



# Disarticulating distribution: Labor segmentation and subcontracting in global logistics



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## ABSTRACT

An enduring focus of scholarly work on global production networks (GPNs) is the process of insertion into production networks and the capacity of places to shape their manner of inclusion. Sometimes overlooked are ways in which these insertions are based on an evolving set of exclusions. A disarticulations perspective trains our attention on the mutual interplay between moments of inclusion and exclusion that produce uneven geographies and histories of development, foregrounding place-specific factors and offering a framework for understanding local experimentation. Firms continue to restructure under relentless pressure to improve performance and the concomitant need to experiment, causing firm strategy to shape-shift and re-making relations of inclusion and exclusion. In the distribution function of global supply chains, the prevailing value-creation strategy is downward pressure on the cost of labor, but this perhaps suggests a false sense of stability. Using data gathered in the distribution hub just outside of Chicago, I examine the role of labor market intermediaries in re-negotiating the boundaries of inclusion. This article explores processes of linking and delinking subsets of workers and the differential implications for worker segments and their attachment to the supply chain. Inscribed in the absorption of places and workers into GPNs are ongoing processes of disarticulation, evident in this case through the labor market strategies pursued by local firms and temporary staffing agencies. These processes lay bare the mechanisms that reproduce capital-labor relationships in global supply chains.

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## Introduction

Drive southwest from Chicago, Illinois on Interstate 55 and you are traveling on a thick artery of the circulatory system of capital. Trucks clog the right lanes of the highway, shipping containers are stacked five and six high in empty lots, and a couple dozen miles outside the city limits the landscape gives way to massive concrete distribution centers – windowless boxes with freight trucks stuck into their sides. Beyond the warehouses lie sprawling rail spurs and intermodal facilities, with awkward-looking cranes moving containers from trains to trucks in a growing logistics cluster in exurban Will County. The circulation of goods through Will County requires an extensive infrastructure that has transformed the corn-field landscape: swathes of new rail spurs, acres of warehouse buildings, truck routes, intersections, intermodal cranes, and sewers. But distribution also demands a far less visible infrastructure, one that organizes a local labor pool and compels workers into the largely contingent, low wage, manual jobs inside warehouses. Workers are absorbed into many different supply chains as they come to ground in Will County but, as I discuss in this article,

the incorporation of workers into global production networks is an experimental and uneven process, reflecting a dialectic of inclusion and exclusion.

The global production network (GPN) approach frames supply chains as a set of power relations and productive processes that touch down in space and produce “observable patterns in the global economy” (Dicken, 2011). This approach has provided a framework with which to analyze webs of relationships, economic and social, that connect goods from their points of production to their points of sale. In the extensive literature on GPNs, the dynamics of outsourcing have been dissected, particularly in developing countries doing the heavy lifting of goods production, and one “observable pattern” of global capital is the increasing use of labor subcontractors across the supply chain (Barrientos, 2013), a trend well underway in the distribution function. GPN research has rarely possessed an explicit focus on logistics, but the approach nonetheless offers much to those interested in examining the circulation of goods and the ways in which places and people are entangled in supply chain development.

A productive intervention into the GPN framework by Bair and Werner (2011), which they term ‘disarticulations,’ turns our attention toward processes of dispossession that (re)produce uneven

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geographies of development. As [Havice and Campling \(2013, p. 2611\)](#) described it, disarticulations offer “a framework for exploring how things included in, as well as excluded or expelled from, production processes mutually, and often simultaneously, constitute commodity chains.” This article engages with the GPN approach through the emerging disarticulations perspective to examine the organization of work, and the mechanisms through which workers experience inclusion and exclusion, in the distribution function of global supply chains. I consider the role played by temporary staffing agencies in mediating employment relationships involving GPN firms and workers in the U.S., and how they act as arbiters of attachment for segments of workers. Using data collected through a worker survey, diaries kept by workers, and series of interviews with employers, industry analysts and consultants, and workers, the analysis focuses on a central characteristic of work organization in the distribution function: the creation of competitive hierarchies, both between and within temp agencies. A process of disarticulation is made visible and embodied in the labor market through intermediaries that are re-negotiating the boundaries and terms of inclusion in and exclusion from global production networks. This is achieved within a political economy that is integral to the functioning of the local labor market: immigration policy, the criminal justice system, welfare policy, labor law, and markers of social, racial, and ethnic difference, all of which serve to shape the opportunity structures workers encounter in the labor market.

### GPNs and disarticulations

An enduring focus of scholarly work on global production networks is the insertion of firms and sites into networks, and the varying capacity of places to shape their manner of inclusion, often via so-called upgrading. GPN research has usefully trained our attention on the role of governance and processes of value creation and capture, and has raised critical questions about the distribution of the benefits of globalized production. The framework is inherently territorialized, given the concern with where chains “touch down” and the production and capture of value in place. This leads to a focus on a range of spatially-determined relationships between firms, institutions, and actors.

Recent interventions in GPN research aim to draw the nuances of relational development more explicitly into conversation with analyses of global supply chains. [Kelly \(2013\)](#) has argued that, despite its strengths, GPN analysis tends to focus on the opportunities created by industrial development, and not necessarily the distribution of those opportunities and who might be excluded from them. [Bair and Werner \(2011\)](#) offer a kindred critique, arguing that the focus on moments of incorporation into supply chains – an “inclusionary bias” (p. 989) – limits the analytical approach and obscures the ways in which these insertions are related to an evolving set of exclusions. They instead emphasize disarticulations, or how prior waves of investment and disinvestment shape how places are incorporated into the chain in subsequent rounds of capital accumulation, and argue that it is the mutual interplay between moments of inclusion and exclusion that produce uneven geographies of development. Resonant with the feminist commodity chain analysis proposed by [Ramamurthy \(2004\)](#), the disarticulations perspective foregrounds the “contradictory, contingent, and recursive processes of mediation at work as commodity chains are constituted materially and culturally” (p. 764). These processes are produced among linked locales, unfolding in locally-specific ways that defy a teleological account of economic development. Critical engagements with GPNs like these have made room for the grounded struggles and multiple viewpoints that shape the ways globalizations are experienced, linking nodes in a value chain,

not through a unidirectional power dynamic of lead firms cascading through the chain, but through recognition of the multiple, complex sites of value production and circulation.

What Bair and Werner termed an inclusionary bias conjures a second, and related, oversight in much of GPN literature: where are the workers? The GPN framework has been subject to critique on the basis of the peculiar absence of the source of value from network research. Scholars have taken aim at the focus on transaction costs and technomanagement fixes common in commodity chain research, which has obscured the inherently social nature of capital-labor relations ([Werner, 2012](#); [Taylor, 2007](#); [Rainnie et al., 2013](#)); while others have argued for a stronger conceptualization of labor power and labor agency in shaping development trajectories and labor outcomes ([Selwyn, 2011](#); [Taylor, 2007](#); [Coe and Jordhus-Lier, 2011](#); [Cumbers et al., 2008](#)). In response, a number of studies that explicitly incorporate labor and labor market dynamics have emerged, enriching our understanding of development in supply chains (see, for example, [Carswell and De Neve, 2013](#); [Coe and Hess, 2013](#); [Coe and Jordhus-Lier, 2011](#); [Cumbers et al., 2008](#); [McGrath, 2013](#); [Posthuma and Nathan, 2010](#); [Selwyn, 2011](#)).

The problems inherent in overlooking labor’s constitutive role in global production networks become particularly stark through discussions of upgrading, an area of research that, while not without dissent, has generated a significant amount of scholarship. Upgrading in the GPN literature refers to the process through which a firm or region moves into more profitable, innovative, or skill-intensive niches of the supply chain, where barriers to entry are higher. This can involve incorporating new functions; for example, taking on more complex assembly processes or component design work ([Gereffi, 1999](#); [Humphrey and Schmitz, 2001](#)).

Yet there is evidence that so-called upgrading is far from a straightforward process that leads to measurable gains for labor. Instances of firm upgrading that allow for the capture of more value do not necessarily translate to improvement in the social conditions of workers, including wages, working conditions, rights, and economic security ([Barrientos et al., 2011](#); [Milberg and Winkler, 2011](#)). In cases where upgrading involves increases in productivity, workers are likely to bear the brunt of functional upgrading. Where processes of technological improvement form the basis of upgrading, employment levels may contract, without the promise of better wages. [Werner \(2012\)](#) found that changes in work process, so often the result of upgrading, are bound up with the mobilization of social difference among workers, and [Raworth and Kidder \(2009\)](#) showed that in just-in-time apparel and fresh produce chains, the implementation of value-adding strategies like lean production are predicated on the ability to degrade working conditions. In many cases, upgrading leads to changes in the social relations of production as well as in material processes, and [Selwyn \(2011\)](#) has argued that this shifting landscape of labor-capital tension is poorly conceptualized. In much of the upgrading discourse, the redistribution of greater shares of profitability to workers assumes a kind of benevolence on the part of the employer, which may or may not exist.

The combined effect of the underspecification of labor in GPN research is to privilege the agency of employers over other actors, rendering artificially smooth the nature of the tension between capital and labor, and thus processes of incorporation into commodity chains. A disarticulations perspective invites us to see the local nexus as a site of invention and reinvention, where a “firm” consists not of a unified set of interests, but a locus of conflicts between capital and labor, and these emerge in the foreground. The shuffling of sites of production and distribution is a process that incorporates and expels both people and places, but the question asked here is, on what terms? Exclusion can sometimes refer to wholesale disconnection of a region over time, as when produc-

tion networks uproot and seek new productive locales. But the terms of inclusion into GPNs are also uneven across different labor market segments, and so too is the nature of workers' attachment to the production network.

The distribution industry touches down and incorporates places into global production networks as lead firms move goods toward their points of sale. This raises questions about the modality of inclusion, and the unevenness that characterizes how workers are enrolled in the logistics sector. Labor market intermediaries – in this case, a broad array of temp agencies – are re-negotiating the boundaries and terms of inclusion and exclusion in the distribution function. These temporary staffing agencies are, in effect, mediating the relationship between the local context and the global production network, and the latter is distanced from the muddiness of local labor market dynamics. The process of network insertion is managed by labor contractors, within a regulatory environment integral to the functioning of the local labor market: immigration policy, the criminal justice system, welfare policy, labor law, and state and local policy, all of which serve to segment the labor market according to ascribed worker characteristics. The contours of the labor market and GPNs presented here – particularly the segmentation of the labor market and role of temporary staffing agencies – demonstrate that places do not simply provide “local context,” but causal powers that shape GPN insertion into locales, such as Will County.

### The distribution function and labor markets in GPNs

As the geography of production has shifted, demand has steadily grown for cheaper, more efficient ways of bringing consumer products to retail stores across the United States. Multinational companies develop complex supply chains that source products from all over the world, and the key to maintaining or gaining competitive position is using logistics to move goods from their point of origin to their point of sale as quickly and cheaply as possible (Dicken, 2011). Logistics – colloquially defined as ‘getting the right products to the right place at the right time’ – is often a critical element in a company's market share, forming a “cornerstone of competitive advantage” (Troy, 2003; see also Fawcett, 1992).

The advent of the container in 1956 was an idea before its time; it was not until almost forty years later that the value of containerization was fully appreciated (Levinson, 2008). The 1990s witnessed explosive growth in container usage as companies realized the potential cost savings: containers allow goods to be transported via different methods, each drawing on core advantages, in order to maximize efficiency. The containerization of goods and intermodalism have led to a shifting geography of distribution (Cidell, 2010), including the rising profile of Chicago in national distribution networks. Chicago's very existence was predicated on its role as a transportation hub for the country, and still sits at the convergence of a web of highways and six of the seven Class 1 railroad networks in the U.S., making it a prime location for intermodal container traffic.

While containers were a breakthrough in shipping technology, other factors have also transformed the logistics industry. Major shifts in the regulatory environment, notably the federal deregulation of transportation and communications, made new industry configurations possible (Dicken, 2011; Hesse and Rodrigue, 2004). Novel production methods involving increased flexibility, the changing relationships between customers and suppliers, just-in-time procurement and delivery systems, and increasing geographical complexity of production networks all played roles in the development of a new logistics paradigm (Aoyama et al., 2006; Dicken, 2011; Fernie and Sparks, 2004). Taken together, these transformations have been characterized as a “logistics

revolution” (Bonacich and Wilson, 2008), and the distinction between production and distribution functions is becoming increasingly blurred, leading to the potential for new kinds of governance dynamics to emerge in supply chains (Coe and Hess, 2013; Hall et al., 2006).

Despite its centrality to firm competitive strategy, distribution has existed largely in the shadows of the global economy. While all of the global “chain” approaches – world systems, GCC, GVC, and GPN – share a focus on the sequence of activities that brings goods from production to sale, all have paid relatively little attention to logistics, perhaps an extension of Marx's own prioritization of production over circulation activities (Sayer and Walker, 1992). Distribution has been viewed as a tertiary or service sector whose demand is derived from other processes (Hesse and Rodrigue, 2006), a lesser cousin to production. Similarly, Coe (2014, p. 224) has suggested that researchers have been stymied by conceptions of logistics as an input, rather than a driver of value production and upgrading, both in client industrial sectors and as “a multi-actor value-generation network with its own strategic and upgrading dynamics.”

The warehousing and distribution function forms a key component of the logistics system, and has always played the role of calibrating the supply and demand of goods. But with the rise of just-in-time supply chain logic, lean logistics, and the incessant drive to eliminate waste, the industry has been transformed from a storage function – “transportation at zero miles per hour” (Murphy and Wood, 2007, p. 242) – to a site where the goal is for goods to be in constant motion. For a supply chain function that was once referred to as a necessary evil because of its reputation as a cost center, new and leaner imperatives for the coordination of distribution have meant widespread restructuring. There is now a range of competitive pressures that this function faces, both locally and globally: fluctuating demand, automation and other technological advances, cost cutting, new levels transparency and security, sustainable and green supply chain initiatives, lean management regimes, and shifting geographies of distribution. New work processes have emerged, most notably the rise of “cross-docking,” where goods are unloaded from one container and repackaged on an outbound trailer, often within a 24-h period (Gue, 2007; Hesse, 2004). The rise of logistics outsourcing options in third-party logistics providers (3PLs) – which are, in the words of an industry executive, “known for their expertise in doing more with less” (Fowler, 2013) – has changed the competitive landscape of the industry.

Bonacich and Wilson's (2008) account of logistics as a value chain is the most far-reaching to date, with a focus on the implications for workers along the chain. They show that the exigencies of supply chain integration cause downward pressure on working conditions across nodes in the supply chain, including in warehousing and distribution, where labor costs make up anywhere from 50% to 65% of total costs (Emmett, 2005; Tompkins and Smith, 1998; TZA, 2014). Similarly, a growing body of literature has examined working conditions and found significant numbers of racial and ethnic minorities toiling for low wages in insecure jobs (Bensman, 2008; Bonacich and De Lara, 2009; Cho, 2012; Ciscel et al., 2003; Jaffee, 2010; Rowe, 2012). Job quality within the sector varies, including the oft-cited model of UPS, which offers job ladders, benefits packages, and decent wages. UPS is also one of the few unionized distribution firms in the U.S. Yet the generally low wages, preponderance of minority workers, and reliance on contingent employment relationships in warehousing and distribution all suggest that the labor strategy tends toward a low-road model that requires the existence of groups of marginal workers.

The growth at the bottom of the labor market is not simply a response to new demands from employers. One prominent force in the process of labor market restructuring and surge in low-wage

employment has been the growth of the temporary staffing industry. These employment intermediaries have played a central role in the provision of flexibility from the early 20th century, shifting their market strategies and recruitment as labor laws changed (Hatton, 2011; Vosko, 2006). Since the 1970s, the industry has expanded swiftly, and has been among the fastest-growing sectors of the economy – from 1990 to 2000, the industry more than doubled total employment across the U.S., though temporary staffing growth has a distinct and uneven geographical makeup. Between 1990 and 2008, for example, the temporary staffing industry grew by 117% in the Midwest, versus 68% in the Northeast (Luo et al., 2010). While still a relatively small proportion of overall employment in the U.S., the temp industry has built density in the manufacturing, warehousing, and service industries, and the rapid growth in temp staffing is linked not to growth in overall occupational employment, but rather to changes in employers' hiring strategies (Esteveo and Lach, 1999).

The spectacular growth of the temporary staffing industry is due to reasons on both the demand and supply side of labor markets. On the demand side, scholars have pointed to the desire on the part of employers for qualitative or quantitative flexibility, for a screening mechanisms for potential workers, for a mechanism of lowering wage and benefit costs and avoiding workers compensation, and as a way to triangulate the employment relationship, shifting risk onto a third party (Abraham and Taylor, 1993; Davis-Blake and Uzzi, 1993; Smith, 1997; Theodore and Peck, 2002). Some scholars see the use of temporary staffing agencies as an explicit union avoidance strategy (Gonos, 1997), a sentiment that some employers interviewed for this research echoed. On the supply side, some argue that it is workers who desire the flexibility of being a temp, or are better suited for contingent work because of inherent work ethic. But as Theodore and Peck (2002) emphasize, the relationship between supply and demand is complex. The temp staffing industry is not a passive beneficiary of firms' shifting labor strategies, but an active participant in creating a market for their product – temporary workers – and a partner to employers looking to experiment. Temp dealers are entrepreneurs, and agencies develop niches in highly cost-competitive markets through product market specialization, undercutting, loopholes, and outright labor law violations (Ofstead, 1999; Peck and Theodore, 2007).

The light industrial segment of the temporary staffing industry that supplies workers to manufacturing plants and warehouses is a low-margin, cutthroat environment in which agencies compete against each other largely on price. In many distribution centers, employers report that they contract with a number of temp agencies at the same time, in different places in a hierarchy of preference. There are powerful inducements to hold wages low, and the competitive dynamics of the temp industry revolve around such inducements (Theodore and Peck, 2002).

The case of the temporary staffing industry reveals a complex array of social and institutional structures in which employment relations are rooted (see Rubery, 2005). Labor markets are constructed, not naturally occurring or neutrally operating, and are embedded in global, national, and local political economies. What accompanied macro-economic reshuffling since the 1970s was a period of political and cultural assault on institutions like unions and the social safety net. Welfare system reform that forced people into a labor market ill-equipped to provide family-supporting work is only one institutional force shaping the labor market. As the following case study explores, markers of social difference that stem from immigration policy, the criminal justice system, and other institutional arrangements shape the opportunity structures of workers in the labor market, largely coordinated in this industry by labor market intermediaries.

## Case study

The case study presented here examines the mechanisms of inclusion and exclusion, focused on one central characteristic of work organization in the distribution function that affects workers' attachment to the industry: the creation of competitive hierarchies, both between and within temp agencies. Data is drawn from three original sources: a survey of workers, worker diaries, and a series of in-depth interviews. The survey of 392 workers was conducted in 2010 in the logistics cluster in and around Will County, which includes data on work in 150 firms. It was conducted in conjunction with a workers' rights organization using a standardized set of questions and trained interviewers. Worker diaries were kept by four workers over the course of two to three months. Diarists made daily audio recordings in response to question prompts, and then engaged in bi-weekly interviews to explore their diary entries more deeply. These rich portraits of daily work-life offer detailed time lapses of churning in the industry as the workers moved between warehouses, and allow for fine-grained analysis of workplace dynamics. Semi-structured interviews were conducted with 30 employers, 11 of which included tours of the warehouse itself. These interviews with managers of distribution facilities represented both vertically-integrated and outsourced distribution functions, with roughly half of interviews conducted with 3PL managers. Finally, an additional 30 semi-structured interviews with industry analysts and consultants, workers, and advocates were conducted between 2011 and 2014.

The worker survey, the first of its kind in the industry, was conducted in part to test a theory popular with local political leaders: that stories about poor working conditions in the distribution industry resulted from a "few bad apples," and did not represent widespread practice. The survey revealed high rates of contingent employment, evident in the 81% of workers who found their job through a temp agency. Sixty-three percent were still temps at the time of the survey, proving a low rate both of initial direct-hire employment and movement from temporary to direct-hire or permanent positions. Fully 89% of workers were racial and ethnic minorities, and 62% earned wages below the federal poverty line. The survey results convincingly showed patterns of insecurity, long-term temping, low pay, and churning, and offered a map of industry subcontracting relationships and outcomes.

The fastest growing area for logistics in the Chicago area and one of the fastest in the country is in Will County, Illinois (Bruns, 2010). A 40-mile drive from the city of Chicago, Will County has made itself the beneficiary of Chicago's legendary rail congestion problems and aging infrastructure, wooing logistics development with a promise of avoiding both delays on the tracks and Chicago's high real estate premium. According to the U.S. Census, Will County has experienced significant population growth, increasing 35% between 2000 and 2010, much of which was concentrated in and around Joliet, the county seat. Joliet is a city that bears the marks of successive rounds of capital investment and flight. Situated on the Des Plaines River, the city was historically home to limestone quarrying for local canal-building and later for export. By the late 1800s the steel industry had overtaken limestone as the local driver of development, and employment in the railroads that serviced the steel mills, coke plants, and foundries was strong. When deindustrialization swept across the Rust Belt, the city foundered. Steel plants and oil refineries, much of the employment base at the time, closed their doors. In 1981 the unemployment rate in Joliet stood at 26%, compared to a national rate of 7.6% (U.S. Bureau of Labor Statistics). In an attempt to reverse its fortunes, an aggressive program of private sector-led economic development has guided Will County to experiment with a suite of the most fashionable economic development tactics, including building a racetrack,

a casino, and a jail, all since the 1990s. Capitalizing on Chicago's historic role as a transportation hub, the economic development strategy for the last decade has pivoted to incentivizing development around supply chain logistics, anchored by the 3000-acre redevelopment of a former military ammunition plant and arsenal. Drawn by tax subsidies and other incentive programs, distribution companies have opted to set up shop outside of Chicago.

The geographical shift from city center to suburban periphery has helped remake employment relations in distribution. In their work on the temp staffing industry, [Peck and Theodore \(2001, 2008\)](#) argue that disadvantaged workers form the basis of the industry, and Will County hosts a robust pool of underemployed and disadvantaged workers, the product of a once-thriving steel manufacturing industry and the more recent population influx that has outpaced job creation. In Will County, the distribution function is characterized by instability: demand volatility spikes and drops, temp agencies are contracted and let go, work processes are remade, temp workers churn through warehouses, firings appear arbitrary. The prevailing value-creation strategy is downward pressure on labor costs, but perhaps even this suggests a false sense of stability. Firms continue to restructure under relentless pressures to improve performance, re-making relations of inclusion and exclusion.

#### *Inter-agency hierarchies*

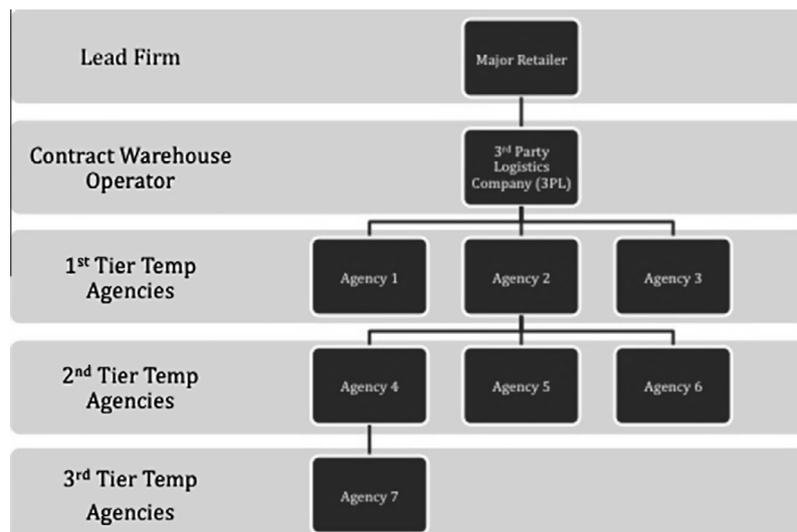
Within a single warehouse, a number of different temp agencies are often operating at the same time, an arrangement not uncommon in subcontracted labor strategies ([Smith and Neuwirth, 2008](#)). Some are contracted directly by the client firm, which could be either the GPN's lead firm or a 3PL, while others are enlisted through layers of subcontracting that distance them from the de facto client (see [Fig. 1](#)). Among these temp agencies, there is fierce inter-agency competition to maintain and expand contracts, and small differences in the markup charged for each worker can mean everything. Extremely cost-conscious clients may use an RFP process in which bids are analyzed by someone whose sole job is to find the cheapest provider, and these analysts are rewarded bonuses based on the variance between bids. The owner of one temp agency that brands itself as a provider of higher quality workers said that their rates were one to two percent higher than competitors. In these highly cost-sensitive cases, the temp agency owner said, it is impossible to compete against lower margin agen-

cies. Relationships between client firms and temp agencies can be effectively dissolved with minimal notice, if not contractually. Orders for day labor workers are most often placed in the evening for the following day's work, and a client can simply choose not to place work orders from a particular agency with whom they have an existing contract. The intermediaries in distribution – temp agencies and third party logistics companies alike – sometimes take on a contract even though it is not profitable, in some cases trying to raise prices later on to recoup their losses.

In one major retailer's million-square foot warehouse, there were seven temp agencies operating in 2011; in 2013 only two of these agencies remained the same. The rest were new, or at least bore new names. The extent of temp agency turnover reveals aggressive competition between them for contracts, and reflects the instability inherent in warehouse workplace dynamics. Client firms prefer not to “put all their eggs in one basket,” and part of this risk aversion strategy includes spreading temporary worker contracts to two or more firms. This allows them not only to encourage temp agencies to compete on price, but to also penalize agencies when they fail to produce the right number and type of workers. One employer, the manager of a large national 3PL facility, told of how his preferred first-tier agency, which normally provided about 70% of the facility's temp workers, found itself ensnared with the Illinois Department of Labor and unable to fill the work order. Unfortunately for the manager, it was during a peak goods-movement season at the warehouse, and he found himself without two-thirds of his workforce. The warehouse manager described the conversation with his preferred temp provider, in which he said that he did not want to have to go to his other provider for the order, but the staffing firm had left him no choice. The manager called up the other temp agency with which he had a standing contract, and requested 100 workers. The agency delivered the full order, and with this one event, moved into the position of preferred provider. These pervasive inter-agency competitive dynamics are key mechanisms through which client firms discipline labor contractors in order to set expectations and extract savings, a strategy that filters down to the dynamics within agencies.

#### *Intra-agency hierarchies*

A number of dialectics of inclusion and exclusion have emerged in the distribution function, and the intra-agency hierarchy



**Fig. 1.** Subcontracting map for a distribution center.

describes the sorting of workers into echelons that have marginally more or less claim to security and dignity. Various markers of social difference shape this sorting process, including race and ethnicity, documentation status, gender, and disability. The terms of inclusion for women, who make up roughly a quarter of workers in warehouses, can vary by the hour. Women are expected, at different moments during a given day, to perform very different roles: to “work like a man” as they unload containers, to do “women’s work,” like clerical tasks, to respond to pervasive sexual harassment with bemusement or at least tolerance, and to use flirtation as a form of currency in the workplace. Workers who have a record with the criminal justice system find themselves at a significant disadvantage in securing work at all (Pager, 2003), and criminal background checks are sometimes used to threaten warehouse workers or otherwise discourage them from asserting their rights. Immigrants without documentation, while often revered for their stellar work ethic, face difficulties in asserting their employment rights on the job, and are thus vulnerable to abuses (see, for example, Bernhardt et al., 2008; Hondagneu-Sotelo, 2007; Kalleberg, 2009; Peck and Theodore, 2001). Similar to the use of criminal background checks, “no-match” letters can be a form of discipline for immigrant workers. No-match letters are issued to an employer by the Social Security Administration or the Internal Revenue Service when there is a discrepancy between the system’s database and the information submitted for an employee. While these discrepancies can be caused by number of problems in the databases that are unrelated to a worker’s authorization status, employers have been known to use no-match letters to intimidate or fire workers they suspect are undocumented (see Mehta et al., 2003; nilc.org/ssn).

These and other categories of social difference are mobilized opportunistically by employers (Sayer and Walker, 1992); they are durable, but not fixed categories. The uneven workplace dynamics hint at the ways inclusion and exclusion are mutually constituted, and show that inclusion is sometimes offered on a provisional basis. In the major retailer’s warehouse mentioned above, we find an illustrative example. The retailer’s warehouse is operated by a third party logistics company (3PL), which uses a mix of both direct-hire and temporary staff. The elaborate labor subcontracting scheme shown in Fig. 1 represents this warehouse at peak season, as the retailer stocks brick-and-mortar stores for the holidays and the workforce more than doubles, to roughly 800 workers. “Labor Now,” one of the labor providers, was subcontracted by a first-tier temp agency to help fill work orders when daily demand outpaces the first-tier agency’s labor shed.

The differences between categories in the pecking order in the warehouse are, on their face, quite small, though they carry significant impacts for workers (Fig. 2). At the top are salaried, full-time managers employed by the 3PL. Below them, Team Leads are oftentimes promoted from being an unloader, removed from manual work and instead overseeing the work process of a small group of other temps. Team Leads receive a small pay raise and significantly more responsibility, but are still employees of the temporary agency.

The next three categories are particularly illustrative of the gradient: what the workers themselves call “perms,” which are permatemps; “seasonals” hired on for a two or three month high-volume period; and what are commonly known as the “tempiest” or “super-temps,” episodic workers subcontracted by yet another temp agency and brought in on an hourly or daily basis. The actual job tasks performed under these three different categories were largely the same, though permatemps were more likely to be in the shipping and receiving department, where there is an element of goods storage, versus “flow,” which entails unloading goods from a container and immediately loading it onto

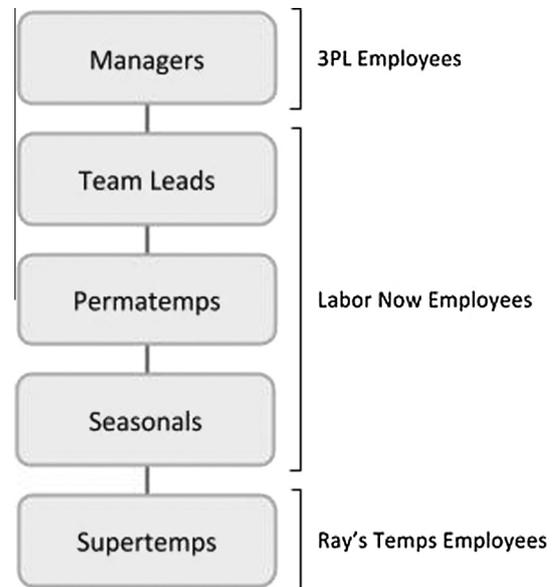


Fig. 2. Intra-agency worker hierarchy.

another. Yet while the work process itself is similar, the ways in which workers experienced contingency were not.

The three central distinctions in the temp hierarchy are the point system, duration of employment, and wage differentials. The point system is one way that temp agencies allow a modicum of flexibility to workers and their lives – though the rules governing when you can use these points are reportedly beholden to particular managers. Points are assigned like demerits when a worker arrives late, needs to leave early, or calls in sick, similar to unpaid time off. For example, one seasonal worker reported arriving to work late because of transportation issues and receiving a half point for her tardiness; when she had two points on her record, she received a warning from the human resources department of the temp agency that she was nearing her limit, at which point she would be let go. Permiatemps at Labor Now are allowed ten points, seasonals four, and the super-temps are not allotted points.

When first hired by an agency, workers are often told how long they can expect to work at the warehouse, though the duration itself carries no guarantees – a hallmark of precarious employment. Permiatemps at Labor Now are given open-ended work assignments that the agency calls permanent, accomplished by sending the worker to alternate work sites as each work order ends, contingent upon having other client firms. Seasonals are told they will be needed only until peak season is over (roughly September to November for retail distribution), and the super-temps are not given any expectations of work duration. Hired into these stratified categories, workers are expected to deliver continuity to the employer only as opportunities arise. These employment relations represent the mechanisms through which demand volatility gets pushed down the production network and out into the community, with differential effects on different segments of workers and their attachment to the network (see Peck and Theodore, 1998).

In terms of wages, permiatemps and seasonals make the same wage (\$10.50 an hour), and super-temps make just above the Illinois state minimum wage (\$9.25), at least technically. Here, it is important to explain the relationship of the super-temps to the subcontracted agency that employs them, “Ray’s Temps.” This agency recruits the majority of its workers through a relationship with a halfway house, serving clients rehabbing from drugs, alcohol and prison. Clients at the halfway house are required to work

for Ray's Temps as a condition of their housing, and to allow fees to be deducted from their paycheck for transportation (which is illegal in Illinois, under the Day and Temporary Labor Services Act). At \$15 per day for transportation to and from work, a distance of roughly 15 miles, this effectively brings workers' hourly rate well below the minimum wage. At the same time, the elaborate subcontracting relationship offers layers of formal and moral distance between the global retailer leading the GPN and the wage theft occurring in exurban Illinois.

In this case, the escape valve for retail distribution appears to be situated at the very margins of the labor market, among a population of workers with few alternatives. As the flow of goods surges, temp agencies like Labor Now subcontract to extremely low-road operations to mobilize workers on short notice for momentary work opportunities, often lasting a few hours or a day. Ray's Temps represents a staffing agency with access to a segment of workers untapped by other agencies – an important niche in an aggressive industry often competing in the same labor pool. Workers mobilized on this model are some of the most vulnerable: in this case, those in rehab. In a similar case, a low-road agency that specializes in Latino workers prides itself on the promise that they can mobilize 300 workers with one day's notice, whom they pick up in vans from day labor corners. The social status of these workers, recognized by both managers and other workers alike, severely circumscribes their access to recourse if and when they are the victims of wage theft and other workplace abuses. Because of the terms of work for those in rehab, workers for Ray's Temps who encounter problems in the workplace are doubly reluctant to speak up, for fear of losing both their job and their housing in the same moment.

This intra-agency hierarchy resembles a perverse 21st century dual labor market, where the core has incrementally more job security – a permatemp – versus the highly precarious workers in low-road temp agencies. The hierarchy should not be mistaken for a job ladder, but rather a disciplining mechanism. Some workers had witnessed promotions to team leads, which reportedly tend to occur through processes of nepotism and favoritism, rather than seniority or knowledge acquisition. But in no other case does the hierarchy offer ways of moving up. On the contrary, it is used as a tool of retaliation. When a group of workers who had been permatemps demanded workplace rights, including health and safety protections, they were moved, en masse, down to seasonals. The reproduction of different segments of temp workers represents a rearticulation of the terms of inclusion: not simply “in” or “out” but “in on these terms,” a gradation of temps, with different positions in the temp hierarchy having more and less claim to stability and dignity. As one interviewee put it in characterizing labor strategies in distribution, “The innovations are in cheating” – either cheating wages or dignity – and the cutting edge is almost always felt by workers themselves.

#### *Piece work*

The innovation and experimentation takes different forms. Most workers are paid an hourly rate, but some temp agencies use a piece rate for particular labor processes. Piece work, a labor strategy that was revealed through the worker survey and subsequent interviews, combines wage suppression, instability, and work intensification. Largely loaders and unloaders of containers who tend to be Latino and African American men, these workers are paid per box, pallet, number of feet, or trucks unloaded. In a case of apparent upgrading, the lead firm in a production network sent the owner of a subcontracted temp agency to one of their warehouses in Georgia. The purpose of the trip was for the owner to learn from another temp agency about the intricacies of paying workers a piece rate, which allows temporary agencies to occupy a “compensation niche” based on productivity, as opposed to

CASE COUNT	Number of Items		
	1 to 4	5 to 10	11 & UP
1-999	\$60	\$65	\$70
1000-1999	\$80	\$85	\$90
2000-2999	\$100	\$105	\$110
3000-3999	\$120	\$125	\$130
4000-4999	\$130	\$135	\$140
5000-up	\$140	\$145	\$150

Fig. 3. Piece rate matrix for unloading containers.

upgrading strategies that offer a functional or technical niche. The agency owner returned to Illinois with a matrix based on the variety of items and number of packages in a container, which determined the rate paid to the worker for unloading it (see Fig. 3). The matrix was posted on the wall of the warehouse, but workers found it to be an indecipherable predictor of their paycheck. It's a cryptic chart that would require workers to keep track of the statistics of containers they unload – how many different products are in a container, and how many items are in each box. Moreover, workers pointed out that the weight of the goods does not factor into the payment system, only the quantity. A container of outdoor patio furniture would require strenuous lifting, but the bulky nature of the goods means that the pay for the container would be lower.

Two years later, workers filed a class action lawsuit against the temp agency for widespread wage theft, since the matrix often dictated that workers earn less per hour than the Illinois minimum wage. Interviews with piece rate workers reveal the negative impacts of “hustle-based” earnings on health and safety in the workplace, and indeed their own bodies. Workers report being trapped between the contradictory priorities of moving goods apace – from boxes of diapers to outdoor grills – in order to make more money, while still protecting their backs and wrists for childcare when they get home and to return to work the next day.

The kind of lead-firm-induced learning so critical to processes of upgrading was, in this case, a form of social downgrading, an innovation in cheating lubricated by the lead firm, made possible through weak regulatory mechanisms, and predicated on the existence of vulnerable workers. Other temp agencies in the same warehouse paid workers an hourly rate, and the intention was to create a niche in which the temp agency could operate at lower cost and induce higher levels of worker productivity. In the settlement that came from the class action lawsuit, workers won thousands of dollars in back pay they were owed, and piece rate pay is no longer used in this warehouse. The boundaries of this labor strategy experimentation were dictated by the capacity of the workers to recognize and enforce their rights.

#### **Conclusions**

The labor markets that global supply chains access as they touch down are alive. They are sites of contradiction and contestation, peculiar to their own histories, and working bodies must be reproduced and compelled to enter the labor market despite these contradictions and the problems they pose for social reproduction. As Jonas (1996, p. 329) argued, local labor markets are better understood as “a fluid, dynamic set of social relations and power structures, reproduced through domination, control, repression, and resistance operating at a variety of scales.” This conceptualization of the labor market suggests that any GPN is likely to encoun-

ter the need for experimentation as employers, workers, and the state negotiate the process of inclusion, and labor market intermediaries are critical partners.

Disarticulations, as particular instances of incorporation and expulsion, are discernable across nodes in global production networks. Distribution has received far less scholarly attention than sites of production, yet this critical supply chain function bears similar marks of disarticulation. The mutual constitution of inclusion and exclusion in distribution is particularly evident through the prevailing labor strategy of contingent work, where the very hiring of a worker is predicated on their potential future dismissal.

Contrary to a narrative of unambiguous economic opportunity associated with GPN incorporation, the distribution function is characterized by a dialectic of inclusion and exclusion *in situ*, where the terms are negotiated by temp agencies. The impetus for the process stems from mounting competitive pressures within this supply chain function, yet the tactics of labor providers possess the distinctive markings of the entrepreneurial spirit of agency owners. The opportunity to implement conditional labor strategies stems from circumstances of the local labor market – a co-determined product of regulation at multiple spatial scales, the characteristics of labor demand, and the nature of the supply of workers, including prior waves of development, decline, and disenfranchisement. The temporary staffing industry is re-drawing the boundaries and conditions of inclusion through experimentation with the selective mobilization of social difference in the labor market. Workers in various segments experience qualitatively different terms of employment including wages, conditions, and stability. At the low-skill, low-wage end of the labor market, the employment practices of distribution firms and temp agencies do not simply reflect labor market inequality that already exists, but have the tendency to further aggravate these inequities (Massey, 1995; Peck, 1996).

Capital is not simply absorbing workers into its distribution function. By enrolling, expelling, and re-enrolling workers through churning in contingent jobs, and by creating a granular hierarchy based on competition and social difference, capital is reproducing relations of power and subordination on an uneven and unstable landscape of restructuring. The location factors that drew distribution development to Will County still exist, though the calculus may be shifting as workers' organizations help raise expectations of and demands for decent work, and as temp agencies continue to find ways to mobilize workers despite changing local norms. Actions by workers in distribution, as difficult as they are to coordinate, will continue to shape the power dynamics in production networks and alter the topography of winners and losers in the global economy.

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