Based on the authors’ long-term field research on low-skilled labor migration from China and Indonesia, this article establishes that more than ever labor migration is intensively mediated. Migration infrastructure – the systematically interlinked technologies, institutions, and actors that facilitate and condition mobility – serves as a concept to unpack the process of mediation. Migration can be more clearly conceptualized through a focus on infrastructure rather than on state policies, the labor market, or migrant social networks alone. The article also points to a trend of “infrastructural involution,” in which the interplay between different dimensions of migration infrastructure make it self-perpetuating and self-serving, and impedes rather than enhances people’s migratory capability. This explains why labor migration has become both more accessible and more cumbersome in many parts of Asia since the late 1990s. The notion of migration infrastructure calls for research that is less fixated on migration as behavior or migrants as the primary subject, and more concerned with broader societal transformations.

INTRODUCTION

A puzzling development in many parts of Asia since the late 1990s is that international low-skilled labor migration has become both easier and more cumbersome. It is easier since more people have gained legal access to overseas job opportunities, while journeys are quicker and safer. It is more

\[^1\]Some of the key ideas in this article were presented at the workshop on “Migration Infrastructure in Asia and the Middle East” organized by the authors and Brenda Yeoh in Singapore in August 2013. We benefited tremendously from the critically constructive comments from the IMR editorial team. We also thank Ruben Andersson and Mark Johnson for their very valuable inputs.
cumbersome since the social process of migration has become more complicated with the increasing involvement of non-migrant actors and growing numbers of regulations, which has often led to higher migration costs. In China, for instance, until the early 2000s, only state-owned enterprise employees with government permission could work overseas legally. Today, every citizen can do so. At the same time, increasing numbers of intermediaries pushed up the average cost for working abroad in Japan, Singapore and South Korea – the top three choices for Chinese migrants – from zero in the early 1990s to 8,000 US dollars by 2010, even as the net monthly wage of migrants remained stagnant at 500 dollars over the same period. While China had four recruitment companies that sent out 2,190 workers in 1979 (Zhang, 1999, 206), by 2010, it had about 3,000 licensed recruitment companies that dispatched around 600,000 workers. This represents a 60% decrease of the number of workers sent out by each recruitment company. These figures would be even more striking if branch offices and unlicensed subagents were included.

In Indonesia, a similar tendency is evident. Although wages have generally increased for migrants over time, fees to brokers, particularly informal recruiters of female domestic workers, have increased far more dramatically. Furthermore, the number of licensed recruitment companies and informal brokers has grown significantly since the 1997 Asian economic crisis. In 1995, there were less than 50 licensed recruitment companies that sent approximately 200,000 workers abroad each year, while by 2007, 500 recruitment companies were sending nearly 700,000 workers abroad annually, the vast majority to Malaysia and Saudi Arabia. In other words, licensed recruitment companies grew three times faster than migration.

3The 3,000 recruitment companies included those licensed by the ministries of commerce, labor, transport and health (estimate based on CHICA 2004–2012; Ministry of Labour and Social Security, Center for International Exchanges, 2008; Xia, 2012, 52). From 2010, the Ministry of Commerce was designated as the single authority to oversee land-based labor outmigration and has since cut down the number of licensed labor specialist companies to just below 1,000 in 2014.
4Lindquist’s primary data from fieldwork in Indonesia intermittently from 2007 until 2014. An informal labor broker in Indonesia can make up to 500 US dollars for the recruitment of each female domestic worker.
5The number of Indonesian migrants is from Hugo (2012, 399). The number of recruitment agencies is from unpublished data from the National Agency for the Placement and Protection of Indonesian Migrant Workers (BNP2TKI) in Jakarta.
As Bruno Latour has put it, it is inaccurate to claim that an airplane or a pilot flies. “Flying is a property of the whole association of entities that includes airports and planes, launch pads and ticket counters. B-52s do not fly, the U.S. Air Force flies” (Latour, 1999, 182). Following this logic, it is not migrants who migrate, but rather constellations consisting of migrants and non-migrants, of human and non-human actors. This is increasingly obvious today, as more than ever before labor migration is intensively mediated. The notion of “migration infrastructure” – the systematically interlinked technologies, institutions, and actors that facilitate and condition mobility – opens up such spaces of mediation to analysis. For analytical purposes, we stipulate five dimensions of migration infrastructure: the commercial (recruitment intermediaries), the regulatory (state apparatus and procedures for documentation, licensing, training and other purposes), the technological (communication and transport), the humanitarian (NGOs and international organizations), and the social (migrant networks). These five dimensions indicate distinct logics of operation rather than discrete domains. For instance, commercial infrastructure functions by interacting with regulatory, humanitarian, social, and technological infrastructures. But in each dimension, the leading actors, the driving forces, the central strategies and rationalities, and the defining modus operandi differ.

The five dimensions collide with and contradict one another, and this deep entanglement is the key to understanding migration infrastructure. In relation to low-skilled international migration from China and Indonesia, this has led to a process of “infrastructural involution” in which migration infrastructure has become self-perpetuating and self-serving.

6For a productive application of this perspective in migration studies, see Chu 2010.
7Larkin (2012) points out that any discussion of infrastructure is a categorical act since the embedded nature of infrastructure means that it is difficult to mark a beginning or an end to its existence. It follows that methodology is contingent and that identifying a methodological approach to migration infrastructure is a theoretical problem (theoretical problem., 338).
8Geertz (1963) famously developed the concept of “agricultural involution” to refer to how the intensification of labor inputs in agriculture increased total production, but not per capita output, thus leading to rural stagnation. Duara (1987, 1988) characterized the building of the modern Chinese state after the collapse of the Qing dynasty and before the establishment of the People’s Republic as “state involution.” Unable to increasing its administrative efficiency and its ability of social mobilization, the modernizing state relied on political brokerage to extract additional resources while in fact losing control over them.
The development of migration infrastructure has turned migration into an object of intensive regulation, commodification and intervention, but has not necessarily enhanced people’s migratory capability in terms of making independent decisions, exploring new paths, and cultivating transnational social relations. The volume and frequency of migration has not increased in proportion to the amount of resources and energy being absorbed in the process of migration. It is in this process that we can understand the paradox of increasing levels of freedom and complication.

The intensification of mediation and infrastructural involution can be attributed to a dual development in the broader political economy: an increasing level of mobility due to the extension of market forces and the enhancement of state regulatory capacity. Migration infrastructure is particularly evident in Asia because both developments have acquired strong momentum in the region. Governments of both migrant-sending and migrant-receiving countries promote temporary labor migration that is placed under increasingly sophisticated regulations (Xiang, 2013a). In receiving countries, migration infrastructure in relation to low-skilled migration confines migrants to employers, prevents settlement, and enforces return (Xiang, 2012, 2013b; Lindquist, 2013). In Asia and the Middle East there is a tendency to concentrate migration infrastructure on the sending side. Not only is migration infrastructure less elaborate on the receiving side, but it also increasingly relies on the sending side to achieve its goals, for instance through health certification and pre-departure training. This makes cases like Indonesia and China particularly important.

DATA AND METHODS

By proposing the concept of migration infrastructure, we are not introducing a new subject of study, but are rather calling for a new way of seeing and thinking about migration. Rather than aiming to define aggregate

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9 A report by International Labour Office (2006) pointed out this phenomenon in Asia, but primarily attributed it to commercial intermediaries.

10 The sending countries that have had a strong development of migration infrastructure include the Philippines (Rodriguez, 2010), Sri Lanka (Frantz, 2011), Bangladesh (Rahman, 2011), and to a lesser degree Vietnam (Belanger and Wang, 2013), which are all characterized by pro-migration policies and active regulation in the field of outmigration. Myanmar and Afghanistan represent two extremes where migration infrastructure is least developed, the former due to the lack of free migration and the latter the lack of functional administration.
patterns of migration as observed from afar, we delve into the internal dynamics of migration infrastructure and the practices of multiple actors in the actual process of migration in order to explain why migration has become both freer and harder. In doing so we rely on our primary, ethnographic data gained from long-term field research in Liaoning province in northeast China (a total of eleven months between 2004 and 2008, and 2011) and on the island of Lombok in Indonesia (eight months between 2007 and 2014). Liaoning Province emerged as a new emigration place in the 1990s amidst massive labor layoffs resulting from the privatization of state-owned enterprises that escalated in 1998. Lombok is a major sending area for male palm oil plantation workers to Malaysia, and, more recently, women migrants to Saudi Arabia, which was partially driven by the economic hardships resulting from the 1997 financial crisis.\(^\text{11}\) We have conducted in-depth interviews and participant observation, primarily with commercial recruiters, in sending as well as receiving countries, namely Japan, South Korea (on Chinese migrants), Malaysia (on Indonesians), and Singapore (on both). Approximately 400 informants were interviewed in total. Unless stated otherwise, all information is drawn from the authors’ primary field research.\(^\text{12}\)

The following sections will develop the concept of migration infrastructure in three steps. First, we provide two ethnographic accounts of how infrastructures work from two migrants’ perspectives, a man from China and a woman from Indonesia. Second, based on the observations of what migration infrastructure does to the emerging migration experiences, we present a theoretical discussion addressing what migration infrastructure does conceptually to migration studies. Third, we present an institutional-historical analysis of how the internal evolution of migration


\(^{12}\)Before proceeding we should acknowledge that both China and Indonesia are characterized by domestic migration that dwarfs international migration and that in many ways the two should be considered together. Migration infrastructure, however, is much more developed in the context of international migration. We do not have space to address this issue here, but suffice it to say that questions of sovereignty, citizenship, remittances, and the increasing importance of global media and transnational NGOs are important dimensions in understanding this difference.
infrastructure – particularly infrastructural involution – has shaped labor migration from China and Indonesia.

While it is this common process of involution that has inspired us to develop the concept of migration infrastructure, China and Indonesia’s different trajectories make them productive cases for comparison. Spontaneous migration from the People’s Republic of China did not resume until the 1980s, and the development of outmigration has since been a process of measured liberalization in which increasing mobility is encouraged but subject to nuanced regulation. In contrast, migration from Indonesia, especially to Malaysia, has a long tradition. The main change in recent times, especially since 1997, has been a process of formalization, as spontaneous and generally undocumented mobility has been incorporated into government designated migration channels.

The two countries also differ in the manifestation of migration infrastructure. Labor migration from China is dominated by male construction and manufacturing workers to East Asian countries. In contrast, the majority of Indonesian documented migrants are female domestic workers. Our comparative method not only aims to illustrate differences between the two countries – it must be noted that within each country migration experiences differ depending on occupation, destination country, gender, age, and sending area – but more importantly seeks to explain the differences as a result of a common trend, namely the development of migration infrastructure.

The gender difference is a case in point. Widespread networks and shared religion between predominantly Muslim Indonesia and Malaysia and the Middle East have made Indonesian women desirable domestic workers, as social infrastructure has developed into commercial infrastruc-

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13 No national statistics are available concerning the gender composition of labor migration from China, but internal reports from the Ministry of Labor indicate that women make up less than 30% of the sum total (Bureau of Labor and Social Security, Liaoning Province, 2005; Ministry of Labor and Social Security, Center for International Exchanges, 2005).

14 In 2006, about 80% of Indonesian documented migrants were women, 88% of whom were domestic workers (Hernández-Coss et al., 2008, 8). By 2011, the number of female migrants had dropped to around 65%, which is largely an effect of the current moratorium on sending domestic workers to Saudi Arabia as well the aftereffects of an earlier moratorium to Malaysia. It is very likely that the proportion of female migrants will rise again. See <http://www.bnp2tki.go.id/statistik/statistik-penempatan/6758-penempatan-berdasarkan-jenis-kelamin-2006–2012.html>. Accessed on June 25, 2014.
ture, which in turn has become a site of regulation. China’s isolation after 1949 dismantled similar transnational social infrastructures, while outmigration during the reform period has been closely tied to state-led projects that usually depend on male labor. Furthermore, the Chinese government disallowed women to become domestic workers in countries with shared cultural backgrounds – Singapore, Hong Kong, Taiwan, and Macau – based on the fear that social sensitivities associated with domestic workers in the destination country could complicate the management of other types of migration or even bilateral relations. The fact that Chinese migrants need to finance their migration project upfront has also discouraged women, who still wield much less power than men in making financial decisions and mobilizing resources, especially in rural areas. In contrast, in Indonesia men finance migration prior to departure while women are financed by overseas employers via recruitment companies, and generally experience salary deductions abroad (Lindquist, 2010a).

Due to the cultural anxieties associated with individual female migration (Lindquist, 2009), beginning in the 1980s the Indonesian government set considerably higher recruitment fees for women compared to men for Saudi Arabian employers, which were paid beforehand to ensure a secure migration process (Cremer, 1988, 78). This had the effect of creating higher profits for the recruitment of women while enhancing the recruiter’s ability to finance migration prior to departure. More generally, this facilitated the rapid increase of female migration.

**HOW DOES MIGRATION INFRASTRUCTURE WORK?**

Sun Dianjun, a 27-year old man from Liaoning, started his migration project in 2007 by approaching Old Chen, who had retired from the county government and now worked as a migrant broker. Chen escorted Sun to be registered at Blue Sky, a labor recruitment company in Dalian, the central city of the region. Chen had neither overseas connections, nor a license or office space; he acted as the grassroots “legs” of higher-level intermediaries. Sun knew this but trusted Chen to navigate the necessary procedures.

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15 Interview by Xiang with a department director of the Ministry of Commerce, April 23, 2007, Beijing. In addition to the ban imposed by Beijing, Singapore and Taiwan do not grant visas to domestic worker migrants from mainland China.

16 Saudi Arabia has been an exception, with no salary deductions.
Sun did not have any specific destination in mind. Four months later, a factory job in Singapore became available and Chen accompanied Sun to Blue Sky to sign a service agreement and pay the first installment of 1,000 US dollars. In the following month Blue Sky contacted Sun constantly, either directly or via Chen, to apply for a passport, obtain criminal clearance, authenticate education certificates and skill recognition by a notary public, and arrange a medical check-up.

When Sun’s work permit application was approved by the Singapore government Sun had to pay more than 5,000 US dollars in intermediary fees (including airfare) plus a 3,300 US dollar security bond. The security bond would be refunded upon return from Singapore after completion of his 3-year contract. Sun had earlier sold the house he had inherited from the parents in the countryside for 4,500 US dollars and his wife’s food stall in the county seat for 3,000 dollars.

Only at this stage did Sun realize that Blue Sky did not have direct access to Singapore employers, but relied on the state-owned enterprise World Journey, which was among the 50 companies jointly authorized by the Chinese and Singaporean governments to recruit workers from China to Singapore. Companies like World Journey are called “windows” both formally and in official documents — all legal international labor migration must go through them — but are unwilling to deal with individual migrants, and instead rely on “legs” like Chen. Sun was pleased by the speed of the process, as it was common to migrate through lengthy chains of intermediaries.

Together with a group of migrants Sun was driven to the airport by Blue Sky’s manager, who handed out passports, employment contracts, and “Promise Letters” listing prohibited activities ranging from spitting to striking, the breaching of which could lead to the confiscation of the security bond. Sun signed the contracts and letters immediately as there was no time to read through them. Upon arrival in Singapore, the migrants changed into purple shirts distributed by Blue Sky. Airport staff recognized the uniform and escorted them to the waiting driver of the Singapore recruitment company, Dragon and Horse.

Two months later, Sun decided to return to China. Blue Sky had promised that he would work overtime and make more than his standard 500 US dollars monthly salary. But the factory had no overtime work, which meant that it would be impossible to recover his fees in Three years. On the same morning, Sun submitted his resignation letter, Dragon and Horse moved him to its own housing while cancelling his
work permit and arranging a return ticket, which Sun had to pay since he terminated his contract prematurely. Sun went straight to Blue Sky from the airport in Dalian, where his security bond was released, but the intermediary fees were withheld. Of the 6,000 US dollars paid by Sun, Blue Sky had kept 3,200 as a service fee and to cover costs such as documents and airfare, paid Old Chen 300 US dollars and World Journey 2,500.

Migration from Lombok, Indonesia, similarly consists of myriad processes, rules and actors. Putri, divorced and in her mid-twenties, is the primary caregiver for two young children. In 2009, Sari, a neighbor and successful migrant-turned broker, introduced Putri to her uncle, Pak Adi, an informal petugas lapangan, or “field agent,” who recruits prospective migrants and delivers them to licensed recruitment companies. Pak Adi lives 20 km from Putri near the island’s main road and is a well-respected low-level bureaucrat in the regency capital. He and Sari courted Putri through home visits and frequent text messages, pointing out that she would not only make more than 200 US dollars per month as a domestic worker in Saudi Arabia, but also learn Arabic and perhaps even be invited by her employer to do the Umrah, the “minor pilgrimage” to Mecca, both accorded high status on predominantly Muslim Lombok. After Pak Adi gave her and her parents 100 dollars in “shopping money” (uang belanja) Putri was convinced and agreed to go to Saudi Arabia on a two-year contract.

With the process in motion, over the course of a month Putri was interviewed, registered, and examined as a prospective migrant. Sari helped her get a formal letter of permission from her parents and a so-called family card (Kartu Keluarga), both via the village head, while Pak Adi escorted her by motorcycle to the branch office of a Jakarta-based recruitment company in Lombok’s commercial center, Mataram, where she was interviewed and then medically examined, including a pregnancy test, at a registered clinic for migrants to Saudi Arabia.\footnote{These clinics are approved by the Gulf Cooperation Council Approved Medical Centers Association (GAMCA) in collaboration with the Department of Health in the sending country. For a critical commentary on GAMCA, see: \textless http://www.migrant-rights.org/research/gamca-controversy-update/\textgreater . Accessed on June 25, 2014.} In the following weeks, Pak Adi accompanied her to government offices in East Lombok to get a birth certificate and identity card, before registering her at the office of the Department of Manpower (Dinas Tenaga Kerja), where she
was interviewed by an official and given a letter of permission to make a special Indonesian migrant worker passport (*paspor TKI*).

After saying goodbye to her children and parents, Putri was taken to live at the office of the local recruitment company. After a second pregnancy test, she was given a contraceptive shot – pregnancy entails termination of the migration process at any stage – before travelling to the recruitment companies’ training center in Jakarta by airplane with Pak Adi and three other prospective migrants. Together with more than 100 women, she spent three months learning Arabic and culturally specific forms of cooking, childcare, and general behavior. From Jakarta, she was put on an airplane to Riyadh with around 50 other women. Upon arrival, she was taken to a local labor agency and then to her employer, a family with three children.

Putri returned home two years later with nearly 3000 US dollars upon completion of her contract. The *kafala*, or sponsorship system, which links migrants to a specific employer in Saudi Arabia and other Gulf States (Gardner, 2010), strictly limited her mobility according to her employer’s preferences, who also kept her passport from arrival until she was checked in for the flight home. Upon landing in Jakarta, Putri was diverted to a special migrant terminal designated for returning female low-skilled workers. There she was interviewed and registered by government officials and her migration experience assessed by the International Organization for Migration’s (IOM) counter-trafficking unit. Even though she was classified as a “migrant without problems,” she was not allowed to leave the terminal on her own and was compelled to purchase a special bus ticket back to her home village.

In contrast to research that has focused on the borders between nation-states as the primary site for the regulation of migration (Andreas and Snyder, 2000), these accounts shift attention towards more expansive forms of mediation and infrastructure. Both Sun and Putri were escorted and encapsulated from the beginning until the end of the migration circuit. In fact, it is clear from the accounts that we cannot understand how migrants move unless we examine how they are moved by others, including brokers, bureaucrats, transport companies, medical clinics, and international organizations. Their mobilities were conditioned by the transfer of documents, data, and money between actors, and especially through

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18 For more detailed discussion of the importance of migration brokers in Asia, see Lindquist, Xiang, and Yeoh, 2012.
the collusion between state regulation and commercial intermediaries. Sun’s security bond and Putri’s compulsory bus trip, for example, were important in shaping their journeys because these are sites where the intersections between the regulatory and commercial dimensions of migration infrastructure are particularly notable.

WHAT DOES MIGRATION INFRASTRUCTURE DO?

It is not entirely new to conceptualize migration as a social process that organizes and channels mobility rather than in terms of mobility per se. Migration cannot “be described without attention to the necessary spatial, infrastructural moorings that configure and enable mobilities” (Hannam, Sheller, and Urry, 2006). But how is “migration infrastructure” different from “migration system”? What can we gain by reconceptualizing migration industry as commercial infrastructure, migration apparatus as regulatory infrastructure, NGOs and international organizations in terms of humanitarian infrastructure, and finally migrant networks as social infrastructure?

Migration systems theory approaches migration as part of two-way flows of people, goods, and ideas between particular places, and stresses that migration will change the conditions of the sending and receiving places and the connections between them, thus altering the migration flow itself (Mabogunje, 1970). But migration does not always form a “system.” The tendency to reify “system” impedes proper appreciation of the diverse and sometimes unstable patterns of migration, and thus explains why the theory has not progressed far since the early 1990s (see King, 2002).

Migration infrastructure draws inspiration from a processual perspective that conceptualizes migration as multi-directional and self-adjusting movements, but shifts focus away from how migration behavior becomes stabilized to how migration is mediated. Migration flows can be fragmented and short-lived, but infrastructure retains a particular stability and coherence. In other words, we are interested in the internal constitution and modular components of migration rather than in a bounded system. This also distinguishes migration infrastructure from the emerging concept of “mobility regime” that focuses on how mobility is structured by, and in turn becomes part of, hegemonic power relations (Koslowski, 2011; Glick Schiller and Salazar, 2013).

“It is not people who migrate but networks” (Tilly, 1990, 79). The migrant network has been widely regarded as the single most useful
variable in migration studies (e.g., Arango, 2004). Instead of describing how migration becomes self-sustaining through networks, migration infrastructure inverts this perspective and seeks to examine how networks work by serving as part of migration infrastructure. Migrant networks between China and Southeast Asia have formed the basis of the China-centric East Asian system since the sixteenth century. These networks sustained cross-region exchanges when China was itself in turmoil, were adapted by European powers for their colonial agendas, and in turn served as a counterforce resisting colonial penetration (Hamashita, 2013). Networks are thus modular and can be copied, extended and adapted, yet need to be enacted in interactions with other social forces. It is by examining these infrastructural properties that we can productively explore the explanatory power of migrant networks, or what we call social infrastructure. From a different perspective, Simone highlights “people as infrastructure” as a “flexible configuration” (2004, 410–411) that emerges in places in which physical infrastructure is lacking and inexpensive labor is abundant (see also Elyachar, 2010). In these cases, the social directly takes an infrastructural form.

The notion of “migration industry” calls attention to the services that facilitate migration rather than the migrants themselves (Hernández-Léon, 2008, 154). The recent effort to broaden the scope of the migration industry by including actors who “control” and “rescue” migrants (Sørensen and Gammeltoft-Hansen, 2013; Andersson, 2014) brings the concept even closer to migration infrastructure. But migration industry primarily constructs migration as a form of business and pays less attention to the fact that migration brokers are not simply selling opportunities for migrating overseas, but are also dealing with various components of infrastructure – such as collecting documents, organizing medical tests, or dealing with pre-departure training – which have far-reaching regulatory effects.19

Regulatory infrastructure is closely related to “migration apparatus,” which Feldman (2011, 6) defines as the disparate institutions, policies and discourses that turn migration into a “static policy object.” Like the notion of apparatus, migration infrastructure emphasizes operational processes rather than end-oriented intentions. But unlike apparatus, which

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19The same point can be made of “migrant institution,” which Goss and Lindquist (1995) developed as a middle-range concept preferable to household or social network. The concept of migration infrastructure seeks to foreground the infrastructural elements that are implied in such concepts as industry, institution and networks.
focuses on governmental operations and policymakers, infrastructure includes a broader array of actors. The standard delegation of visa processing to private agencies, the outsourcing of migration control to civilians and employers as in the kafala system, and, in the context of deportation, the increasing involvement of contractual relations between states, on the one hand, and the IOM or private “security companies,” on the other (Xiang, 2013b), all testify to the increasing importance of non-governmental actors in the regulation of migration. Regulatory infrastructure—particularly reliable data registration systems—is also deemed important for the purpose of protecting migrants’ rights, as the illegal and undocumented appear unadministerable and thus unprotectable (Global Commission of International Migration (GCIM), 2005).

This leads to humanitarian infrastructure, in which mass media, international organizations, and NGOs play important roles that are related to one another in practice through funding circuits and transnational advocacy networks (Keck and Sikkink, 1998), and more generally through the circulation of human rights norms and images and discourses of suffering (Lindquist, 2010b).20 The importance of mass media in generating broad responses to abuses against migrants is increasingly obvious. While humanitarian programs are generally treated separately from, and often as antagonistic to, government and commercial actors, in reality NGOs have come to shape migration through active policy interventions and public advocacy and are critical to the transnational humanitarian infrastructure, that is, central to the post-Cold War global order. The close alliance between the U.S. government and NGOs worldwide in the struggle against human trafficking is a case in point, as is the 2006 End Human Trafficking Now campaign in which the ManpowerGroup, one of the largest global human resource recruitment companies, was the first signatory of the Athens Ethical Principles that aimed to establish a framework for businesses to combat human trafficking. Ironically, international pressure for rights protections directly encouraged the development of a migration industry in China. Until the middle of the 1990s employers in

20 Although humanitarianism and human rights follow from two different lineages and landmark events—the founding of the Red Cross and the Universal Declaration of Human Rights following World War II, respectively (Bornstein and Redfield, 2011, 5–6)—both seek to improve the human condition and have in many ways come to reinforce one another in recent decades, particularly with the rise of NGOs. Counter-trafficking and human rights protection have emerged as the two pillars of migration-related humanitarian infrastructure in recent decades.
the Middle East covered all the costs including recruitment fees for migrants, which was then deducted from the migrant’s salary upon arrival. When wage deduction was condemned as a human rights violation, migrants had to pay all costs prior to departure.

Perhaps the most obvious element of migration infrastructure is the technological. Most notably, ICT (information and communications technology) has not only revolutionized communication between migrants (Madianou and Miller, 2011), but also come to facilitate the recruitment of migrants, as in the case of Putri. It should thus not be taken for granted that ICT necessarily empowers migrants. Furthermore, the deregulation of the airline industry in Asia has significantly altered the transport of low-skilled migrants. The development of regulatory infrastructure, for instance the externalization of border control, is also to a great extent reliant on new technologies. The dramatic growth of biometric identifiers, systems of data storage, and the exchange of this data on an international scale, points to the rise of regulatory infrastructures that both aim to facilitate mobility and intensify control, even if their actual effects on migrants must be carefully considered in context (Lyon, 2008). It is thus by interacting with other components that technological infrastructure becomes particularly consequential.

Each of the five dimensions of migration infrastructure must be considered together. This perspective is not meant to be comprehensive—this would be the least of our desires—but rather to foreground intersectionality as an operational logic of how migration is actually constituted. We are thus less concerned with the external contour of migration and migration infrastructure—identifying a beginning and end—than with the internal workings. The primary value of the concept lies with its sharpness, not its breadth. In comparison to the feminist concept of intersectionality (e.g., Crenshaw, 1991), which considers the effects of intersections between systems of power on individual lives, our foregrounding of intersectionality identifies particular sites where different logics of actions collide with and contradict one another, and where we therefore may witness new modes of operation in the process of migration.

For an impressive account of the impacts of technological infrastructural developments on human mobilities, see Urry, 2007, chapter 1.

In this context, it is important to be attentive to development of logistics in the movement of migrant labor (Neilson, 2012).
**INFRASTRUCTURAL INVOLUTION**

Migration infrastructure should be examined not only synchronically with full attention to the connections across dimensions, but also diachronically as a process of evolution. Over the last two decades, in the labor migration infrastructure in China and Indonesia, the growth of one dimension has led to the growth of another, thus creating a self-reinforcing mechanism. This is particularly true in the relation between the regulatory and the commercial, as evidenced by the experiences of Sun and Putri. Furthermore, the growth of regulatory and commercial infrastructure has been intensive (e.g., by introducing increasingly detailed medical examinations and specialized training of would-be migrants) rather than extensive (enlarging the population base of migrants or broadening the scope of destinations).  

The intensification of migration infrastructure has not generated new capacities for migration. We call this infrastructural involution.

**China: Regulation Through Liberalization**

Migration infrastructure hardly existed in China when outmigration started as part of state-organized overseas projects at the end of the 1970s. Throughout the 1980s, the government selected workers from state-owned work units to dispatch overseas. In practice some government departments and work units charged the workers money. The problems became obvious in the late 1990s: inefficiency, nepotism, corruption, and irregular migration. The policy consensus in the 1990s was that migration must be made freer. Nearly twenty administrative procedures in passport application were cut-out, and by 2005, most urban residents were able to...

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23 As an example of intensification, pre-departure training has become increasingly common for low-skilled migrants, particularly women, which takes up time, money and labor (for the Philippines, see Rodriguez (2010, chapter 2), for Indonesia, see Killias (2012, chapter 4), for Sri Lanka, see Frantz (2011, chapter 3)). The limit of the expansive trend can be illustrated by the scope of destinations. In the case of Indonesia, Malaysia and Saudi Arabia predominate since the 1980s; in the case of China, Asia accounts for more than 70% of all low-skilled labor migrants since the mid-1990s, and the top destinations remain unchanged.

24 In the late 1980s, a large state-owned company set up by relatives of senior party cadres was known among political and business elite as the “leading human smuggler.” Xiang interview with a former staff of the company, 23 July 2007, Shenyang.
apply for a passport by presenting their identity cards. The Passport Law, effective from January 2007, enshrined every citizen’s legal entitlement to possess a passport. In 2002, private companies were allowed to export labor, and public and government institutions were banned from the business in order to maintain the integrity of both the market and regulation. The annual outflow of labor migrants increased from 253,000 in 2000 (China International Contractor Association (CHICA), 2004–2012; 10) to 527,000 in 2013 (Ministry of Commerce, 2014).

Liberalization removed the state from direct control over recruitment, but enhanced its overall regulatory capacity. The previous system of passport application, for example, required every citizen to obtain political approval from the work unit or local government officials, thus putting everyone under strict scrutiny, but in a decentralized and scattered manner. The procedural simplification effectively centralized regulation. Decisions are now made according to a single set of criteria instead of subjective assessment, and data are administered in unified manner. This was made possible through the establishment of a nationwide computer data system of identification and especially criminal clearance, which constitutes a critical part of regulatory infrastructure. With regard to recruitment companies, the government set a high bar for issuing licenses. Companies had to pay a minimum of 60,000 US dollars to a designated bank account as security, hire staff with work experience in international relations and career development, and appoint their legal representatives overseas (Ministry of Labor and Social Security, Ministry of Public Security, State Administration for Industry and Commerce, 2002).

The regulatory and the commercial infrastructure had so far expanded hand in hand, namely the government developed regulatory infrastructure while requiring commercial companies to strengthen managerial capacity. Government consciously attempted to govern migration through commercial infrastructure, turning companies into its functioning “arms.” This co-evolution, however, soon developed into competition in which the regulatory and commercial infrastructure strove to outpace each other in order to ensure their respective core interest: order for the former and profit for the latter.

The competition started with the emergence of hierarchically linked chains of recruitment, as we witnessed in Sun’s case, which constituted the core of commercial infrastructure since the early 2000s. The involvement of multiple intermediaries not only pushed up costs, but also increased disputes both in China and overseas, either due to inadequate
coordination among brokers or deliberate misinformation by some brokers in the chain. In response the Ministry of Labor and the Ministry of Commerce tightened regulation from 2005. First, the criteria for licensing was raised. The required minimum security deposit was raised over the years to 500,000 US dollars in 2012 (State Council, People’s Republic of China’s, 2012). Second, the provincial government was tasked to develop elaborate mechanisms, including data reporting systems, approval procedures, and regular meetings, to monitor the companies’ recruitment procedures. Third, and most importantly, window companies were held responsible for disputes and were punishable, including being delicensed, for irregularities in the recruitment process that took place in their names.

This unintentionally complicated the commercial infrastructure. It reinforced the monopoly position of the windows because it was more difficult for small companies to circumvent windows. Furthermore, the windows passed liability downward and held the lower levels of brokers responsible in cases of dispute overseas, which was the reason for the creation of the security bond. In some cases, windows and legs worked together to introduce the disciplinary method of lianzuo, or “linked seats,” that collectively punished groups of migrants – who may previously not have known each other – because of the misbehavior of one individual. For enforcement, the brokers had to work with local government. Thus, both migrants’ social networks and local regulatory infrastructure were turned into disciplinary devices of commercial brokers.

In 2010, the Ministry of Commerce launched a campaign to set up “labor service platforms” at the county level, and by the end of 2012, there were 168 such platforms across the country (Wen, 2013, 9). The platforms are networks of government departments coordinated by a specially created government agency, which have direct access to the labor force and to window companies, and are thus able to process the entire recruitment procedure. In other words, it aims to create a new regulatory infrastructure to “flatten” the multi-layered commercial infrastructure. The outcome of this reform remains to be seen, but it is clear that the interplay between the commercial and regulatory infrastructure has been the central thrust of the change.

**Indonesia: Formalization and Incorporation**

Prior to the 1980s, international migration from Indonesia was largely organized through migrant networks and commercial brokers. Migration
to neighboring Malaysia, in particular, has deep historical roots and was largely male and undocumented, organized by *tai kong*, or smugglers, who controlled the migration process and social infrastructures (Spaan, 1994; Jones, 2000). International documented migration became an explicit dimension of national development with the rise of largely female migration to the Middle Eastern oil economies during the 1980s (Cremer, 1988). In response to the growth of private recruitment companies, regulatory infrastructures expanded, notably with the creation of the Centre of Overseas Employment (Pusat AKAN) within the Department of Manpower in 1984 (Spaan, 1999, 158–159).

The 1997 Asian economic crisis was a watershed, as the collapse of the Indonesian rupiah led to the increase of both the number and proportion of documented migrants.\(^{25}\) The liberalization of the economy after the fall of Suharto led to a dramatic growth in labor recruitment companies in tandem with an expanding migration bureaucracy, as highly publicized mass deportations from Malaysia led many to turn to documented migration. Recurring abuses against female domestic workers abroad, and the widely acknowledged extortion of returning migrants—all in the context of an increasingly vibrant civil society—led to an intensifying focus on the “protection” (*perlindungan*) of migrants. For instance, as in the case of Putri, a specified migrant reception terminal at Jakarta international airport opened in August 1999 (Silvey, 2007).

These infrastructural developments have intensified. In 2006, the National Agency for the Placement and Protection of Indonesian Migrant Workers (Badan Nasional Penempatan dan Perlindungan Tenaga Kerja Indonesia, BNP2TKI) was created to coordinate government activities, both on the national and provincial levels, thus further expanding the regulatory infrastructure. As of 2013, there were 546 licensed recruitment companies with approximately 4,000 branch offices around the country, as well as an inestimable number of “field agents” such as Pak Adi, who handle the actual recruitment of migrants.\(^{26}\) Each recruitment company

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\(^{25}\) See Hugo (2012, 399) for the increase in documented migration. There is no data on the drop in undocumented migration, but on-going fieldwork in migrant-sending areas, in tandem with Malaysian deportation programs point to a significant drop in undocumented migration (e.g., Chin, 2008; Lindquist, 2010a).

\(^{26}\) Lindquist interview with office manager at the head office of APJATI, the Indonesian Manpower Services Association (Asosiasi Jasa Tenaga Kerja Indonesia), in Jakarta, June 4, 2014. Of the 546 licensed companies, 461 were members of APJATI, and these had a total of 3,227 licensed branch offices.
must pay a 50,000 US dollar cash bond for licensing and is bound to specific procedures, for instance, a strict process of documentation and compulsory pre-departure training, which increasingly has come to integrate commercial and regulatory infrastructures, not least on the provincial level where most recruitment takes place. Processes of delicensing have also become increasingly common.

BNP2TKI’s contradictory role in both promoting migration and protecting migrants suggests – as noted above – that the expansion of a gendered humanitarian infrastructure should be understood in relation to, rather than in contrast to, commercial and regulatory infrastructures (Rudnyckyj, 2004), particularly with regard to the significant profits for the recruitment of female domestic servants. The differential treatment of men and women is evident in the context of regulation; for instance, there are higher minimum ages for women who work as domestic servants than for men, and intermittent moratoriums to sending countries such as Malaysia and Saudi Arabia focus exclusively on domestic workers. The concern with “protection,” which is written into government directives (Kloppenburg, 2013), offers an obvious link to the rise of a humanitarian infrastructure after the fall of Suharto. Furthermore, the IOM has a counter-trafficking office at the migrant reception terminal at the Jakarta airport, which almost exclusively handles women, while reception terminals have opened at other airports across the country, and a reception and return program has been developed to deal with the largely male deportees from Malaysia (Lindquist, 2013).

Most striking in the process of infrastructural involution, however, is the rise of the unlicensed petugas lapangan, meaning field agent, or PL for short, who recruits and delivers migrants to licensed agencies – akin to the Chinese “legs” – and in an important sense has replaced the tai kong of the earlier era (Lindquist, 2012). Although in some cases former tai kong have become PL, the primary differences between the two are that while tai kong escorted undocumented migrants across great distances, PL work within a more constricted space, delivering migrants to local recruitment companies while dealing with government paperwork.

In order for a villager to become a migrant, there is an extensive process of documentation. The language associated with documents – tembak, to shoot, or jalan tol, toll road, for instance – points to the extra costs

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27The Philippine Overseas Employment Administration, founded in 1982, was also created with a similar dual function (Goss and Lindquist, 2000, 396).
involved in accessing documents quickly. The road metaphor is apt since
the process of documentation entails that the PL escorts prospective
migrants to government offices and spends time waiting for documents to
be produced. Great distances, bad roads, and lack of public transportation
make mobility arduous and expensive in many areas. This means that
transport, money, food, cigarettes, and cell phone credit must be in good
supply for the PL.

In contexts in which physical infrastructures are lacking or inadequate
– as in Simone’s (2004) discussion of “people as infrastructure” – PL are
located at the heart of a socio-technical constellation that sets migrants in
motion through escort. Despite the ubiquity of cell phones and that most
migrants now travel directly by airplane rather than overland, it is the
movement of migrants to the urban-based recruitment company prior to
departure that is the main logistical problem; thus in the space between
rural and urban areas different brokers temporarily collaborate. In this pro-
cess, PL – particularly those who are most successful and considered reli-
able by recruitment companies – are able to control capital, documents,
and the migrants themselves, generally without having direct access to for-
eign markets. As in the case of the Chinese “legs”, much of this power is
based on relations of trust or social proximity with prospective migrants.

The PL is at the center of current regulatory reform. Since 2012,
BNP2TKI in collaboration with APJATI, the Indonesian Manpower
Services Association (Asosiasi Jasa Tenaga Kerja Indonesia), the national
organization for licensed recruitment companies, has initiated a govern-
ment-controlled licensing system for PL, who are to be registered in a data-
base using biometric technology, in effect a radical attempt to formalize the
informal. While previously PL were able to control migrants and corre-
sponding documents until departure, thus allowing them to move migrants
between recruitment companies, the licensing program connects prospec-
tive migrants to a specific PL at the initial stage of the migration process.
This ideally allows recruitment companies and government agencies to
regain control over the recruitment process and profits. More generally, this
is part of BNP2TKI’s broader attempt to create a migrant labor database
based on biometric technology in an ongoing shift to e-governance.
Although the actual effects of these changes are as yet unclear, they signal a
further step in the process of infrastructural involution.

The Chinese and the Indonesian cases represent two trajectories of
infrastructural involution. In China, both regulatory and commercial
infrastructures have expanded outward and downward, from the center to
the periphery, from Beijing to localities. In Indonesia, the involution partly manifests itself through the incorporation of previously existing social networks and informal brokers into the formal commercial and regulatory infrastructure, as well as humanitarian infrastructure that monitors the mobility of migrants. What the two cases have in common is the mutually reinforcing relation between different dimensions of migration infrastructure.

It is also striking that mediation processes are concentrated in the sending countries and especially at the local level, as evidenced by the activities of the “legs” and PLs. These brokers not only bridge the existing demand for migration and supply of jobs. The demand for migration, as we see in Putri’s case, is often actively cultivated. In China, increasing costs, stagnant migrants’ wages, and the strict age limit set by employers have compelled brokers to mobilize workers in the poor and remote countryside. At the same time, brokers help arrange loans to finance migration, for instance, by tapping into the poverty alleviation fund of the local government in China. In this context, the apparent increase in the demand for migration was not a consequence of the development of the migration industry, but was created by commercial infrastructure. Furthermore, the enlargement of the outmigration pool did not cause the rise of the cost of migration, but both were rather the result of the development of migration infrastructure.

CONCLUSION

We have demonstrated that low-skilled labor migration from China and Indonesia is more intensively mediated than before. Migration should not be imagined as a line between two places, but rather as a multi-faceted space of mediation occupied by commercial recruitment intermediaries – large and small, formal and informal – bureaucrats, NGOs, migrants, and technologies. It is in this space that migration acquires its particular forms and meanings. We propose the notion of migration infrastructure to unpack this space. Migration infrastructure is both an analytical perspective that reconceptualizes what is already known, and a methodological tool that renders visible what was previously hidden. It represents a new way of describing and analyzing migration in the face of a changing empirical reality. Labor migration is not what it used to be: migrants enjoy safer journeys and fewer injuries, but have to shoulder higher financial burdens; they face less physical risks, but are more socially
constrained. The double-edged sword of “protection” further comes to intensify various forms of mediation. These changes in the internal composition of migration – how migration as a social process is constituted from within – require new methods of collecting new types of data.

Migration infrastructure urges us to collect information at two levels simultaneously. First, we need to examine migration as quotidian and processual operations: how, for instance, a form is designed, handed out, filled out by whom on whose behalf, how it travels, and comes to shape migration and its relation to other dimensions of social life (cf. Hull, 2012). Migration is determined neither by autonomous markets, policy logic, nor according to individual migrant agency, but is rather constituted by a multitude of activities, practices, and technologies that must be considered in specific contexts. Migration infrastructure provides a framework that offers analytical order to these activities without assigning them to pre-given categories.

Second, we need to think relationally across the commercial, the regulatory, the social, the humanitarian, and the technological. Infrastructure is ecological and relational (Star, 1999), and should be construed as a socio-technical constellation (see also Larkin, 2013). This needs to be done both synchronically and diachronically. We delineate the process of infrastructural involution – the intensification of migration infrastructure that does not expand people’s migratory capabilities – as an example of how the interplay between different aspects of migration infrastructure becomes a central force in conditioning migration flows. This explains the phenomenon that low-skilled labor has become both more accessible and more complicated in China and Indonesia.

Migration infrastructure is applicable to other regions though it is likely to assume different configurations in each context. Migration between “Fortress Europe” and African sending countries, for instance, could well be reconceptualized not primarily in terms of the flow of migrants across the Mediterranean, or the material production of the border dividing them, but more broadly through the creation of infrastructural forms that follow from the export of funding, technology, training, expertise from Europe, often under the guise of development aid (Anderson, 2014; see also Feldman, 2011). Once we focus less on the movement of migrants and more on how they are moved by others, it becomes apparent that Europe is not passively receiving a supposedly unstoppable human tide, but is actively reconfiguring regional relations through migration infrastructure. Migration infrastructure as an analytical perspective
will thus shed important light on how new geopolitics emerges in the process of migration (e.g., Thiollet, 2011; Natter, 2013).

Migration infrastructure not only explains migration as a result of larger forces, but also seeks to explain broader social processes through migration as an analytical lens. Detailed examination of the internal working of migration infrastructure is meant to reveal how social changes such as state-led market-oriented Chinese reform and post-Suharto economic and political transformation in Indonesia are taking place on the ground, each following multiple logics and rationalities simultaneously. Future research that compares different configurations and dynamics of migration infrastructure (e.g., by testing how applicable infrastructural involution is across contexts), refines the statistical and ethnographic measurements about the intensification of mediation, and explains the uneven distribution of migration infrastructure across space and scales, may well help develop migration studies into a field where new insights into general social change emerge.

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