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Article

Living in a fly-over world: on moving in a heterogeneous navigational culture

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Arnold Wilts

Utrecht University, The Netherlands

Abstract

This article explores a question of aeromobility and cultural geography by asking what it means to live in a fly-over world. How are we part of practices of aeromobility at times when we are not travelling ourselves? In reflecting on different aspects of global air travel, the article offers a critical understanding of how aeromobility increases the heterogeneity of our navigational culture. A culture not understood as a single global space encompassing us all but rather as networked combinations of travel and non-travel, of horizontal speed and vertical distance, and of complex patterns of diverse modes of movement. Air travel changes the relative distance between geographies. Based on this observation, the article argues that aeromobility affects the feeling of belonging that we develop to the people and places around us – even when we are not able or willing or allowed to travel across the globe.

Keywords

aeromobility, belonging, navigational culture, wayfaring, wayfinding

Introduction

I live underneath a crossroads of air routes. Every day dozens of planes fly over my home. Flights from Copenhagen to Paris, from London to Sydney, from Frankfurt to San Francisco, they all pass the town I live in. Most people flying over will have never heard the name of it. Yet, many leave their traces behind. On a clear day, at any given moment the sky above my house is filled with condensation trails, patterns of cirrus homogenitus – line-shaped clouds made by aircraft flying over at high altitude. Straight lines fill up the sky, running in parallels, criss-crossing each other apparently randomly. White lines between the clouds are constantly emerging and disappearing again. And within minutes the aircraft that have created the lines and patterns are gone and out of sight, continuing their journey to distant places and faraway lands. They leave me behind, looking up at their cloudy trails slowly dissolving in the sky.

Corresponding author:
Arnold Wilts, School of Governance, Utrecht University, Bijlhouwerstraat 6, 3511 ZC Utrecht, The Netherlands.
Email: a.s.wilts@uu.nl

I have often wondered what the meaning is of the straight lines in the sky above my world. I ask myself what it means to dwell in a mobile world and live underneath the sky through which other people travel across the globe.[1] The patterns of lines left behind by aircraft are a symbol of rapid mobility in an increasingly connected world.[2] International travel creates links between the places where we live and it connects our distant geographies.[3] Contrails symbolize the patterns of presence and absence that we create as we travel and move within and between cultures.[4] As I stand on the ground and look up, mine is the world that other people fly over. But what does it mean to live in a fly-over world? Does this affect my personal experience at all, my sense of geographical belonging, of being part of the environment through which I move?

In this article, I explore the question of how I am part of a practice of international mobility at times when I am not travelling myself.[5] My aim is to extend an understanding of how different modes of movement are implied by the very notion of mobility.[6,7] In reflecting on different aspects of global air travel, I offer a critical understanding of how aeromobility increases the complexity of our navigational cultures. I show how the condensation trails in the sky above our heads cut through our worlds, our stories, and our ways of knowing.[8] My contribution in this article is the argument that aeromobility practices force us to continuously switch between different modes of moving, recognizing and belonging. Aeromobility affects our ways of connecting to the people and places around us. It changes how we perceive the world in which we live and complicates our understanding of our place within it. Even when we are not able, or allowed, to travel through the air ourselves, aeromobility changes our sense of being in the world.

As we watch aircraft create straight-lined clouds in the sky, we see connections between our distant geographies emerging in real time. We realize that our world is not made up of two-dimensional territories, understood as 'bounded spaces' but of places that are connected through transcending forms of transport instead.[9] But focusing on this, we too easily overlook the fact that many of us do not travel and that those who do, do not travel most of the time. This explains the relevance of asking what it means to live in a fly-over world. We all do. And this confronts us with the challenge of balancing our moving along a path through life with finding our way in an increasingly connected world.[10] As I will argue, the lines in the sky show us that finding our way through the world increasingly requires us to adapt to life within a heterogeneous navigational culture. This argument allows me to identify a central topic in aeromobility research, one that centres around how we become skilful in orienting ourselves in the complexities of the modern world and find our way through life.

Navigational cultures

Contrails are the straight lines left behind by aircraft passing over at high altitude, generally over 20,000 ft. As the aircraft is travelling through the sky, its condensation trails are formed when moisture in the engines exhaust gasses freezes into ice particles in the turbulent air behind it. These little pieces of ice reflect the light of the sun differently than the water particles around them and hence become visible as white lines in a blue sky. Our international air routes are material and visible, a tangible infrastructure of global transport.[11] However, at the same time these bands of condensing water and ice are a powerful cultural symbol. Contrails are the visualization of global air travel. The patterns they form symbolize the many connections between distant geographies across the planet, while the straightness of the lines expresses the sophisticated nature of the institutional arrangements in which these connections get organized.

Planes move in both horizontal and vertical directions as they navigate their way across often densely crowded airspaces. For safety reasons, this has to be closely monitored and this is achieved through organizations for air traffic flow and capacity management (ATFCM). Air

traffic control agencies work along international guidelines to organize movement across a three-dimensional space.[12] Airline pilots moving through this space are ruled by the straightness of ATFCM lines, lines 'on plans and specifications nowadays backed by force of law and contractual obligation'.[13] It is clear that what we are observing in the geometrical format of contrails is that the spatiality of air is highly organized[14] – an expression of deliberate attempts to regulate international movement.[15]

The anthropologist Tim Ingold describes straight lines as 'the virtual icon of modernity'.[16] This certainly pertains to the straightness of condensation trails and the geometrical patterns they form when crossing each other. The lines and patterns are the outcome of sophisticated and technologically intensive, rationalized planning procedures performed by unseen and distant people – air traffic controllers working at computer screens and airline pilots plotting their course using GPS and radio navigation.[17] The straight lines that appear in the sky above do not seem to be a part of the physical world through which we move on the ground below. But they do remind us of the existence of other worlds, and they confront us with an apparent opportunity of almost unlimited mobility. When straight lines symbolize modernity, condensation trails symbolize our way of moving through it.

Ingold points out that by being in our environment, by moving along, we become part of it – as our environment becomes part of us, in our personal experiences and life histories. He speaks of wayfaring to refer to the 'embodied experience of … perambulatory movement' as we find our way through life by physically moving within the environment we live in.[18] Only through perceptual and sensory experience can we, literally, move through the world and find a path 'along which life is lived'.[19] It affects how we perceive the proximity of others, those that are important to us.[20] It is by physically moving through the world, by being part of it, that we connect with people and places around us and develop shared stories about them. As we walk through the landscape that surrounds us, we develop a 'feeling of belonging … fostered by movement with both eyes wide open'.[21] Wayfaring connects us and it blends our physical and cultural worlds into one. It allows us to embody our world and learn to know it, enabling us to develop a sense of belonging to the places where we live.[22] Moving along in the world and travelling straight across it clearly are not the same thing.[23] How, then, do we learn to find our way in the connected geographies of our modern world?

In his book *The Lost Art of Finding Our Way*, the physicist John Edward Huth[24] observes that 'each of us is a navigator … constantly finding our way in our environment'. Finding our way, either by chance or through plotting a course, requires skill and familiarity with the terrain we are moving through – being it a natural or a built environment.[25] Finding our way through our environment requires us to learn, to develop, and share knowledge. Huth develops the concept of navigational cultures to describe the forms of knowledge, the shared cognitive repertoires, that we use to find our way. Navigational cultures, according to Huth share a sense of distance, a common approach to the memorizing of waypoints, and a preferred way of orientation that helps its members to survive in their environment.

Within any navigational culture, there are a number of ways in which we can share knowledge about the environment through which we move. We can do this through oral tradition, conversation,[26] and storytelling,[27] by textual means and written records,[28] graphically by drawing up maps,[29,30,31] and digitally by using GPS and Internet services.[32] The key point is, however, that we must share this knowledge among us. Our 'very human art of wayfinding'[33] depends on our ability to share knowledge about the geographical terrain we want to navigate through and on which we depend for our survival.

While finding our way we use a mental image of a range of navigational possibilities. Recognition of geographical features allows us to assess probabilities of effectiveness of various options we may have when a plotting a course.[34] Huth argues that waypoints along our route are necessary to

measure our progress through the terrain. These waypoints may help us to recognize where we stray from our planned route or find back to it – either on purpose or by accident. Next to culturally shared knowledge about our environment, we thus depend upon our own, personal experience within it in order to find our way through the world.

Ways of moving

The theoretical notions of wayfaring and wayfinding are different in many respects.[35] What these notions share, however, is a focus on how we actually move through the world, learn to know it and develop a feeling of belonging to the people and places around us. Both the idea of perambulatory movement and sensory experience – essential to wayfaring – and that of cognitive repertoires and navigational skills – important to wayfinding – give us a perspective on the difference between movement and mobility. This helps us to understand how variations in horizontal speed and vertical distance produce a differentiation in how we perceive our world and develop a feeling of belonging to the people and places that are important to us.[36] And we realize this the moment we stop to move along and begin to look up at aircraft flying over.

Although the traveller up above and we on the ground may simultaneously move through the same geographical coordinates, we are literally worlds apart.[37] When we look up, we can see tiny aircraft move silently across the sky above our world. From below we can see where about the lines of different flights will cross. We can see the crossing of contrails emerging and disappearing again, briefly connecting us, grounded in our local environment, with the international travellers on their way to destinations we don't know where. Seated within the jetliners high above are people that seem to live in a larger, cosmopolitan world. People may be en route to other continents, travelling through different time and climate zones and be at the other side of the world by the same time tomorrow. In contrast, while looking up we find ourselves in a fixed geographical point, 'rooted in time and bounded in space'.[38] Although we have the ability to move along and go forward, looking up at aircraft flying over we can't help but experience a sense of being left behind, of almost standing still.

For those looking down a very different picture emerges. Immobilized for the duration of the flight, locked within a huge flying machine often weighing more than forty tonnes, its engines running all the time, the traveller looks down and sees geographical shapes, natural and man-made structures – lines on the ground – slowly coming into view and gradually disappearing again. Although the aircraft is moving very rapidly through the skies, the ground or sea beneath only slowly passes by. And looking down from over 20,000 ft., the people on the ground are not visible anymore. It is a disembodied world and an empty landscape that we fly over. The traveller, looking down, is separated from the world below. There is a sharp disconnect between the traveller's perception of the world – she can see large stretches of it[39] – and her inability to move through it.[40] But despite sitting still while looking down on the world from high above, her seatbelt fastened, the traveller experiences a sense of being unbound, of truly flying on wings.

Travel and transport

Ingold distinguishes between travel and transport to argue that air travel actually is not about movement so much but rather about immobility. This difference evolves around the need for us to stop wayfinding and give up agency in order to be able – or allowed – to be transported to another place. When we want to travel along straight lines of transport, we must seek to gain access and allow ourselves to become part of the system that is in place to organize orderly air traffic.[41] We must allow air traffic control to take over and transport us through the airspaces between

geographies. This requires us to temporarily give up our ability to find our way through the world. It is on this condition only that we are granted permission to move along the world's international airways. We do not just hit the road and one day fly away.[42,43] We must subject ourselves to the rules and procedures of air traffic control. And our first step is to enter the global travel system through an air terminal.[44]

Airports are transit areas, gateways that allow access to other parts of the world and border stations protecting the global travel system from unwanted entry at the same time.[45] Travellers arriving at the airport are gradually made into passengers.[46] As we pass the different stages from arrival at the airport, carrying our bags or pushing a cart and walking to Departures, checking in for our flight, going through security and, when necessary, customs, moving through the shopping and waiting areas, all the way to actually boarding the aircraft we pass hurdles of increasing security and ever tighter control. As we enter the system and while moving towards the departure gate, we are constantly being watched.[47] There are people in uniforms, some carrying guns, monitoring our behaviour at all times. While new technologies connect the smartphones, we are carrying to the airport's surveillance system and track our every movement through its facilities.

CCTV is everywhere, policing restricted zones within the airport buildings and monitoring passenger flows through its publicly accessible areas.[48] Not visible to most of us, there are areas where passenger movement is physically restricted – such as the holding cells for undocumented immigrants at international airports or the waiting areas for those forced to travel and about to be deported to another country. Below our feet and behind the walls, there is the hidden reality of the airports' practical operations such as the staff canteens, the technical installations, baggage handling areas, and the security control rooms. While the constant monitoring of passengers ostensibly facilitates our safe passage through the airport, we have no choice but to subject to the continuous surveillance, the securitization of our documented identities,[49] and the powers that select and distinguish those who are from those who are not allowed to travel.[50]

After passing through the airport and its various transit areas, discipline becomes total once our flight is called and we board the aircraft that will carry us to another place. We walk into the plane, put our carry on in the overhead lockers and take our designated seats. Then, when the doors are locked and sealed, there is no feasible way out anymore. Our room for personal movement has been maximally reduced. In a final security instruction, flight attendants point out that prior to landing we will only be able to leave the aircraft in case of an emergency. After that the captain comes onto the intercom and welcomes us aboard. Referring to possible turbulence when airborne she asks us to keep our seatbelt fastened and to sit back and relax – she invites us to remain as immobile as possible for the duration of the flight. And there we are, 'strapped in our seat' and ready to go.[51]

As long as we remain in transit, we cannot escape the watchful eyes and pervasive security measures aimed at preventing uncontrolled wayfaring. The physical layout and architecture of major airports,[52] their organizational routines of crowd management and security control discipline us as passengers.[53] They prompt us to develop specific sets of competences that we need to move through the global transport system. This is easily recognized when reflecting upon the ease with which the experienced traveller navigates through an unknown airport of destination. Knowing where to go is knowing how to belong.[54] We have no choice but to adjust to the systemic pressures of air travel – or face the consequences when we don't. Punitive sanctions apply to undisciplined and unruly behaviour aboard flights and within airport buildings – as the system will not stop to remind us.

However, no matter how tight the security and encompassing the control, we still have some agency left throughout this process. Regardless of the omnipresence of observation and surveillance, we can still decide to turn around and leave. As long as we are not prevented from doing so,

we can trace our steps back and check out again – as we will upon arrival at our airport of destination. There we will move through the system again but this time in reverse order. After being allowed to we check our smartphones, leave the aircraft, go through customs when travelling internationally – again ascertaining our identity and demonstrating our right to travel – and collect our luggage. We follow the isomorphic sign language directing us to the main exit. Eventually, doors slide open and we are out – we have left the system. And straight away we face a task of navigation. We must find our way in a new environment, a place very different from the one we were in just a few hours earlier.

Not knowing where we are

While in transit, we cannot embody the world we are flying over and this means that we cannot really know where we are. We can still create a shared space with the people and things around us,[55] but like using other forms of motorized transport,[56] flying offers us only very limited opportunity to meet and connect with others.[57] It prevents us from paying 'close and careful attention' to the world.[58] The international air traveller is being transported along straight lines and across worlds. While in flight, she can only locate her position on a mental map of the country she is flying over. She cannot relate it[59] – the traveller does not know how she got there, how her path led her to this particular point above the world. As she gazes down upon the landscape, there is no possibility of seeing its 'folds' or perceiving its 'depths'.[60] Looking down we are detached from the world below and experience a disruption of the relationality between the landscape and our selves.[61]

The mental map the international traveller uses after finding her way to the aircraft is symbolized by the plane's course as it is displayed on the screens of the in-flight entertainment system. She travels over a map made up of familiar lines and shapes depicting countries, oceans and entire continents. There is some information about altitude, air speed and temperature, perhaps even images from outside cameras, but that is it. Waypoints along the route do not have to be memorized by the traveller nor does she need a 'primary means of orientation'.[62] The traveller does not need to engage in any form of orientation among navigational possibilities as the task of finding the way has been delegated to the flight deck. The international air traveller temporarily is *in between* navigation.

Thus, the contrail, the straight line that illustrates mobility, morphs into something which appears to be the very opposite of movement. It no longer stands for finding our way through our environment, transcending boundaries and discovering new worlds. International air travel temporarily prevents us from connecting to the people and things around us at free will. As we move between worlds the pathways along which we live our life are momentarily disrupted – transformed into condensed experiences shared with others being disciplined as we are. In its complex combinations of fixity and flow,[63] its connections between horizontal and vertical geographies,[64] air travel seems to set our worlds apart rather than connect them. The straight lines in the sky above our heads begin to symbolize a three-dimensional differentiation between worlds.

The crossing of paths

What we are beginning to see, then, is that the notion of aeromobility implies very complex connections between patterns of moving, recognizing and belonging. Finding our way through the world and flying across it complicates how we relate to the people and places around us. It affects how we learn to know the world and it gives us multiple ways of developing knowledge about it.

To illustrate how air travel changes navigational cultures, I want to share three examples of intersections of contrails I saw emerging as I was writing this article. Note that these are factual observations and not fictional vignettes.[65] Each of these examples at first sight appears to be trivial and certainly too mundane to write about in an academic paper. But when looking closer, this anecdotal material suggests a wider relevance of thinking about the geometrical grid of international travel through the sky above and how this is connected to our moving along and finding our way on the ground below. The examples I discuss show how technological developments in aviation, organizational changes in the airline industry, and the politicization of international mobility combine to structure the connections between our geographies. These developments together have altered our sense of distance, increased the diversity of waypoints that we may recognize along our routes, and have led to a differentiation in how we orient ourselves to the people and places around us.

The first example exemplifies how much technological developments in aviation have changed our sense of distance. Looking up, while using commercial flight tracking software, I observed a flight from Qatar Airways on its way from Doha to Edinburgh and a flight from the Polish national flag carrier LOT en route from Amsterdam to Warsaw. Before crossing each other's path above the Netherlands, both aircraft had touched down in dozens of places around the world. The LOT aircraft had been flying to Larnaca, Düsseldorf, Kiev and Copenhagen the day before and after arriving in Warsaw from Amsterdam continued to perform return flights to Istanbul and London that same day. The Qatar Airways aircraft had touched down in Karachi and Copenhagen during the 24 hours before taking off for its flight to Edinburgh. After crossing the Polish flight above the Netherlands and completing its journey to Scotland, it headed back to Doha and was flying out to Hong Kong the next day.

Journeys like these cover unprecedented distances in very little time and are only possible because of an almost incredible technological development. Within just a few decades aviation technology has produced flying machines able to efficiently transport hundreds of passengers and tonnes of cargo across the globe in mostly non-stop flights. This has resulted in an unprecedented increase in air traffic with the total number of passengers almost doubling in the last decade. Technological developments in aviation have deeply changed the relationality between the geographies in which we live.[66] Our sense of distance has changed accordingly and altered our way of perceiving our relations with people and places.[67]

The second observation I want to discuss concerned a Ryanair flight on its way from East Midlands Airport near the English city of Nottingham to Copernicus Airport near Wroclaw in Poland. It crossed the path of a Finnair Airbus heading South to South-East on its way from Helsinki to Paris. The Ryanair connection between East Midlands and Wroclaw did not exist some years ago. Before, passengers who could not afford to fly would need the best part of a full day to travel by train and ferry from England to Poland, crossing at least three different borders between countries on the way. Now they board an aircraft at an airfield outside of the global hub and spoke system and arrive at their destination in a little of under 2 hours. The Finnair flight on the other hand is a regular service between the capitals of two EU member states that has existed for years and which traditionally has been important for the exchange of people and ideas between countries. However, readily available cheap flights seem to have done more for European integration than decades of EU policy-making.[68]

Increasing competitive pressures between airline companies and the restructuring of the aviation industry have a created a situation in which the flow of people and ideas between places has taken on a new meaning.[69] Mergers between flagship carriers, an increase in code-sharing arrangements, and the emergence of low-cost airlines[70] have fundamentally changed the way we travel.[71] In a context where cross-national movement between countries has become the norm for many,[72]

budget airlines were instrumental in creating real opportunities of connecting with different people and previously unseen places.[73] As passenger numbers have grown, the diversity of waypoints along people's route through life and the chances of meeting distant others have multiplied.

The final example I want to mention exemplifies the fact that global aeromobility practices are deeply political,[74] both a manifestation and symbol of a global 'geography of exclusion'.[75] Looking up, I observed a Delta Airlines flight on its way from Frankfurt to Detroit crossing the path of an Airbus A300-B4 cargo plane operated by DHL, flying out from London Heathrow to a small airfield just outside the German city of Leipzig. The Delta Airlines flight connects one of the largest airports in Europe with a major North American hub. But this does not constitute a viable connection to all passengers as those who travel to the US – or, for that matter, to the EU – are subject to access barriers and travel bans. These testify to the uneven distribution of access to networks of international transport,[76,77] the global nature of its patterns of inequality,[78] and the continuous, high-tech surveillance of airline travel.[79]

The DHL Airbus crossing the Delta Airlines flight illustrates that the transport of goods by air link and its associated logistics are of great economic importance[80] – and likely to grow in both volume and significance.[81] However, the meeting of the two aircraft above the Netherlands also underlines how skewed aeromobility is in favour of those allowed and able to use the global transport system.[82] While large parts of the world's population in effect are excluded from the prerogatives of global mobility, it is easier in many ways to ship goods between countries than people. Through a combination of political and economic pressures, air traffic control unwittingly plays a role in maintaining and reproducing a global pattern of unequal mobility chances – blocking the access of many to a system that only in very rare circumstances breaks down for all.[83] This cannot but create an unequal pattern, a differentiation in how we develop preferred ways of orientation to the people and places around us. The uneven distribution of access to air travel thus is a third factor leading to a heterogenization of navigational cultures.

Connections

The parallels and geometrical patterns of intersecting contrails are an example of how we create and maintain technocratic practises[84] to physically organize the connections between distant geographies and the transport of goods and people between them.[85] The straight lines left behind by aircraft are the outcome of sophisticated, technologically intensive organization. They connect the paths of people and things – crew, passengers, and cargo – going into and leaving the plane. These myriads of threads are temporarily combined to form a line. The line thus emerges as a funnel, a long-stretched obligatory passage point in a complex pattern of international mobility. Contrails are lines drawn between connected points in a three-dimensional surface. In contrast, the paths that people follow through the world are part of 'meshworks of entangled lives'.[86] The extent to which these meshworks can stretch out around the globe once they connect to networks of transport is illustrated by the variety of backgrounds of airline passengers.

Information about passengers' backgrounds is not normally published by airline companies but is listed publicly in the case of fatal incidents. When in March 2015 its first officer deliberately crashed Germanwings flight 9525 in the Swiss Alps en route from Barcelona to Düsseldorf, there were 150 people with 18 different nationalities on board. Victims of the crash came from Germany, Australia, Spain, the United Kingdom, Kazakhstan, Iran, the United States, Colombia, Argentina, Israel, Belgium, Mexico, the Netherlands, Denmark, Morocco, Venezuela, Chile and Japan. Note that this was a routine flight between two European cities and yet there were people from 18 separate countries on five different continents on board the aircraft. A multitude of threads from many different geographies indeed.

The same story can be told of other flights that ended in tragedy. Every time passenger lists are published, we are struck by the diversity of people on board. In July 2014, in one of the biggest air disasters in recent times, Malaysia Airlines flight MH17 en route from Amsterdam to Kuala Lumpur was shot down above Ukraine. More than 200 people perished, among them many children. Victims of the violent attack on the commercial jetliner included people from all walks of life, among them, next to the pilots and flight attendants, school teachers, civil engineers, academic researchers, NGO representatives, technicians, care workers, politicians, and restaurant owners. It is not difficult to see how threads from many different life-worlds come together in a group of passengers finding themselves travelling together within the same aircraft.

The meshwork of paths that people find through the world connect to the geometrical grid of the straight lines of transport. But despite the fact that these straight lines are made by a vastly institutionalized and thoroughly rationalized socio-technical system, the diversity of passengers' backgrounds makes us realize that seeing the intersection of contrails emerging and slowly disappearing again still is a moment of poetic beauty. It is a passing, fleeting moment in time in which a myriad of paths that people follow through their lives come together at one geographical coordinate, a single, identifiable point in space.

'The aeroplane is faster than the heart'[87]

The straight lines in the sky exemplify cosmopolitanism. Does flying over it, then, make my world local? Salim, the central character in V.S. Naipaul's novel *A Bend in the River* realizes one day how different his world is from others. Seeing a postal stamp picturing brightly coloured fishing boats in the local harbour makes him realize that others find his world 'picturesque', that his world is small and different from others. For the first time in his life, Salim looks at his world through the eyes of others and realizes that he is a local. After that he is never able to look in his old way at the world again and his decision to leave his village and explore the land beyond becomes almost inevitable.

Perhaps this is an important observation when looking up to see planes flying over. It is the travelling of other people that makes us feel part of our local world. It is the speed of cruising jetliners that puts us in our place. The pace in our world is slow when compared with the velocity of aircraft speeding through the sky. It is the movement of others that increases our awareness of our environment, of the world we inhabit, the embodied landscape of our experience. But it is also something that turns against us, which turns our attention away from the things happening directly around us. It draws our mind to other places and makes us see our local environment through the eyes of distant others. It looses the bond between us and our world.

When reflecting upon this, the very notion of international mobility turns out to be something very contradictory.[88] Being able to travel, to go places, enlarges our world enormously. Yet, at the same time, it is our own experience of air travel that makes us realize how small and different from other worlds ours actually is. Many of us leave our local world ever so often to become international travellers. We know what it is like to be a passenger aboard aircraft flying over our world, perhaps even having looked down on the very place that we call home. Our personal experiences of wayfaring through the world below, finding our way as we go along, and travelling up above the clouds are intertwined and we can no longer understand the one without referring to the other. Our personal experience and the knowledge we share with others blend into a heterogeneous navigational culture.

In this culture, finding our bearing within our environment becomes an increasingly complex task. Being able to move in different modes and at varying speeds changes our sense of distance between the places that are important to us. We have to memorize a multitude of geographically

dispersed and culturally diverse waypoints along our route. And we can choose between different ways of orientation when finding our way along them. We are increasingly confronted with the tensions and uncertainties implied by meeting others in different and perhaps unfamiliar settings. But despite this growing complexity, the heterogeneity of our navigational culture also enables us to learn. It is because we know that we are able to go to distant places that we may learn how we are bound to our environment. The cultural richness of travel and an increased sense of home are both ingredients of the heterogeneous navigational culture of which we are part.

Travel thus affects our sense of being and belonging in the world in several ways.[89] It influences our sense of culture as it makes us more aware of other worlds and more detached from our own. Being privileged to be internationally mobile, it becomes increasingly difficult for us to remain in place. But at the same time, the experience of travel and our often taken-for-granted ability to go to other places increases our awareness of our local environment, of the place that we call home. As our world grows larger, our being in it becomes less obvious and more complex.[90] The possibilities and actual experience of international travel or, alternatively, being excluded from such possibilities and experience cannot but affect our sense of being in the world.[91] Even when we are just moving along and not being mobile ourselves, looking up at the sky we realize that our local environment is tied to other places – that the culture of which we are part stretches out across different worlds.

Conclusion

What does it mean to live in a fly-over world? In this article, I have discussed a range of theoretical issues and empirical examples implied by this question, thereby drawing on diverse strands of literature. What I found is that we increasingly live in a heterogeneous navigational culture. A culture not understood as a single global space encompassing us all but rather as networked combinations of travel and non-travel, of horizontal speed and vertical distance, and of complex patterns of diverse modes of movement. Our embodied skills of moving along a path through life, the cognitive repertoires we use to plot a course through our environment, and the algorithms and rationalized procedures that enable us to follow straight lines across the world are intertwined. What we need to address conceptually, then, is how these three sorts of knowledge interact; how we use combinations of skills, repertoires, and algorithms to orient ourselves in the complexities of our modern world. We need to ask how the institutionalized, and politicized, ability of moving across the world affects our recognition of waypoints along our route and ultimately the feeling of belonging that we develop to the people and places around us as we go along.

Like Salim, once we realize how our world is connected to others, we can no longer be locals – but being part of our environment there is no way in which we can truly become cosmopolitans. We can speed up and let ourselves be transported to another place, but we cannot leave the environments to which we belong and that are part of our personal experiences and life histories. This means that we can't really differentiate between the meshworks of entangled lives of which we are part and the networks of transport connecting our distant geographies. Whether we like it or not, our personal paths through the world are being caught up in the geometrical grid of international transport. And this reconfigures our ability for finding our way forever.

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ORCID iD

Arnold Wilts https://orcid.org/0000-0003-2593-6166

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Author biography

Arnold Wilts is a lecturer in organization, culture and management at the Utrecht University School of Governance. He works on questions of mobility and learning.