

# Transport geography and geopolitics: Visions, rules and militarism in China's Belt and Road Initiative and beyond



Weiqliang Lin\*

Department of Geography, National University of Singapore, AS2 #04-34, 1 Arts Link, 117570, Singapore

## ARTICLE INFO

### Keywords:

Geopolitics  
Belt and Road Initiative  
Silk Road  
Transport corridors  
Mobilities  
International relations

## ABSTRACT

Transport geography has made significant progress since the 2000s, attending now not only to transport's spatial properties, but also its economic, developmental, and, most recently, environmental intersections. As its eponymous journal celebrates its twenty-fifth year, this article seeks to introduce another dimension—geopolitics—by which the field can make further breakthroughs. Despite a few similar calls in the early-2010s, research contextually grounded in the mutual imbrications between transport and geopolitics has remained scant. This diverges from how the field used to countenance states' geopolitical strategies much more rigorously in the early-twentieth century, gracing topics such as imperial corridors, civilizing missions through mobility, and the establishment of world transport orders. Using China's Belt and Road Initiative as a prompt and exemplar, this paper argues for more sustained research on three broad geopolitical strands in the future. These strands are: transport visions and imaginations, rule-making in transport, and militarism in transport. Demonstrating the centrality of geopolitical discourses and practices in China's Belt and Road Initiative and other large-scale transport projects, this paper argues that geopolitics is not merely a background fact 'out there' affecting transport. Rather, it is an integral part of the asymmetrical production, organization and impedance of transport's geographies.

## 1. Introduction

The twenty-first century is a time of great power competition again, with transport taking centre-stage in many international clashes around the world. Of the many tensions that have recently surfaced—from Russia's controversial Northern Sea Route (Blunden, 2012), to competition between Nicaragua and Panama to command canal traffic between the Atlantic and Pacific (Yip and Wong, 2015), to the United Arab Emirates' troubled port investments in Africa (Khan, 2018)—China's Belt and Road Initiative (BRI) arguably stands out as the most important nexus between transport and geopolitics. As a sign of the explosiveness of the BRI, Admiral Harry Harris, chief of the US Pacific Command, framed it in terms of a superpower rivalry between China and the US, calling it the former's ploy to encircle global shipping chokepoints and marginalize America's global influence. Criticizing the massive transport investment programme as a means to control 'shipping routes', 'strait[s]', 'gulf[s]', 'canal[s]' and 'port[s]', he described the BRI as 'much more than just an economic engine' for development; '[i]t is a concerted, strategic endeavour by China to gain a foothold and displace the United States and [its] allies and partners' (*The Times of*

*India*, 2018). From this and other similar power projections, it is ostensible that transport is featuring increasingly prominently in countries' strategic calculations.

Admittedly, transport projects have long been fraught with contradicting international agendas and power plays, and the BRI is certainly not the first of its kind. A quick survey of history reveals how transport revolutions have not led to even socio-economic progress around the world, but rather asymmetrical outcomes as countries vie for connectivity and access against one another (Knowles, 2006). Zeroing in specifically on the war years in the first half of the twentieth century, transport research was often read synonymously with geo-strategic calculations, with scholars poring over issues such as 'aeropolitics' (Hershey, 1943), 'imperial air routes' (Sykes, 1920), 'seaways of the empire' (Sargent, 1918), 'civilizing rails' (Jefferson, 1928) and Nazi Germany's transport innovations (Lehmann et al., 1937). In the post-war era, these foci have receded from view, but their falling-out-of-favour should not be mistaken as a diminution of the importance of geopolitics in transport. If anything, states continue to hold sway in major transport decisions, shaping the way people and things move. This is why, in a piece aimed at (re)engaging transport with key

DOI of original article: <https://doi.org/10.1016/j.jtrangeo.2019.01.008>

\* Corresponding author.

E-mail address: [weiqliang@nus.edu.sg](mailto:weiqliang@nus.edu.sg).

<https://doi.org/10.1016/j.jtrangeo.2019.05.001>

Available online 11 May 2019

0966-6923/ © 2019 Published by Elsevier Ltd.

agendas in human geography, Shaw and Sidaway (2011): 507) underscore the need to consider the place of geopolitics in these debates, for 'transport and travel concerns are at the heart of geopolitical thinking and practice'. To re-articulate their stance in reverse, geopolitical thinking and practice are equally at the heart of transport, and should be of (greater) concern to transport geographers.

Having made significant progress in the twenty-five years since its founding, the *Journal of Transport Geography* is well-placed to tackle such a 'new' area of inquiry. This is not to suggest that scholars have completely neglected geopolitics in transport geography today, but, rather, that most engagements with the subject now tend to apply a light touch. Indeed, present-day transport geography has channelled most of its energies into delineating the socio-economic impetuses, and developmental value, of transport (see e.g. Keeling, 2007; Knowles, 1993). While there is a place for such analyses, it warrants recognition that geopolitical reasoning and action can likewise—if not more impactfully—determine the spatial networks, locations and functions of transport systems. Indeed, they can affect transport's very feasibility and success (Yip and Wong, 2015). Without attending to how transport is simultaneously shaped by geopolitical interventions among states, transport geography risks casting its empirical object as developmentalism's 'positivist spatial science' (Cresswell, 2011: 554).

In a bid to foreground these vital geopolitical processes, this article will explore three relevant strands for future research, which roughly coincide with the main tenets of critical geopolitics (Tuathail, 1996). These strands are, namely: transport visions and imaginations (discourse); rule-making for transport (technique); and militarism in transport (force). While acknowledging the salience of other transport-related conflicts, this article specifically uses China's BRI as a prompt to reflect on how states' geopolitical framings and strategic actions speak integrally with transport's geographies. To some extent, the article mirrors the contours of the 'new' mobilities paradigm in teasing out the productive meanings and politics in specific mobile contexts (Cresswell, 2006), but it also seeks to accent transport geography's longstanding concern for the spatial organization of transport (its location, nodes and networks). In the next section, I survey some opportunities for the cross-fertilization of ideas between transport and geopolitics, referring to work in transport geography, mobility studies, and beyond for directions. The three sections that immediately follow crystallize the three aforementioned research strands vis-à-vis China's BRI. The paper then concludes by reiterating the value of co-opting geopolitical processes within transport geography's fold.

## 2. Advancing the transport-geopolitics nexus

As evident in early-twentieth-century work on imperial travels and geo-strategies, a focus on geopolitics is highly compatible with transport geography's remit. In fact, cognate fields such as mobilities research and global networks analysis have provided early signposts to the intensely power-laden nature of transport. While Shaw and Sidaway (2011) underscore the importance of ports and canals in commanding world trade as part of the power competition between states, others point to the spatial structure of trans-border mobilities and their resultant regional hierarchies (Ducruet and Notteboom, 2012). In equally critical terms, Cowen (2014: 9), a social and political geographer, considers modern-day logistical networks as a re-invention of imperial geopolitics, engendering a neoliberal order of the 'world market' through pervasive circulation. Taken together, a quiet movement is gathering pace to re-cognize states as having strategic uses for transport, not least, to amass power, acquire wealth and gain a comparative advantage over others.

Notwithstanding the potential linkages that transport geography shares with geopolitics, the field has much to catch up on with respect to these tropes (see e.g. Rodrigue, 2017). It is not that transport geography never broaches the question of geopolitics in the present-day (e.g. Debbage, 2013; Rodrigue et al., 2013); rather, it is that where

international affairs are concerned, transport geography tends to construe them and their components—e.g. jurisdictions, borders and laws—as incidental 'facts of life' that may pose a constraint to mobilities. Instead of interrogating *how* strategies in statecraft intentionally and contextually develop *through* transport, the propensity has been to focus on the aftermath of these strategies and their ramifications on networks, locations and distribution (see e.g. Christidis, 2016; Goetz and Graham, 2004; Hall, 1993). It propounds a form of descriptive geopolitics that is remarkable only for its impacts on, rather than its constitution with, transport geography.

In many ways, the relegation of geopolitics and its execution to the background is understandable for a field that has made transport's economic impacts its concentration. However, this deference of geopolitics to economics also represents a missed opportunity of sorts: not just in terms of reflecting on the field's highly rationalist, and slightly un-reflexive, assumptions about transport (Schwanen, 2016), but also in terms of discovering 'new' (antagonistic) drivers—of inter-state contest, competition, connivance and mutual crippling—behind transport's spatializations. In today's increasingly multi-polar world where transport systems are showing signs of instability, this perspective has become more urgent than before. It holds the key to understanding states' unspoken motives and strategies in effecting change in the world through transport, and to comprehending the impact of these geopolitical games on transport's geographies.

A sprinkling of research from both within and without transport geography is able to offer some preliminary insights on how geopolitics prevalently infuses, and functions pervasively through, the spatialization of transport. In a rare rendering of international air transport in strategic terms, Raguraman's (1997: 240) work parts ways with more neutral understandings of aviation to demonstrate how (air) transport 'plays an important symbolic role in national identity and nation building'. His work does not only re-imagine the spatial structures of air transport as gestures of power and prestige, but also explains why aviation has throughout its history been subject to a variety of diplomatically significant—though often uneconomic—policies, including: the building of expensive, state-of-the-art airports (Adey, 2006), the establishment of flag carriers in territories with small populations (Bowen, 2000; Sampson, 1984), and the launch of expansive airline services worldwide (Williams, 2010). Understood as such, state rivalry and power projection are implicit in the location and morphology of aviation's hubs and networks, exceeding traditional explanations such as distance and airline economics.

Nationalist overtures like these spill over to regulatory practices as well, affecting air transport geographies in other profound ways. On the matter of international routing in aviation, Raguraman (1986) and Butler (2001) both evince how protectionist states have historically devised targeted international air laws to restrict foreign carriers' access to their airspace. Besides flagging the history of legal frameworks such as (the ironically named) 'Freedoms of the Air', both authors illustrate how 'the non-existence of routes does not imply the lack of demand' (Raguraman, 1986: 66), but the exercise of 'supply side' controls by powerful states to steer international transport development in their favour. Indeed, strategic motives often inform and underpin the invention of regulatory frameworks—whether at the global scale, such as the Chicago Convention of 1944 (governing international air transport) and the United Nations Convention on the Law of the Sea or UNCLOS (which mixes maritime transport interests with resource entitlements); or at the local/regional scale, such as in the articulation of safety standards (consider the certification disagreements over the Boeing 737 Max aircraft in March 2019), passage rights and navigation technologies in air and sea transport (Lin, 2014; Peters, 2014; Steinberg, 2014). These interpretations serve as further reminders to resist conflating transport's geographies with economic imperatives alone. Critically, they underscore the need to get to the heart—the stakes, the rationalities and the mechanics—of transport rules and frameworks, which are often not just regulatory in nature, but highly discriminating.

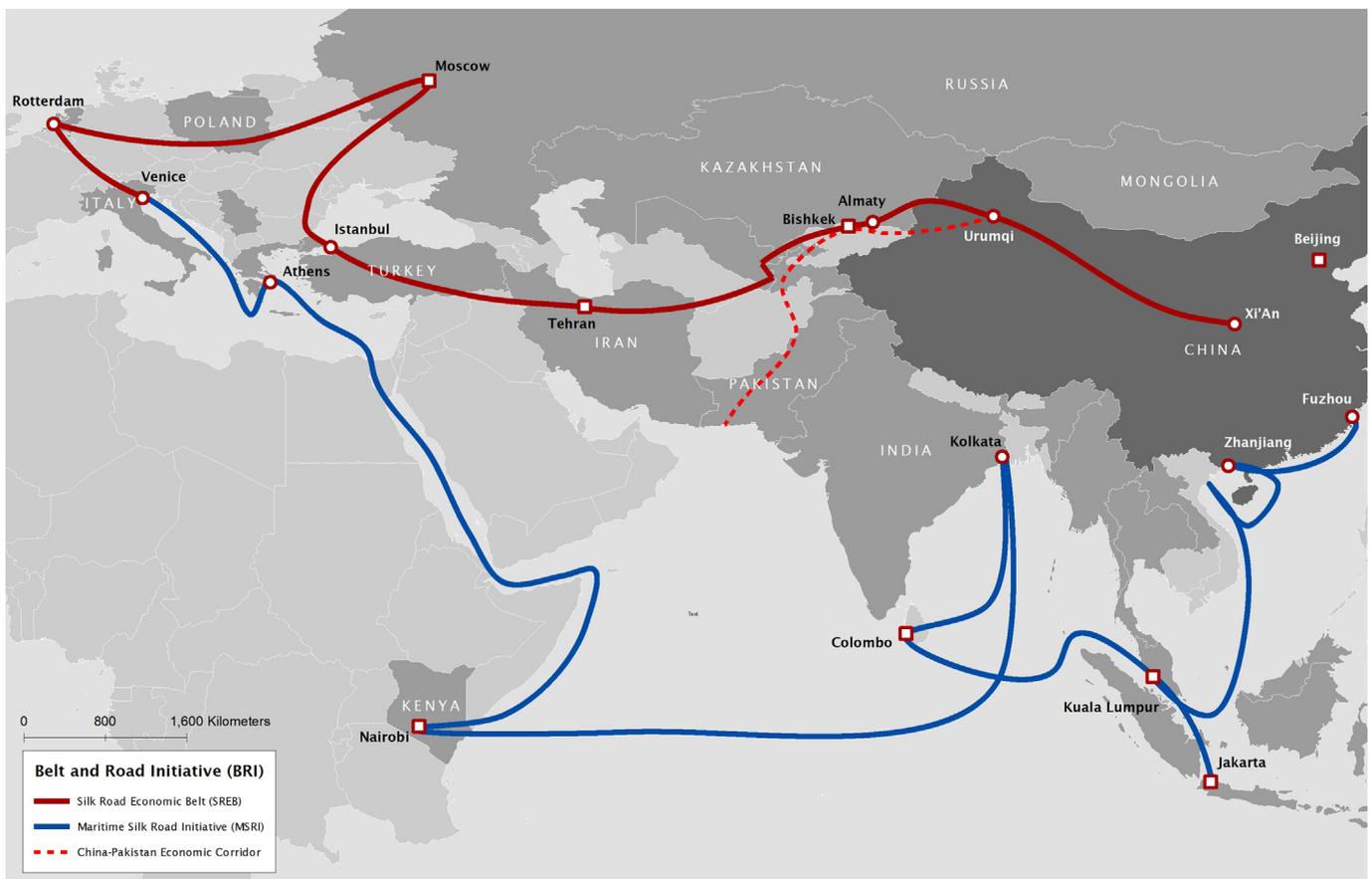


Fig. 1. Key transport corridors in China's Belt and Road Initiative.

The influence of geopolitics on transport's spatial distribution is further brought to bear by a third vein of work on war and security. While seemingly distant to concepts such as transport location, networks and distribution, this literature is instructive for surfacing how military—or military-style—action and policing are integral to the production of transport systems in civil contexts. Focusing specifically on the securitization of transport, some authors have uncovered how the war-like management of people flows in the passenger transport industry has contributed toward splintering the mobility life chances among different groups. In particular, they demonstrate how these measures have a capacity to deny transport access to the poor, ethnic minorities, and, to a lesser extent, non-elite travellers (Sheller, 2013), especially in times of emergencies. Others have considered how certain ports (and entire economies) can be excluded from world trade, if they do not adhere to 'international' standards on security, and are 'yet to be connected the right way' (Stenmanns and Ouma, 2015: 89). In more extreme cases, breakouts of war at key logistical junctures, such as in the Gulf of Aden, can portend catastrophic consequences to certain transport installations, even as the rest of the network is secured (Cowen, 2014). For these authors, war and security are a double-edged sword that both accelerates spatial integration (for some) and justifies systematic exclusion (of others). It produces networks that are splintered and unjust, and legitimizes the same asymmetry through rationalist arguments about the need to defend transport spaces.

This provocative, yet loose, collection of work—from both within and outside the discipline—acts as a signpost to another pathway of research that does not simply acknowledge the (static) presence of geopolitics in transport. It impels a special attention to *how* geopolitical strategies contextually permeate through the entire process of imagining, designing, implementing, and contesting transport systems. Concomitantly, it raises global questions about the origins, motives,

driving forces, and tactics in transport's spatializations. In the absence of ready frameworks that can animate this transport-geopolitics nexus, the following sections will now crystallize three distinct foci that mirror the tenets of critical geopolitics (Tuathail, 1996), as a model for future research. Taking its contextual cue from China's BRI, but by no means suggesting the scheme's exclusivity, the rest of the discussion advocates a (re)new(ed) understanding of transport's geographies not just as socioeconomic attempts to overcome 'the friction of space' (Rodrigue et al., 2013), but also as derivatives of states' strategic calculations for power, wealth and advantage.

### 3. Transport visions and imaginations

States have long made use of transport—from transcontinental rail to highways to canals—to project geopolitical power (see Knowles, 2006). But how this power is expressed, and subsequently attained, through particular transport visions and imaginations has rarely been evinced. The BRI's ascension to become a prominent transport investment programme is exactly the result of such visioning exercises, and of the strategic re-casting of ancient Silk Roads imaginaries into symbols of China's 'inevitable' rise (Frankopan, 2015; Sidaway and Woon, 2017). A trans-border initiative first mooted by President Xi Jinping as, separately, the Maritime Silk Road Initiative (MSRI) and the Silk Road Economic Belt (SREB) in 2013, the BRI is China's centrepiece foreign strategy, which seeks to bridge the country with territories across Eurasia through various land-and-sea transport investments (Blanchard and Flint, 2017). Yet, despite a semblance of schematic coherence, the plan is, in reality, an imprecise transport order that has its genesis in various state- and provincial-level highway, rail and port projects since the 1980s (Summers, 2016).

In the face of this patchwork of scattered infrastructural plans,

geopolitical visions and imaginations play an instrumental role in unifying the BRI into what is today a spatially intelligible inter-continental transport network. They help translate China's nationalistic dreams of a 'great rejuvenation' into an aspirational trans-Eurasia transport network that now underpins the BRI's basic morphology. In his speech in Kazakhstan to launch the SREB, Xi began illustratively by narrating 2100-year-old history and likening modern Chinese bids to promote 'trade and investment facilitation' in Central Asia to Han Dynasty imperial envoy, Zhang Qian's Silk Road 'exchanges and co-operation' in the second century BC (People's Republic of China Ministry of Foreign Affairs, 2013). During the launch of the MSRI in Indonesia the following month, Xi similarly portrayed the BRI's seafaring counterpart as reminiscent of Chinese admiral, Zheng He's fourteenth-century South Sea expeditions, using the latter as a model for turning 'the vast oceans' into a 'bond of friendship connecting... peoples' (ASEAN-China Centre, 2013). In both renderings, the invocation of historical 'truths', 'beneficent' figures, and romanticized ideas of 'cooperation' and 'friendship' along exemplary transport corridors gave powerful discursive substance to the BRI, its networks and its significance for the first time. These visions and imaginations of nationalist rejuvenation did not only sketch the basic blueprints of a dual-track transport system that spans Eurasia by land and sea—later to be embellished by the China-Pakistan Economic Corridor linking the interiors of Western China with Gwadar port by the Indian Ocean (Fig. 1). It would also justify China's hefty investment of US\$345 billion in transport projects to materialize such a network, including in the top five recipient countries of Pakistan, Bangladesh, Malaysia, Indonesia and Egypt (Joy-Pérez and Scissors, 2018).

China is, however, not the only party issuing such visionary framings to influence the shape of international transport systems. Western media and commentators have likewise contributed to delineating the geographical limits of the BRI. The publication of an influential article, entitled 'Our Bulldozers, Our Rules', in the foreign policy section of *The Economist* (2016) in July 2016 is a case in point. It painted an ambitious China trying to 'reshape a good part of the world economy', and offered the first cartographic visualization—and Western imagination—of the SREB and MSRI. Explicitly, the two corridors were thought to link (Muslim-dominated) Bishkek and Tehran overland to Moscow, and Kuala Lumpur, Colombo and Nairobi to Athens and Venice across the sea. The article went on to describe the scheme as Xi's 'way of extending China's commercial tentacles and soft power' through charting two Sino-centric transport conduits that would avoid and exclude key trans-Atlantic and trans-Pacific nodes.

Such portrayals in popular geopolitics (Sharp, 1993) have played into the fears of America (among other competing states in the Indo-Pacific such as India), instigating counter-proposals and infrastructural plans across the same strategic theatres. While the US recently announced a tripartite Indo-Pacific transport investment scheme with allies Australia and Japan (Scott, 2018), India joined hands with Japan to launch a similar 'Asia-Africa Growth Corridor' scheme in the same region (Nair, 2017). India further entered into a joint venture with Sri Lanka to operate a loss-making (originally Chinese-funded) airport near Hambantota, in response to China's acquisition of rights to the seaport for 99 years. If China's articulations envision a transcontinental network centred on itself, competing polities are now eyeing alternative transport orders and making material investments as a counterbalance to Chinese visions.

In another sign that international transport connections tend to follow such visionary cues, consider the Chinese state's updating of the initiative's official English name from 'One Belt, One Road' (OBOR) to the current BRI—only a few weeks after the publication of 'Our Bulldozers, Our Rules'. Calling OBOR a misnomer, China sought to (re) imagine a more flexible global transport network that would exceed just two land-and-sea corridors. Xi elaborated on this open-endedness at the inaugural Belt and Road Forum in 2017, when he envisaged an increase in 'land, maritime, air and cyberspace connectivity', and partnerships

with countries 'from either Asia, Europe, Africa or the Americas' (Xinhua, 2017; emphasis added). Spanning across all transport types and almost all continents, this arbitrary, though not un-strategic, re-posturing has prompted states that did not use to belong to the original SREB and MSRI visions to begin courting Chinese funds for transport development in a variety of unconventional places, including airport developments in Central Asia (CAPA, 2018), port construction in the Arctic (Lanteigne, 2017), and air and shipping infrastructural investments in Latin America (Calamur, 2018). In an ongoing (re)visioning of transport supply lines, China's—alongside other players'—latest geopolitical projections have 'real' impact on transport decision-making, laying the groundwork for new infrastructures, transport nodes and networks where there were none.

This tussle between opposing geopolitical visions and imaginations surrounding the BRI suggests that it is not socioeconomic factors alone that determine the geographies of world transport systems. As Culver (2016: 70) avers on the importance of these articulations, political viewpoints on transport are 'not simply dispassionate... discussions of quantifiable advantages and disadvantages, but... involve competing interests, beliefs, normative values, and visions [that persuade] how transportation and its spaces "ought" to be'. Extrapolated to the BRI, such normativities are even more potent, guiding transport decisions among states on the basis of geopolitical allegiances and the promise of future integration. Similar geopolitical discursive framings can be observed in times past, including the construction of the trans-Siberian railroad for Russian national integration, and Britain's imperialist dream of linking itself to the 'Far East', culminating in the acquisition of Hong Kong as a permanent trading node, and, later, the adjacent New Territories for 99 years (Bassin, 1999; Louis, 2006). In order to arrive at a fuller understanding of how transport circuits develop, transport geographers need to give serious attention to the discursive power of these visions and imaginations. Crucially, they can direct, sway and pre-judge transport's geographies even before they happen.

#### 4. Rule-making for transport

Earlier discussions have evinced how the geopolitical technique of rule-making figures as another important dimension in transport. From international frameworks such as the Chicago Convention and UNCLOS, to specific regulations among countries, transport is a highly rules-bound sector (Rodrigue et al., 2013). However, far from fixed or immutable, these rules are made (up) in dynamic ways to enable states to secure mobility advantages for themselves. As Mitchell (2002: 12, 14) explains, rules do not just impart a structure of regularity, but also actively construct 'expert' logics to normalize and legitimize particular policy actions. In the case of the BRI, the nascent scheme provides a useful foil for observing how processes of rule-making arise spontaneously among states, and go on to sculpt transport's spatial possibilities.

China's bid to render the SREB's overland transits more seamless exemplifies the salience of active rule-making in transport. Problematically for China, the trans-border nature of these new rail connections portends that it does not have direct control over the entire journey, including any delays and blockages. One of the points at which such friction manifests is the Khorgos Gateway in Kazakhstan, the world's largest dry port in the borderlands west of Xinjiang. Here, Chinese goods bound for Europe have to undergo custom checks at the border, as well as train changes due to the dissimilar rail gauges—'standard' 1435 mm versus 1524 mm respectively—used between China and former Soviet states (Feng, 2017). Because of these procedural and material specificities, current conventions of organizing land transport within the rights of each state's sovereignty are incompatible with China's objective of fast transcontinental rail connections.

While dissimilar gauges are a technical problem China is resolving through investing in new standard rail-lines such as the Khorgos-Aktau corridor (Maitra, 2017), delays due to customs hold-ups require the

intrusive revision of foreign laws. Specifically, China has sought to alter the rules of transport governance in Kazakhstan to make trans-border procedures more seamless. Pouring in large quantities of loans and investments into the country, China has over time amassed such clout that it was able to partially influence Kazakhstan's land and economic reforms of 2016/2017 (Vaswani, 2017). In a break from past traditions, the Kazakh state recently implemented rules that would enable foreign ownership of major state-owned entities for the first time (Foy, 2017), paving the way for China Ocean Shipping Company (COSCO) to acquire a 49% stake, and hence managerial rights, in Khorgos in a previously outlawed deal. Separately, the Chinese have employed the same financial leverage to oblige the modernization of customs procedures at Khorgos, introducing *their* rules, standards and common platforms to 'better control vehicles, goods and individuals on the Kazakh side of Khorgos' (Omigazy, 2017). These Chinese efforts to re-write the terms of rail ownership and practices in Kazakhstan exemplify how international laws are not static policies that predictably govern transport operations; rather, they are outcomes of live geopolitical negotiations that continually influence the spatialities (and speeds) of trans-border transport systems.

The maritime geography of the BRI proves equally contingent on rule (re)writing. If, earlier, China has aligned overland states in Central Asia with its mobility norms through chequebook diplomacy, it now faces a more wide-ranging (and dominant) global navigation order that subsumes the MSRI under the multilateral UNCLOS. Central to the contention is UNCLOS's classification of much of the South China Sea (SCS)—an important corridor in the MSRI—as 'high seas' for free passage (Article 87). This portends that the SCS is not a 'territorial sea' under the purview of a nearby sovereign state (Article 2), including China. While China possesses a number of interests in the SCS, including the preservation of its (perceived) sovereign right to territory and fossil fuel resources, an emergent concern related to this ruling pertains to China's ability to reliably traverse one of the world's principal transport corridors, amid a large US trading presence.

Accordingly, the Chinese state has attempted, since 2009, to re-qualify the sovereign terms of the basin and to (re)align the transport corridor closer to itself. It has occupied and encircled several island chains—and, by extension, their surrounding waters—with a so-called 'nine-dash line' (Wang, 2014), tacitly invoking UNCLOS's Article 2 to turn the adjacent SCS into a de facto 'territorial sea' under its control. While China has never gone so far as to formally annex the islands, its assertions have included reclaiming dozens of artificial islands around existing outcrops, and outlawing third-party 'navigation and overflight operations' in the resource-rich region (Tsirbas, 2016). Not only do these actions point to incremental steps by China to obtain legal rights—through a loose interpretation of Article 2 in its favour—to access and secure an area so vital to the BRI; they also show how territorial contests and disputations can stem partly from attempts at (re)organizing and securing transport routes and networks.

While trying to draw strength from UNCLOS's Article 2 to enlarge its footprint in the SCS, China has also rejected rules in times when they militate against or contradict the BRI's agendas. Consider the Hague Permanent Court of Arbitration's verdict in 2016, in a case of maritime dispute brought by the Philippines against China. Not only did the Chinese foreign ministry criticize the ruling that China does not hold any 'historic' rights to the SCS or its islands as 'biased and unfair', 'absolutely terrible' and 'a joke' (Phillips et al., 2016); the country has since redoubled its efforts in land reclamation on the islands, going so far as to operate logistical facilities to host civilian shipping and 'domestic' tourism there (Seidel, 2018). These reactions should not be misread as displays of Chinese petulance, but ongoing international contestations in a wider geopolitical impasse that entangles questions of access to transport corridors with those on territorial rights and resource allocation. How this impasse gets resolved—or not—potentially has important ramifications on port and shipping geographies down the line.

On rulings on the international carriage of goods, China has likewise opted not to recognize extant international frameworks governing maritime freight, choosing instead to apply domestic laws 'in accordance with the needs of [its] shipping industries' (Yu and Chang, 2018: 291). Disagreeing with wording under the current Rotterdam Rules which mandate internationally uniform liabilities for shippers in cases of delays and losses, China considers such US- and European-leaning transport legislations to be overly onerous for its shippers, and prefers to be absolved from these responsibilities given the BRI's multi-modal—and logistically more complex—nature (Yu and Chang, 2018). Once again, international rules here are not simply ready facts that unchangingly shape and spatialize trans-border transport systems. Rather, they are tenuous 'expert logics' (Mitchell, 2002) that states selectively devise, interpret, and sometimes spurn to achieve desired transport network outcomes for themselves.

Ng et al. (2014: 85) recently argued that transport geography cannot remain a 'closed' system of knowledge generation, but must endeavour to shine a light on 'the underlying economic, environmental... social'—and, I add, geopolitical—'processes that contribute towards continually changing transport patterns'. As the above exemplifications have shown, rule-making is a vital part of these live 'processes', constituting not merely a form of transport oversight, but a dynamic geopolitical strategy by which states technicalize, materialize and normalize certain spatial orders in transport (see Mitchell, 2002). This is an insight that a handful of studies have alluded to in the past (Butler, 2001; Raguraman, 1986), but it warrants a more sustained emphasis in transport geography, so as to move beyond what are often static and historical representations of transport's international frameworks. What needs greater attention are the *emergent* laws, legislations and legal legitimations that continually (re)script contemporary transport and the conditions under which it operates (e.g. through what spaces, by which states, on what grounds). Fleshing out the processes and techniques in transport rule-making empowers the discipline to not just describe, but also *explain*, the dominations and asymmetries latent within transport's geographies, along with the changing complexion of modern transport systems in a geopolitically contested world.

## 5. Militarism in transport

A final plot that can animate the deeply geopolitical nature of transport concerns militarism and war. Considering how the US Interstate Highway system was funded out of the US Defence Budget, the way in which the Panama Canal was sized according to the beams of US warships, and how jet and radar technologies had their genesis in World War II, the boundaries between war and peace are decidedly fluid in transport. Cowen (2014: 9) detects this perviousness in the contemporary era too, when she likens the 'corporate supply chain' of today to 'the military and colonial supply line' of old, arguing that the former has now become 'both vital and vulnerable and... in urgent need of protection' by virtue of its function as a frontier of wealth production. Seen as such, transport networks, and their respective nodes, cannot be taken-for-granted as stable geographical configurations or unassailable transport orders. Rather, they must be defended through combative action, aimed at deterring or repelling potential disruptors.

In the case of the BRI, much of this transport-motivated militarism is concentrated again in the SCS. Given the basin's strategic position as a major chokepoint in world shipping that is vulnerable to piracy attacks and blockades, the region has long been subject to heavy military surveillance and reconnaissance. Countries conducting such surveys include Japan, South Korea and, especially, the US, which maintains widespread naval presences in the Philippines, Singapore, and Thailand to ensure 'freedom of navigation' (US Navy, 2015).

With the entrance of China, the militarization of this sea-space has intensified, with many of the aforementioned Chinese-built artificial islands used to house military installations as a counterbalance to US dominance. In the Spratly and Parcel Islands, for instance, China has

built no less than seven naval bases and multiple airstrips in recent years (Chan, 2018), seeking to secure unobstructed sea-passage through the region's vital corridors through these offshore assets. As a People's Liberation Army lieutenant-general, He Lei, defended these positions at the Shangri-La Dialogue in 2018, the military features reflect a 'determination, confidence and capability to safeguard the motherland's safety, territorial sovereignty, integrity and its developing interests' (Chan, 2018). Besides these SCS fixtures, China has further set up (quasi)bases at other key MSRI nodes including Djibouti and Sri Lanka (Lo, 2018). These attempts by China to militarily keep seaways open, alongside the US and others' own enactments of naval security, signal that shipping networks are volatile spatial formations. To remain unchallenged, they must exist in conjunction with the military's protective work.

In addition to military asset investments, war games and missions likewise contribute to defending transport spaces, engendering a set of belligerent mobilities paralleling civilian conveyances. While the US helms the world's largest multi-national maritime exercise biennially in collaboration with friendly Pacific Rim nations to ensure the continued 'safety of sea lanes and security on the world's oceans' including the SCS (US Navy, 2014), China has lately stepped up on its aircraft carrier and overflight missions in the same region to ward off what it sees as US military threat to, interference with, and containment of its sovereign and trading interests (China Daily, 2018).

Such military operations have on occasions sparked tensions that go on to negatively affect the flows and circulations of civilian transport. In 2016, while repatriating assets from a military exercise in Taiwan, Singapore—a key US ally that had previously riled China by supporting the Hague's denial of Chinese sovereignty in the South China Sea—faced Chinese impoundment of its nine infantry armoured vehicles en route. While this disruption was also motivated by Chinese retribution against Singapore for its relationship with the pro-Independence Taiwanese government of the time, that China was able to orchestrate such a seizure, unchallenged, off an American President Lines container ship via two of its ports (Hong Kong and Xiamen) trumpeted its influence over military and commercial activities in the SCS corridor (Chan, 2016). Yet, military policing like this has also impinged on China's own (air) transport industry. Because of China's perceived need to stage large-scale air exercises over the East and South China Seas, its air force has resorted to controlling over 70% of the country's airspace. Overlapping flight paths between military and civilian aircraft have resulted in repeated delays, not only crimping growth in the country's civil aviation sector (Wang, 2017), but also re-drawing the maps of air transport geography.

Contemplating the place of militarism in transport is not some hyperbolic extension of war into the realm of civilian travel, but a recognition that brute force in geopolitics plays an integral role in securing corridors and supply chains for the production of wealth (Cowen, 2014). The BRI is but only one example encapsulating such connivances between transport and militarism, showing how the struggle for unimpeded movement often invokes a variety of war-like exigencies, including arms races, regional patrols, and route disruptions. Besides earlier examples cited on highways, canals and aviation technologies, there are antecedents and parallels in the imperial age too, including how ocean liners were designed for war, and how air power was used to safeguard British trading routes across its colonial possessions (Brobst, 2004). One could extrapolate these 'mobilities wars' to international resource conflicts as well, particularly in the struggle for fuel to power 'domestic' automobiles (Huber, 2011; Urry, 2012). Sidelining these military entanglements in transport geography occludes a vital aspect of the everyday production of transport. It restricts the field to an outlook overly fixated on 'peace', while propagating a false assumption that transport's spatialities are driven predominantly by rational and socio-economic considerations.

## 6. Conclusions

This paper has offered a three-part framework by which transport geography can be advanced and nuanced through a deeper conversation with geopolitics (Shaw and Sidaway, 2011). Emphatically, it is not that the discipline has now neglected to make mention of geopolitics altogether (see, e.g. Debbage, 2013; Rodrigue et al., 2013). Rather, it is that the field can benefit from a more rigorous (re)engagement with the contextual underpinnings of strategic statecraft, and the integral role that modern geopolitics plays in the (ongoing) asymmetrical production, organization and impedance of transport.

In this article, I have used the example of the BRI to highlight metonymically the pertinence of visions and imaginations (discourse), rule-making (technique), and militarism (force) to the production of transport. I have underscored how these geopolitical framings and strategic actions—all crucial components in critical geopolitics (Tuathail, 1996)—do not only normatively inform transport decisions among states, but also affect transport's spatial possibilities and configurations. Such a viewpoint potentially introduces another dynamic to questions on location, networks and distribution that transport geographers are familiar with. It layers in insights on the mutual imbrications between socio-economic and (geo)political factors, while surfacing the injustices of domination, coercion and violence that some states unleash on others in their respective pursuits of mobility. In this context, attuning transport geography to geopolitical thinking and practices usefully adds a critical perspective to the field, not presupposing transport's geographies to be neutral spaces, but contentious formations needing explanation.

A focus on geopolitics further trains the field to be more sensitive to the relationality and multi-scalarity of transport systems. While a case study on the BRI tends to spotlight big infrastructures such as long-distance railways and transcontinental shipping, none of the three geopolitical themes discussed in this paper needs to be confined to such grand scales. As a pragmatic call for cooperation, the BRI simultaneously has discursive and material effects on the way that *local* transport systems are planned in sites and cities around the world, as disparate places seek to become the scheme's nodes and termini. Percolations of geopolitical agendas to local contexts like these are in fact not unprecedented, as evident in today's (geoecologically influenced) urban emphasis on 'green' transport (Rice, 2010), and the increasing attention on urban freight in a (geo)economy geared toward e-commerce and logistics (Cherrett et al., 2012). Probing the geopolitical foundations of these shifts avoids the reduction of local transport systems to discrete morphologies, and promotes a multi-scalar appreciation of how local transport developments around the world may be related through wider geopolitical interventions.

Foregrounding geopolitics within transport geography clearly charts out new exciting roadmaps for the discipline. It affords the field another point of intersection with the rest of geography as well as with other social science departments, including mobilities studies (Cresswell, 2006), critical development studies and international relations. Drawing on its rich experience in the spatial tradition, the *Journal of Transport Geography* is highly well-placed to lead such a re-orientation, and to render the study of transport a more relevant and explanatorily robust undertaking, in an era of Arctic explorations, overseas port acquisitions and new canal proposals (e.g. Nicaragua and Kra). Indeed, in today's increasingly multi-polar world, it may well be a necessity to advance an outlook that can account for the sure changes that are to come in the fraught geographies of transport.

## Acknowledgements

The author would like to thank Frank Witlox and two anonymous reviewers for their very helpful comments and feedback. He has also benefited from conversations with Richard Bater on the Khorgos Gateway, and with Jean-Baptiste Frétiigny and colleagues while being

hosted at the Institute for Advanced Studies, Université de Cergy-Pontoise. He would like to acknowledge the able cartographic assistance from Julius Chiang and funding from the National University of Singapore (Grant Number: R-109-000-217-133). An earlier version of the paper was presented at the RGS-IBG Annual Conference 2018 in Cardiff, UK. All the usual disclaimers apply.

## References

- Adey, P., 2006. Airports and air-mindedness: spacing, timing and using the Liverpool Airport, 1929–1939. *Soc. Cult. Geogr.* 7 (3), 343–363.
- ASEAN-China Centre, 2013. Speech by Chinese President Xi Jinping to Indonesian Parliament. Available from. [http://www.asean-china-center.org/english/2013-10/03/c\\_133062675.htm](http://www.asean-china-center.org/english/2013-10/03/c_133062675.htm), Accessed date: 27 September 2017.
- Bassin, M., 1999. *Imperial Visions: Nationalist Imagination and Geographical Expansion in the Russian Far East, 1840–1865*. Cambridge University Press, Cambridge.
- Blanchard, J.M.F., Flint, C., 2017. The geopolitics of China's maritime silk road initiative. *Geopolitics* 22 (2), 223–245.
- Blunden, M., 2012. Geopolitics and the northern sea route. *Int. Aff.* 88 (1), 115–129.
- Bowen, J., 2000. Airline hubs in Southeast Asia: national economic development and nodal accessibility. *J. Transp. Geogr.* 8 (1), 25–41.
- Brobst, P.J., 2004. 'Icarian geography': air power, closed space, and British decolonization. *Geopolitics* 9 (2), 426–439.
- Butler, D.L., 2001. Technogeopolitics and the struggle for control of world air routes, 1910–1928. *Polit. Geogr.* 20 (5), 635–658.
- Calamur, K., 2018. Tillerson to Latin America: Beware of China. In: *The Atlantic*, Available from. <https://www.theatlantic.com/international/archive/2018/02/rex-in-latam/552197/>, Accessed date: 11 June 2018.
- CAPA, 2018. China's Belt and Road Initiative and Aviation. Available from. <https://centreforaviation.com/analysis/reports/chinas-belt-and-road-initiative-and-aviation-419638>, Accessed date: 12 June 2018.
- Chan, M., 2016. How Singapore's Military Vehicles Became Beijing's Diplomatic Weapon. Available from. <http://www.scmp.com/week-asia/politics/article/2051322/how-singapores-military-vehicles-became-beijings-diplomatic>, Accessed date: 20 June 2018.
- Chan, M., 2018. China Is Putting Troops, Weapons on South China Sea Islands, and Has every Right to Do So, PLA Official Says. Available from. <http://www.scmp.com/news/china/diplomacy-defence/article/2148979/china-putting-troops-weapons-south-china-sea-islands>, Accessed date: 19 June 2018.
- Cherrett, T., Allen, J., McLeod, F., Maynard, S., Hickford, A., Browne, M., 2012. Understanding urban freight activity—key issues for freight planning. *J. Transp. Geogr.* 24, 22–32.
- Christidis, P., 2016. Four shades of open skies: European Union and four main external partners. *J. Transp. Geogr.* 50, 105–114.
- Cowen, D., 2014. *The Deadly Life of Logistics: Mapping Violence in Global Trade*. University of Minnesota Press, Minneapolis.
- Cresswell, T., 2006. *On the Move: Mobility in the Modern Western World*. Routledge, London.
- Cresswell, T., 2011. Mobilities I: catching up. *Prog. Hum. Geogr.* 35 (4), 550–558.
- Culver, G., 2016. End of the line: the spatial framing of high-speed rail in Wisconsin. *J. Transp. Geogr.* 51, 70–76.
- Daily, China, 2018. US Blame Game Part of its Containment Strategy. Available from. <http://usa.chinadaily.com.cn/a/201805/21/WS5b02c14ba3103f866ee9aff.html>, Accessed date: 20 June 2018.
- Debbage, K.G., 2013. The geopolitics of air transport. In: Goetz, A., Budd, L. (Eds.), *The Geographies of Air Transport*. Routledge, London, pp. 41–56.
- Ducruet, C., Notteboom, T., 2012. The worldwide maritime network of container shipping: spatial structure and regional dynamics. *Global Networks* 12 (3), 395–423.
- Feng, E., 2017. China-Kazakhstan Border Woes Dent Silk Road Ambitions. Available from. <https://www.ft.com/content/1606d70a-9c31-11e7-8cd4-932067fb9f46>, Accessed date: 12 June 2018.
- Foy, H., 2017. Investors Welcome Push to Prise Open Kazakhstan. Available from. <https://www.ft.com/content/96dcb4c-4a04-11e7-919a-1e14ce4af89b>, Accessed date: 12 June 2018.
- Frankopan, P., 2015. *The Silk Roads: A New History of the World*. Bloomsbury, London.
- Goetz, A.R., Graham, B., 2004. Air transport globalization, liberalization and sustainability: post-2001 policy dynamics in the United States and Europe. *J. Transp. Geogr.* 12 (4), 265–276.
- Hall, D.R., 1993. Impacts of economic and political transition on the transport geography of Central and Eastern Europe. *J. Transp. Geogr.* 1 (1), 20–35.
- Hershey, B., 1943. *The Air Future: A Primer of Aeropolitics*. Duell, Sloan and Pearce, New York.
- Huber, M.T., 2011. Enforcing scarcity: oil, violence, and the making of the market. *Ann. Assoc. Am. Geogr.* 101 (4), 816–826.
- Jefferson, M., 1928. The civilizing rails. *Econ. Geogr.* 4 (3), 217–231.
- Joy-Pérez, C., Scissors, D., 2018. The Chinese State Funds Belt and Road but Does Not Have Trillions to Spare. Available from. <https://www.aei.org/wp-content/uploads/2018/03/BRI.pdf>, Accessed date: 8 June 2018.
- Keeling, D.J., 2007. Transportation geography: new directions on well-worn trails. *Prog. Hum. Geogr.* 31 (2), 217–225.
- Khan, S., 2018. Djibouti Rejects London Court Ruling over DP World's Doraleh Terminal. Available from. <https://www.thenational.ae/business/economy/djibouti-rejects-london-court-ruling-over-dp-world-s-doraleh-terminal-1.756798>, Accessed date: 10 December 2018.
- Knowles, R.D., 1993. Research agendas in transport geography for the 1990s. *J. Transp. Geogr.* 1 (1), 3–11.
- Knowles, R.D., 2006. Transport shaping space: differential collapse in time-space. *J. Transp. Geogr.* 14 (6), 407–425.
- Lanteigne, M., 2017. Who Benefits from China's Belt and Road in the Arctic? Available from: <https://thediplomat.com/2017/09/who-benefits-from-chinas-belt-and-road-in-the-arctic/>, Accessed date: 12 June 2018.
- Lehmann, E.A., Adelt, L., Dratler, J., Rosendahl, C.E., 1937. *Zeppelin: The Story of Lighter-than-Air Craft*. Longmans, Green and Company, London.
- Lin, W., 2014. The politics of flying: aeromobile frictions in a mobile city. *J. Transp. Geogr.* 38, 92–99.
- Lo, K., 2018. A Chinese Flag Flies over Sri Lanka as China Extends its Reach into India's Backyard. Available from. <http://www.scmp.com/news/china/diplomacy-defence/article/2126897/chinese-flag-flies-over-sri-lanka-china-extends-its>, Accessed date: 19 June 2018.
- Louis, W.R., 2006. *Ends of British Imperialism: The Scramble for Empire, Suez, and Decolonization*. IB Tauris, New York.
- Maitra, R., 2017. OBOR Brings New Life to Central Asia: Kazakhstan in Focus. Available from. <https://www.schillerinstitute.org/economy/2016/1212-obor-kazakhstan/ok.html>, Accessed date: 12 June 2018.
- Mitchell, T., 2002. *Rule of Experts: Egypt, Techno-Politics, Modernity*. Berkeley, CA. University of California Press.
- Nair, A., 2017. To Counter OBOR, India and Japan Propose Asia-Africa Sea Corridor. Available from. <http://indianexpress.com/article/explained/to-counter-obor-india-and-japan-propose-asia-africa-sea-corridor-4681749>, Accessed date: 12 June 2018.
- Navy, U.S., 2014. RIMPAC Is the world's Largest International Maritime Exercise. Available from. <http://www.cpf.navy.mil/rimpac/2014/>, Accessed date: 20 June 2018.
- Navy, U.S., 2015. Commander, Logistics Group Western Pacific (COMLOG WESTPAC). Available from. <http://www.clwp.navy.mil/>, Accessed date: 19 June 2018.
- Ng, A.K., Ducruet, C., Jacobs, W., Monios, J., Notteboom, T., Rodrigue, J.P., Slack, B., Tam, K.C., Wilmsmeier, G., 2014. Port geography at the crossroads with human geography: between flows and spaces. *J. Transp. Geogr.* 41, 84–96.
- Omrigazy, D., 2017. Kazakhstan, China Discuss Improving Controls at Khorgos Border Trading Centre. Available from. <https://astanatimes.com/2017/11/kazakhstan-china-discuss-improving-controls-at-khorgos-border-trading-centre/>, Accessed date: 12 June 2018.
- People's Republic of China Ministry of Foreign Affairs, 2013. President Xi Jinping Delivers Important Speech and Proposes to Build a Silk Road Economic Belt with Central Asian Countries. Available from. [http://www.fmprc.gov.cn/mfa\\_eng/topics\\_665678/xjpfwzysiesjgfhshzfh\\_665686/t1076334.shtml](http://www.fmprc.gov.cn/mfa_eng/topics_665678/xjpfwzysiesjgfhshzfh_665686/t1076334.shtml), Accessed date: 8 June 2018.
- Peters, K., 2014. Tracking (im)mobilities at sea: ships, boats and surveillance strategies. *Mobilities* 9 (3), 414–431.
- Phillips, T., Holmes, O., Bowcott, O., 2016. Beijing Rejects tribunal's Ruling in South China Sea. Available from. <https://www.theguardian.com/world/2016/jul/12/philippines-south-china-sea-case-against-china>, Accessed date: 18 June 2018.
- Raguraman, K., 1986. Capacity and route regulation in international scheduled air transportation: a case study of Singapore. *Singap. J. Trop. Geogr.* 7 (1), 53–67.
- Raguraman, K., 1997. Airlines as instruments for nation building and national identity: case study of Malaysia and Singapore. *J. Transp. Geogr.* 5 (4), 239–256.
- Rice, J.L., 2010. Climate, carbon, and territory: greenhouse gas mitigation in Seattle, Washington. *Ann. Assoc. Am. Geogr.* 100 (4), 929–937.
- Rodrigue, J.P., 2017. Cargomobilities: moving materials in a global age. *Geogr. Rev.* 107 (4), 47–50.
- Rodrigue, J.P., Comtois, C., Slack, B., 2013. *The Geography of Transport Systems*. Routledge, London.
- Sampson, A., 1984. *Empire of the Sky*. Hodder and Stoughton, London.
- Sargent, A.J., 1918. *Seaways of the Empire: Notes on the Geography of Transport*. A.C. Black, London.
- Schwanen, T., 2016. Geographies of transport I: reinventing a field? *Prog. Hum. Geogr.* 40 (1), 126–137.
- Scott, J., 2018. U.S.-Led Infrastructure Aid to Counter China in Indo-Pacific. Available from. <https://www.bloomberg.com/news/articles/2018-07-30/u-s-led-infrastructure-fund-to-counter-china-in-indo-pacific>, Accessed date: 17 August 2018.
- Seidel, J., 2018. Photos reveal China's South China Sea island fortresses are complete. Available from. <https://www.news.com.au/technology/innovation/photos-reveal-chinas-south-china-sea-island-fortresses-are-complete/news-story/776e1a695fb41ccb7e47a436594c1530>, Accessed date: 18 June 2018.
- Sharp, J.P., 1993. Publishing American identity: popular geopolitics, myth and The Reader's Digest. *Polit. Geogr.* 12 (6), 491–503.
- Shaw, J., Sidaway, J.D., 2011. Making links: on (re)engaging with transport and transport geography. *Prog. Hum. Geogr.* 35 (4), 502–520.
- Sheller, M., 2013. The island effect: post-disaster mobility systems and humanitarian logistics in Haiti. *Cult. Geogr.* 20 (2), 185–204.
- Sidaway, J.D., Woon, C.Y., 2017. Chinese narratives on "One Belt, One Road" (一帶一路) in geopolitical and imperial contexts. *Prof. Geogr.* 69 (4), 591–603.
- Steinberg, P.E., 2014. Steering between Scylla and Charybdis: the Northwest Passage as territorial sea. *Ocean Develop. Int. Law* 45 (1), 84–106.
- Stenmanns, J., Ouma, S., 2015. The new zones of circulation: On the production and securitization of maritime Frontiers in West Africa. In: Birtchell, T., Savitzky, S., Urry, J. (Eds.), *Cargomobilities: Moving Materials in a Global Age*. London: Routledge, pp. 87–105.
- Summers, T., 2016. China's 'New Silk Roads': sub-national regions and networks of global political economy. *Third World Q.* 37 (9), 1628–1643.
- Sykes, F.H., 1920. Imperial air routes. *Geogr. J.* 55 (4), 241–262.

- The Economist, 2016. Our bulldozers, our rules. Available from: <https://www.economist.com/china/2016/07/02/our-bulldozers-our-rules> [(Accessed 12 December 2018)].
- The Times of India, 2018. China's Military Could Soon Rival American Power 'across Almost every domain': Top US Admiral. Available from: <https://timesofindia.indiatimes.com/world/us/chinas-military-could-soon-rival-american-power-across-almost-every-domain-top-us-admiral/articleshow/62926388.cms>, Accessed date: 1 June 2018.
- Tsirbas, M., 2016. What Does the Nine-Dash Line Actually Mean? Available from: <https://thediplomat.com/2016/06/what-does-the-nine-dash-line-actually-mean/>, Accessed date: 18 June 2018.
- Tuathail, G., 1996. *Critical Geopolitics: The Politics of Writing Global Space*. University of Minnesota Press, Minneapolis.
- Urry, J., 2012. Changing transport and changing climates. *J. Transp. Geogr.* 24, 533–535.
- Vaswani, K., 2017. How China's Shaping One country's Future. Available from: <https://www.bbc.com/news/business-40367806>, Accessed date: 12 June 2018.
- Wang, Z., 2014. The nine-dashed line: 'engraved in our hearts'. Available from: <https://thediplomat.com/2014/08/the-nine-dashed-line-engraved-in-our-hearts/>, Accessed date: 18 June 2018.
- Wang, X., 2017. China's Airports Lead the World – So why the Delays? Available from: <http://www.scmp.com/week-asia/opinion/article/2099540/chinas-airports-lead-world-so-why-delays>, Accessed date: 20 June 2018.
- Williams, A., 2010. Flying the Flag: Pan American Airways and the Projection of US Power across the Interwar Pacific. In: MacDonald, F., Hughes, R., Dodds, K.J. (Eds.), *Observant States*. IB Tauris, London, pp. 81–101.
- Xinhua, 2017. President Xi's Speech at Opening of Belt and Road Forum. Available from: [http://news.xinhuanet.com/english/2017-05/14/c\\_136282982.htm](http://news.xinhuanet.com/english/2017-05/14/c_136282982.htm), Accessed date: 29 September 2017.
- Yip, T.L., Wong, M.C., 2015. The Nicaragua Canal: scenarios of its future roles. *J. Transp. Geogr.* 43, 1–13.
- Yu, Y., Chang, Y.C., 2018. The 'One Belt One Road' initiative and its impact on shipping law in China. *Mar. Policy* 87, 291–294.