



ELSEVIER

Contents lists available at ScienceDirect

## Journal of Transport Geography

journal homepage: [www.elsevier.com/locate/jtrangeo](http://www.elsevier.com/locate/jtrangeo)

## Case studies on transport infrastructure projects in belt and road initiative: An actor network theory perspective

James Jixian WANG<sup>a,\*</sup>, Selina YAU<sup>b</sup><sup>a</sup> Research Center on One-Belt-One-Road, College of Business, City University of Hong Kong, Hong Kong<sup>b</sup> Department of Geography, The University of Hong Kong, Hong Kong

## A B S T R A C T

This article is a new attempt to apply the Actor-Network Theory (ANT) as a qualitative analytical framework for examining the possible roles played by multilateral platforms in facilitating cross-border transport infrastructural projects at regional/continental scale. Given its magnitude, diversity and uniqueness, the Belt and Road (B&R) Initiative, as a multi-country platform along the contemporary Eurasia trade routes, underpins our diagnoses. The Chinese government posited B&R Initiative as an economic prescription which is premised on the provision of infrastructural connectivity across the Eurasia continent. By treating human and non-human elements symmetrically, ANT possesses wide scope elasticity that helps describe the dynamic interrelationships among various actors/actants, including the ways how government and state-controlled actors rationalized cross-border infrastructure projects by anchoring discourses about the thriving B&R network. Based on the analyses of three case studies, we argue that B&R Initiative has been a catalyst and obligatory passage point (OPP) for facilitating transnational transport infrastructure projects in garnering required resources and supports, though its efficacy might be subdued by other factors such as political contentions.

### 1. Introduction

In the literature on cross-border transport infrastructure projects, geographers have shown great interest in assessing the socio-economic effects of different transport development initiatives at various geographical scales (Lakshmanan, 2011; Bröckera et al., 2010; Gutiérrez et al., 2011). Although attention on key drivers and contributing resources is relatively scant, identifying them may be equally important. It is also imperative to understand how these factors interplay with each other during the processes through which multiple state governments (or possibly interested investors and companies as well) negotiate, bargain, compete and cooperate through various channels, leading to certain geographical specific changes of network while denying other possibilities. These processes involve complex networks of diverse associations that eventually shape and confine the transport development initiatives into physical outcomes.

An ongoing set of such processes suitable for our investigation is the Belt and Road (B&R) Initiative proclaimed by the Chinese Government in the fall of 2013. This strategic development framework aims at bridging the connectivity gaps in terms of government policies, facilities, trade, capital, and cultural exchanges among economies along the Eurasia trade routes. Improvements in infrastructural connectivity, particularly for the weakest links of the inter-and-intra continental

supply chains systems, have been identified by Beijing as the first and foremost engine to expedite the above objectives of the B&R Initiative.<sup>1</sup> Other countries which fall within the B&R orbit, especially the emerging economies, also envisage the long-term economic enhancement value of the new transport/economic corridors in facilitating a higher mobility of goods, capital and people. However, B&R Initiative, in its present form, takes a much more fluid structure when compared with other transnational transport network of a similar scale, such as the Trans-European Transport Network (TEN-T). The latter has a clear hierarchy operated under the auspices of the European Parliament and Council with the European Commission (EC) approving policies, guidelines and funding to support priority projects of high European added value and of common interest and traffic management systems that will play a key role in facilitating the mobility of goods and passengers within the European Union (EU). Specifically, EC's Directorate-General for Mobility and Transport defines the TEN-T policy, monitors and controls the overall programme execution while its executive arm, TEN-T Executive Agency (succeeded by the Innovation and Networks Executive Agency in 2014) will manage the implementation of individual TEN-T projects (EC Public Portal, January 2018).

The B&R Initiative does not have a well-defined hierarchical structure, and therefore clear project guidelines and procedures, paralleled to those of TEN-T. Besides, as the first mega cross-border transport

\* Corresponding author.

E-mail address: [jamewang@cityu.edu.hk](mailto:jamewang@cityu.edu.hk) (J.J. WANG).

<sup>1</sup> For the key cooperation priorities stated in the blueprint of the OBOR initiative issued by the National Development and Reform Commission (NDRC) of PRC on March 28, 2015, that is, "Vision and Actions on Jointly Building the Silk Road Economic Belt and 21st Century Maritime Silk Road", please refer to Section 4 of the document.

<https://doi.org/10.1016/j.jtrangeo.2018.01.007>

Received 18 January 2017; Received in revised form 24 January 2018; Accepted 24 January 2018

0966-6923/ © 2018 Published by Elsevier Ltd.

infrastructural initiative targeted at the developing regions in the contemporary era, the B&R Initiative is likely to experience a development process quite different from their counterpart in the developed world. Given their magnitude, diversity and uniqueness, the B&R mega transport infrastructure projects can provide transport geographers with the necessary materials to diagnose how they are negotiated, built, and evolved, thereby identifying the determinants of mega cross-border transport infrastructure development. The aim of this research is to assess to what extent and in what ways the multi-country B&R platform, among other things, helps accelerate or defer the development of B&R transport projects, including how state governments and state-controlled actors reacted to this proposition. These initiatives should be assessed from the outset when diverse forces and resources are converged to construct individual networks.

### 1.1. Research methodology

The difficulty in analyzing ongoing processes, such as B&R Initiative, is methodological. First, quantitative analysis is unrealistic largely due to the lack of reliable data sources at this stage of B&R Initiative. Wong (2018) summarizes the latest information of cumulative investments stated by various Chinese banks for the B&R Initiative and points out that the data is neither comparable nor accurate, since there are no standard criteria for deciding on which countries and cities, or what types of projects should be included under the B&R Initiative.<sup>2</sup> Among qualitative methodologies, while the institutional approach may appear to be a suitable candidate given its capacity of handling organizational effectiveness, which is a common problem in cross-border collaborative initiatives, the role of individual organizations in such transnational projects and the leverage they use are unclear and difficult to confirm. In this regard, heterogeneity limits the usefulness of institutional analysis. Besides, since the B&R projects are still at their early stage of development and the fruits are yet to be realized, the usage of established approaches such as cost-benefit analysis could likely be applicable only at a later phase. At this juncture, ANT is an original method that is perfectly fit for conducting a qualitative assessment on the networking process of these projects for a number of reasons.

Considering these methodological difficulties, we opt to apply the framework of Actor-Network Theory (ANT) in our analysis on three cases of B&R projects – a new attempt in transport geography to apply ANT in analyzing transport infrastructure development at international scale. The integrative approach of ANT holds substantial appeal for examining the formation of mega cross-border transport infrastructure projects that involve a multitude of stakeholders and their dynamic interrelationships. The essence of ANT—heterogeneity, symmetry, and network ontology—makes it a useful and distinct tool for understanding the complex relations among actors/actants, humans and non-humans, material and semiotic, in the course of network-building. Using this tool, we assess the heterogeneous associations, mutual attraction, resistance and power dynamics of a network of concepts, human and institutional actors, technical artefacts, and other resources, and investigate the process by which their associations in B&R actor-networks are derived and stabilized, and the manner in which the roles and functions of various actants are attributed. In treating different elements symmetrically, ANT possesses wide scope elasticity that

<sup>2</sup> Prof. Christine Wong (Director of the Centre for Contemporary Chinese Studies, University of Melbourne) gave a seminar at the City University of Hong Kong on ‘Bold strategy to remake the world or irrational exuberance? - The Belt and Road Initiative and China’s fiscal foundation’, on January 19, 2018. In her presentation, she presented a list of information about the cumulative investments on the B&R projects from various banks, including Asian Infrastructure Investment Bank (AIIB), World Development Bank, and five Chinese Banks but she refused to use these data to conduct any statistical analysis, noting that they are neither accurate nor comparable.

facilitates all-rounded analysis of networks that cannot be explained by other conventional theories. For instance, non-human actants are beyond the analytical coverage of institutional approach. Our primary research interest lies in network knitting, that is, how the spatial relations are enclosed in complex networks of diverse associations by adopting the ANT approach (Murdoch, 1998), rather than focusing on diverse intentions and motivations of government actors concerned.

The outline of this paper is as follows. After a brief review on ANT literature in geography and the formation of ANT actor-networks, we analyse three case studies which represent developments at different stages with unique characteristics of their own. We then summarize the results and lessons learned from these cases in the conclusion.

### 1.2. ANT in geography

Originally proposed in attempt to integrate science and technology into social processes, ANT understands the complexity of the world by tracking and uncovering the heterogeneous “actor-networks” of associations among various actors/actants, humans and non-humans, thus shedding light on how different things become and how they endure and exist (Bosco, 2006). As a key contributor of ANT, Latour (1996) defined actor/actant as “something that acts or to which activity is granted by others” (p. 373). ANT theorists further divide actors/actants into mediators and intermediaries. The former defines purpose and problem and attempts to convince other actors to create alignment between those actors’ interests and their own (Latour, 2005). Intermediaries are actors that are relatively stable, which allow networks to exist; types of intermediaries include texts, technical artefacts, human beings, and money (Murdoch, 1995). ANT also emphasizes how particular social situations and human actors enrol these intermediaries into actor-networks (Graham, 1998).

Influencing and being influenced by one another, actants co-exist. Law, another key contributor of ANT, asserted that “entities achieve their form as a consequence of the relations in which they located... they are performed in, by, and through those relations” (Law and Hassard, 1999, p.4). Bosco (2006) echoed that all things “are produced by relational effects, facilitated and enacted through networks” (p.137). Networks are fundamental to ANT because it views stable sets of relations or associations as the means by which the world is built (Murdoch, 1998). Networks gather diverse places and times within common frames of reference and calculation in which the associations between the enrolled elements are effectively consolidated (Ibid.). Actor-network encompasses a center actor and a decentered network, embracing both networks and points, collectives and individuals (Callon and Law, 1997). From an ANT perspective, the precise measurement of geographical “proximity” and “distance” is less relevant (Murdoch, 1998, quoting Latour, 1997); proximity within networks of both space and time is more important for ANT (Murdoch, 1998).

Since the 1990s, application of ANT has been increasing in the research of geographers (for instance, Murdoch, 1997, 1998; Woods, 1997; Power, 2008). While ANT was originated from the sphere of sociology, geographers supplemented on “how the actor-networks that give rise to knowledge, institutions and organizations come to be (and the reason for their success or failure) is also related to a spatiality that is embedded in the actor networks” (Bosco, 2006, p. 139). For example, how specific geographic settings will influence interactions in actor-networks. ANT differs from other approaches on the spatial analysis of networks in geography by theorizing society, nature, and space from a relational perspective; it also provides a framework for analyzing a multiplicity of actants and their fluid interrelationships. ANT focuses on circulations and flows, rather than on hierarchies and categories, or on humans and non-humans (Bosco, 2006).

Treating humans and materials symmetrically, actor-network theorists focus on “how things are ‘stitched together’ across divisions and distinctions” (Murdoch, 1997, p. 322). Some human geographers, for example, apply ANT to investigate the interrelations between humans

Download English Version:

<https://daneshyari.com/en/article/11005353>

Download Persian Version:

<https://daneshyari.com/article/11005353>

[Daneshyari.com](https://daneshyari.com)