but estimates have varied from 30,000 to 500,000 (Crystal 1997, p.287). We know about Ancient Greek, Latin, Pali, Sanskrit and a few other extinct languages but, these aside, it is clear that tens – probably hundreds - of thousands of languages that existed in the past have disappeared. This is not at all surprising. As we have wandered restlessly from continent to continent, from the Stone Age to the present day, encountering a myriad of different environmental and social contexts, our languages have responded accordingly. As those contexts have changed so languages have changed and, in time, have disappeared. It is inconceivable that the language spoke¬n 70,000 years ago by my mother's maternal ancestors in the area which today is on the border between Sudan and Egypt (Figure 1) could be preserved until the present day. Similarly, there is no way that the language of my father's paternal ancestors from the time when they were in the Balkans about 25,000 years ago (Figure 2) could still be maintained.

[1] Darija is Moroccan Arabic; Kinubi is also known as Juba Arabic (Calderbank, 2013), spoken in South Sudan; Hassaniyya is the Arabic spoken in Mauritania; Kalam is the variety of Arabic spoken in countries around the Lake Chad Basin in the centre of North Africa (Hassana, 2021).

Thus there is a dilemma here. We love languages, we describe and document languages and we learn languages. Every language has its own unique character, developed in its own environmental niche. But languages come and go; they are born and they die. (What, one wonders, is the average lifespan of a language?) Of course, every child must be given the chance of becoming literate in and educated in their home language. But in the fullness of time every language will die. This is inevitable.

The dilemma is exemplified by the contrast between the cynical pragmatism of the narrator in the satirical poem *The Latest Decalogue* by the Victorian poet Arthur Hugh Clough (1819-1861) and the universalist humanity of the sermon *Meditation XVII* by John Donne (1572-1631), one of the Metaphysical Poets.

Clough (1862) writes:

> Thou shalt not kill; but need'st not strive
> Officiously to keep alive

Deliberate murder is not acceptable, he says, but doctors do not need to try too hard to save their seriously ill patients. If a patient is near death anyway, further intervention is unnecessary. A 'Do Not Attempt to Resuscitate' (DNAR) order may need to be placed at the foot of the patient's bed.

Contrast this with Donne (1624):

> No man is an Island, entire of itself; every man is a piece of the Continent, a part of the main; if a clod be washed away by the sea, Europe is the less, as well as if a promontory were, as well as if a manor of thy friends or of thine own were; any man's death diminishes me, because I am involved in Mankind. And therefore never send to know for whom the bell tolls; it tolls for thee.

Donne says that all of humanity is interrelated; if just one person is lost then we are all diminished.

Applied to language, the Clough poem suggests that no language should be deliberately eradicated, but, at the same time, if a language is endangered there is no need to invest great effort into keeping it alive (since, in the long run, all languages will die). In contrast, Donne's sermon could be interpreted as saying that all languages are valuable because each one reflects a part of human creativity. If just one language is lost then we are all the poorer for it.

Conclusions:
Movement and Language in Deep Time of the Future?

Three lessons emerge from this discussion. The first concerns human movement. Tucci and Akey (2016) say:

> From our evolutionary birthplace in Africa, modern humans have migrated to nearly every habitable corner of Earth.

They might have added that it is not only modern humans who possess this characteristic. The propensity to be mobile has been part of our make-up ever since the genus Homo first appeared on the surface of the Earth. Our species Sapiens inherited that propensity just as our now extinct cousins the Neanderthals and the Denisovans did.

In today's world we continue to move, in many different ways, and we will keep on moving in the future. Without the freedom to move we are traumatised and stressed and we tend to behave aggressively towards others and ourselves.

It is not surprising that human beings continue to move around. What is surprising is that we are still surprised by it, that we are constantly unprepared for it and that we keep trying to stop it.

The second lesson concerns who we are. Genetic data confirms in striking ways what we always knew (or should have done): that we are all related and that we all originate in the same area in eastern Africa. What is new is that we can now map in extraordinary detail how our ancestors have moved around and how we come to be where we are today. Much of this information is surprising and intriguing. New findings are emerging daily. It is clear, therefore, that the idea of 'homeland' is meaningless. Our ancestors may have spent a few thousand years in one part of the world and felt that that was their homeland. But further back in time their own ancestors had spent many generations in another part of the world and felt equally strongly that that was their homeland. Bad tempered boundary disputes between nations have no sense when viewed from a Deep History perspective. Similarly, generalisations about the characteristics of the inhabitants of particular parts of the world are meaningless when we know that there is no such thing as genetic 'purity'. Furthermore, attempts to calculate the number of ancestors we have show that we are all related to each other in multiple ways.

The third lesson concerns language. The languages which we have spoken during our travels across the globe are untold in number - tens or even hundreds of thousands - because they have adapted according to circumstances. Of this huge number we speak only about six or seven thousand today. New languages continue to be born and old languages die. We can mourn the decline and death of languages, but this cycle of appearance and disappearance has always been the case and it will continue to be so. I am aware that colleagues in UNESCO, SIL and elsewhere will be disappointed by what I am saying. However, I cannot see that any other interpretation is possible.

These lessons have emerged through the adoption of a Deep History approach. We now need to consider briefly whether it is possible to adopt a Deep Time of the Future approach to help us to respond to the lessons.

Attempts to prevent movement are futile and often inhumane. Panicked responses when large numbers of migrants begin moving in order to avoid natural disasters, dictatorships and war are often inadequate and delayed (though they may be well-meaning).

With regard to environmental issues, a Deep Time perspective should make us aware of what Farrier and Aeon (2016) refer to as the 'cataclysmic consequences of modernity': 'The irony of the Anthropocene is that we are conjuring ourselves as ghosts that will haunt the deep future.' For example, we already know that sea levels are rising rapidly, but what long-term planning is taking place? Do we have to wait until the people of the Maldives are all up to their knees in water before we start thinking about where they (and their language) can be moved to? This is not a problem that the Maldivians can solve by themselves.

What of human movement caused by persecution, territorial disagreements, disputes over natural resources, and so on? One has to wonder whether the nation state in its present form is still fit for purpose in this restless world. The origin of the concept of the nation state is often said to be the Peace of Westphalia in 1648, following a series of treaties between European nations. In essence the Peace established the inviolability of national boundaries:

> The Westphalian peace reflected a practical accommodation to reality, not a unique moral insight. It relied on a system of independent states refraining from interference in each other's domestic affairs and checking each other's ambitions through a general equilibrium of power. ... each state was assigned the attribute of sovereign power over its territory. Each would acknowledge the domestic structures and religious vocations of its fellow states and refrain from challenging their existence.
> (Kissinger, 2014)

But we now need new ways of preparing for the unexpected and of manifesting our common humanity. Issues such as terrorism, pandemics, climate change and human migration can be solved only by international cooperation, not competition. (Yuval Noah Hahari in his book ***21 lessons for the 21st Century*** (2018) offers some very interesting thoughts on the sort of discussions which would be needed to achieve international understanding and cooperation over immigration.)

In modest ways, international collaboration has already started to happen. The European experiment of permitting - and indeed encouraging - freedom of movement across the borders of its member states is a step in the right direction, as are shared currencies such as the West African CFA, the Central African CFA and the euro. And of course the United Nations and its agencies provide a glimpse of what a Deep Time of the Future might look like.

Finally, with regard to language, following Rapatahana and Bunce (2012) and Bunce at al. (2016), one thing that we can do with a Deep Future perspective is to be alert to any threat posed by the presence of a voracious and omnivorous Tyrannosaurus language and take robust action to counter such a threat.

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