

Knowledge on the Move: Between Logistics and Translation

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Abstract: Translation and logistics are often considered distinct and opposed activities. The former is a social practice that produces boundaries and connections between languages, cultures and forms of life. The latter is a technical operation that contributes to the production of value by creating efficiencies of communication and transport. This paper takes translation and logistics as twin analytical pincers in which to examine the changing politics and economy of knowledge in the contemporary capitalist world. Particular attention is given to the socio-technical systems that enable practices of translation and the role of social and cultural negotiation in facilitating movement along the logistical chains that support global production. By examining the terms and the limits of the overlap between translation and logistics, the paper investigates its implications for the global arrangement of space and time as well as the subjective stakes of labor in the production of knowledge.

How does knowledge travel? The question is profound to the point of being banal. Movement is intrinsic to knowing. Whether the passage is between subject and object, through space and time, or across the boundaries of disciplines or other gardens of knowledge, knowledge seems unable to submit to stillness. The present essay investigates two dimensions of knowledge movement that have come to the fore under conditions of capitalism and globalization: the first associated with logistical operations and the second deriving from translation. The aim is to show the intertwining and interdependence of these different aspects of knowledge movement, despite the seeming tension between them in terms of openness to political and cultural life, subordination to technological processes and coordination with economic activity.

Logistics organizes and produces the heterogeneity of global space and time. Tuned to the turnover of capital, it mobilizes material and infrastructural implementations to produce communication, transport, and economic efficiencies. With its origins in mil-

itary supply, it has, since the 1960s, become a software-driven process that coordinates production and assembly processes across planetary expanses. No longer an exercise in cost reduction, it has become integral to the maximization of profit. Essential to its operations is the governance of supply or commodity chains. Logistical networks rely on internal standards and protocols to establish interoperability between systems and facilitate the movement of people, goods, and things. Attention to the logistics of knowledge movement thus requires awareness of techniques and technologies that enable sorting, classification, distribution, and storage. Increasingly these processes are inseparable from the production of knowledge itself, making it unfeasible to consider them *post hoc* arrangements that pertain merely to the movement of already formed or commodified knowledge. The metaphor of knowledge transfer, which circulates widely in academic and commercial contexts, registers some of the limits and dilemmas associated with such an approach to knowledge. It signals at once the dream that knowledge might travel efficiently and unaltered between a source and a target and the reality that such movement is always interrupted by social and cultural factors. In other words, it shows how the logistics of knowledge movement is always entangled with the politics of translation.

Translation is a privileged cultural operation and social practice that produces bridges and barriers between languages, civilizations, and forms of life. It is an iterative operation that facilitates movement through an active process of mutation in which difference and incommensurability tend to win over standardization and protocols. This is to say it is a vernacular or idiomatic practice that creates social relations within a force field marked by differentials of power, culture, and economy. At once sparking connections and active in processes of domination, not least those associated with modern colonialism and global capitalist expansion, translation is an inherently double-sided political concept and practice. It can open channels of communication and understanding between communities and cultures but only at the risk of establishing boundaries in ways that further a politics of rigidified identity. Historically this has been one of its major functions. When the practice of translation establishes equivalence between languages or groups of people, it enforces the idea of distinct communities, nations, or

civilizations traveling coevally through time. It thus contributes to the creation of dominant geopolitical constructs: the West and the rest, center and periphery, and so on. In the contemporary world, where such an approach to translation remains prevalent, it plays a part in dividing the planet into blocs or regions and producing normative figures of continentalization: the European, the Asian, the African, et cetera. Yet, as several critical scholars (Sakai 1997, Iveković 2010, Mezzadra 2010) have emphasized, translation continues to hold a potential for radical subversion or the unsettling of established identities, boundaries, and the social relation of capital.

Here is the dilemma. Translation is seen as the cultural operation *par excellence*, a creative act with the power to rearrange social relations whether in politically liberating or constraining ways. By contrast, logistics is widely understood as a set of technical operations driven by algorithmic processes and subordinated to the imperatives of capital or war. Attempting to shift these established views is perhaps a futile exercise. The current paper holds these shibboleths in place, even as it questions them by probing the borders between the cultural and the economic, and querying the separability of the creative and the technical. The argument is deceptively simple: without logistics no translation, and without translation no logistics. This is an analytical and political claim rather than a logical proposition or dialectical formulation. The intertwining of translation and logistics comes into view with the historicization of these practices. Particularly in current conditions of capitalism (where cooperative networks are crucial to systems of production, and value creation depends ever more on distribution and access to knowledge), translation and logistics have developed in ways that make them increasingly indistinguishable. This article explores the terms and limits of this overlap, investigating its implications for the global arrangement of space and time as well as the subjective stakes of labor in the production of knowledge.

Traveling Theory

In an article entitled “Traveling Theory” (1983, 226), Edward Said identifies “a discernible and recurrent pattern to the movement” of ideas and theories. Although widely read within critical and postcolonial circles, the paper’s delineation of four distinct stages of “travel” reads like a familiar narrative of immigration and

acculturation:

First, there is a point of origin, or what seems like one, a set of initial circumstances in which the idea came to birth or entered discourse. Second, there is the distance transferred, a passage through the pressure of various contexts as the idea moves from an earlier point to another time and place where it will come into a new prominence. Third, there is a set of conditions—call them conditions of acceptance or, as an inevitable part of acceptance, resistances—which then confronts the transplanted theory or idea, making possible its introduction or toleration, however alien it may appear to be. Fourth, the now full (or partly) accommodated (or incorporated) idea is to some extent transformed by its new uses, its new position in a new time and place. (Said 1983, 226–227)

Said's essay focuses on the geographical movement of ideas and theories, which, although part of knowledge, are not the whole of it. Yet the typology he offers provides a schema by which to assess the evolution of knowledge movements across the past three decades. A distinct absence from his analysis is an account of the material forces and technical factors that compel knowledge to move. Said recognizes a "commerce of theories and ideas" but does not interrogate the economic and material processes that underlie this trade or exchange (226). The movement of knowledge, in this account, seems almost disconnected from economic forces or technical parameters. It is the result of patterns of influence between prominent thinkers.

Said's primary example is the transfer of Lukács's concept of reification into the works of Lucien Goldmann and from there into the writings of Raymond Williams. Although he examines the conditions of acceptance, pressures, and resistances that surround this transplantation of ideas, he does not explore the material conduits that make it possible. The movement of knowledge between the works of these figures is attributed to patterns of "indebtedness" and "use" (235, 242). There is little attention to histories of publication, translation, or dissemination—say, in the manner of Franco Moretti's (1999) rewriting of the history of the European novel. Said mentions that Goldmann was Lukács's student and that Williams heard Goldmann deliver two lectures in 1970. But in his account, the transfer of knowledge is almost entirely restricted to philological and hermeneutic concerns. As a result "Traveling Theory" has little to say about how the movement of knowledge is linked to infrastructural conditions of transport, communication,

memory, or economy. Implicit in Said's argument is the claim that Lukács's concept loses its revolutionary potential as it travels, a position he revises in a later essay entitled "Traveling Theory Reconsidered" (1994) by considering Frantz Fanon's reception of Lukács. In both of these pieces, however, the focus is on matters of concept production, reading, and reception. Transplanted knowledge is subjected to pressures of context and interpretation but the exact manner in which it moves through space and time remains obscure.

This is surprising given Said's (1978) writings on how orientalist knowledge practices have shaped and in turn been shaped by colonial adventures in Asia and the Islamic world. Following from this work, there has been an ongoing concern across a number of disciplines with the material and discursive practices that have led to the emergence (and maintenance) of a distinction between the West and the rest. One result of this is a/the growing attention to how the practice of translation facilitates the circulation of knowledge across geopolitical and social boundaries. As Irrera (2013, 2) explains, the "notion of translation, although rarely mentioned by Said, is actually at the very heart of the cultural practices of Saidian humanism." At stake is partly an emphasis on translation's capacity to create mutual understanding and reciprocity between human groups. In a late article published in the Egyptian newspaper *Al-Ahram*, for instance, Said (2001) argues against a campaign to stop the translation of Arabic books into Hebrew on the grounds that greater availability of Arabic writings in Israel will better enable Israelis to understand Arabs "as a people." But as a practitioner of comparative literature, a discipline that maps linguistic differences over bodies of expression and thought, Said would have been aware of the ambivalent position of translation as both a border-breaking and border-making practice. Although committed to humanist precepts and the opening of world-historical horizons, he remained acutely aware of the politics of cultural imperialism and the capacity for translation to serve the ends of domination and separate populations into distinct identity groups.

The limit of Said's work for understanding current knowledge movements lies less in its muted engagement with translation than its neglect of what today is called knowledge management—that is, the codification and collection of processes and devices for governing the production, circulation, and utilization of knowledge.

“Traveling Theory” was written at a time when the rise of a knowledge economy oriented toward services, intellectual property rights, innovation and information technology was just getting underway. Thirty years later, the implication of translation in practices of logistical calculation that pertain to the production and transfer of knowledge has become a crucial part of globalizing capitalism. There is a need to move beyond the paradigm of traveling theory with its cultural and exegetical bias and to probe translation’s role in the production of subjectivity and the making and unmaking of worlds. This means investigating translation’s entanglement with operations of capitalism. The capacity of capital to translate heterogeneous forms of life into the homogenous language of value is only one aspect of this entanglement. Efforts to make capital’s turnover productive also invest practices of translation, whether they take a linguistic, cultural, or more generally social form. Only by disentangling translation from these efforts can we begin to discern a knowledge politics adequate to the invention of new modes of social cooperation.

The Logistics Revolution

If Said’s “Traveling Theory” supplies an icon of thinking about knowledge movements and translation without a developed account of relevant logistical arrangements, there is a plethora of approaches that do the opposite. Logistics is a technological and pragmatic field, increasingly driven by computational modes of control and forever pushing deadlines. It is hard to imagine logisticians entertaining an interest in the subtleties of translation theory or its implications for issues of economy and politics. Nonetheless the transfer and sharing of knowledge is crucial to logistical processes, particularly when they connect up supply chains in which efficiencies can be established through the implementation of standards or other mechanisms of internal governance. According to Ballou (1992, 5), the “mission of logistics is to get the right goods or services to the right place at the right time, and in the desired (right) condition, while making the greatest contribution to the firm.” This definition, with its identification of the firm as the exemplary logistical subject, registers the commercial imperatives that drive contemporary logistical practices. Yet this was not always the case. Until the mid twentieth century, logistics was primarily a

military practice associated with the supply of food and arms to fighting forces.

This is not the occasion to explore the history of military logistics and its implications for the relation of war to politics (Neilson 2012). Suffice it to say that logistics was considered one of the three arts of war alongside strategy and tactics. Prominent nineteenth-century military thinkers such as Carl von Clausewitz (2007) attributed a lesser role to logistics insofar as it was understood as a preparatory exercise that established the conditions for these more warlike arts. As technological innovations such as the introduction of railways and the use of fossil fuels changed military campaigns, logistics became a central part of modern warfare. Meanwhile, with the spread of the industrial revolution, practices of transport and spatial economics drew mounting interest in the civilian sphere. In seminal publications such *The Theory of the Trace* (1900), the German civil engineer Wilhelm Launhardt built on the mathematical formulations of Pierre de Fermat to derive efficiency criteria for commercial transport networks with regard to topography. This work was replicated and extended by Alfred Weber, the younger brother of Max, in his *Theory of the Location of Industries* (1929). Weber's book closed with a mathematical appendix, written with Georg Pick, which offered a formula purporting to derive the optimal location for an industrial plant based on variables such as the cost of transport, the agglomeration of industrial facilities and the cost of labor across different sites. These are among the earliest precedents for a mathematical approach to logistics. It is not until the 1960s, however, that the introduction of a systems analysis approach to transport and distribution management began to remake geographies of production and circulation at the global scale, giving rise to the distinct economic sector of logistics.

Scholars who study the evolution of the field call this the logistics revolution (Allen 1997). Changes in this period and its aftermath include the spatial reorganization of the firm, the performance monitoring of labor, the interlinking of logistics science with computing and software design, the introduction of the shipping container, the formation of business organizations and academic programs for the production and dissemination of logistical knowledge, the building of global supply chains, and the search for cheap labor rates in poorer areas of the world. Logistics moved from being

an effort of cost minimization to become an integrated part of global production systems and a means of maximizing profit. The myth that production stopped at the factory gates, challenged in feminist theory and politics, was shattered in the mainstream world with the evolution of more efficient transport and communication systems. The assembly of goods across different global locations, with objects and knowledge constantly moving between them, served to blur the processes of production and distribution. Logistics also made the organization of global space more complicated and differentiated. Geographical entities such as special economic zones and logistics hubs sprang up to attract investment and organize the business of global production. Increasingly, logistics also came to play a role in service economies and production processes not involving the manufacture of material goods. From financial operations to television production, translation services to the formation of global care chains, the logistical organization of work and mobility became central to the expansion of capitalist markets and logic.

The technological and representational systems that enabled this shift have seen vast changes since the 1960s. The evolution of supply chain management and just-in-time production would have been impossible without the controlled feedback of logistical data into production and distribution systems. Enterprise Resource Planning (ERP) and Electronic Data Interchange (EDI) software platforms aided efforts to digitally record, communicate, and analyze every aspect of production, transport, display, and sales. This resulted in more expansive and articulated logistical systems that sought to continuously map out the position and trajectory of objects in motion. The real-time integration of these systems provided an unprecedented ability to rationalize labor at every point along the chain, intensifying the pace and squeezing workers for greater productivity. But the desire to match ideals of lean production to agile and adaptable logistical processes proved elusive. The reduction of costs, elimination of waste, and optimization of flow could only be pushed so far without jeopardizing the robustness and flexibility of production systems. Issues of supply chain resilience sparked efforts to minimize contingency by simulating the decisions of actors on both supply and demand sides of the equation. Today complex techniques of scenario planning, sometimes

involving the use of software adapted from financial market applications, are deployed to smooth out discrepancies and interruptions. The challenge of achieving interoperability between systems and building “fault tolerance” into them has underscored the difficulties that underlie programs of standardization. Nonetheless, the internal governance of supply chains continues to demand protocols of hierarchy, codifiability, capability, and coordination (Gereffi, Humphrey, and Sturgeon 2005).

To some extent, the problem of interoperability can be conceived as one of translation. The attempt to coordinate discrepant systems, smooth out glitches, and exchange data via common formats means working across gaps and connections to relationally produce, arrange, and conceptualize information. Often this involves the creation of standards to which different systems must conform to enable the transfer of information between them. In such instances, translation is flattened out and directed toward a single and tightly controlled set of protocols. But such standards are hard to create, technically and in terms of the time, labor, and resources that must be invested in them. They also tend to proliferate, leading to a situation where standards conflict with other standards. Even in cases where technical interoperability has been established, social and cultural factors tend to interfere, making the task of translation tricky and unstable. This is not an observation made only by social and cultural thinkers such as the anthropologist Anna Tsing (2005), who writes about the “friction” that inhabits the global supply chains of contemporary capitalism. Engineers also recognize the cultural and social barriers to interoperability, writing of the need to establish “cultural interoperability” and of the imperative to establish “supply chain integration” by facilitating “the exchange of knowledge across dissimilar cultures and in different native languages” (Whitman and Panetto 2006, 235-36). It is in this sense that logistics must reckon with the politics of translation. The question is whether such a politics provides resources for smoothing out the operations of capital or whether it supplies methods for organizing against current practices of exploitation and dispossession.

In the Translation Machine

The proximity of the social practice of translation to the worlds of the technologist, engineer, and logistician is evident not only in discourses about “cultural interoperability” and supply chain integration. It is also present in processes of translation themselves, which are increasingly powered by algorithmic technologies and codes. Any attempt to reckon with the politics of translation must confront the rising prevalence of machine translation, which submits the social practice of translation to logistical protocols and software routines that purport to accomplish direct transfers between languages. Think of the interface of online translation platforms such as Babelfish or Google Translate. Two text boxes of the same size face each other. One can write (or more usually cut and paste) into the first, choose the language into which the text is to be translated, and click the button. The program has the capacity to detect the input language. Such a technique of translation powerfully reinforces what Sakai (1997) calls the schema of cofiguration. The copresence and equal size of the text boxes suggests a parallel between languages that are conceived as separate prior to and independently of the act of translation. Rhetoric and context fall away. The screen divides source from target, incomprehensible from comprehensible. As the user’s eyes are drawn from left to right, she is sealed as member of one language community as opposed to another. As much as this is a machine for translation, it is also a machine for the production of what Jon Solomon (2013) calls the “speciation of the human”—the division of the genus human into distinct and fixed blocs of identity and culture. From philology to imperialism, comparative literature to algorithms, the movement is seamless and seemingly instantaneous.

Yet there is a glitch. As anyone who has used these platforms knows, the results are patchy. Machine translation offers an antidote to dreams of a pure or universal language, such as that offered by Walter Benjamin (1968, 80) when he describes the translator’s task as releasing “in his own language that pure language that is under the spell of another.” Benjamin’s impulse is theological, but the dream of machine translation has equally been driven by a vision of universal language, albeit one that is much more instrumental. The cyberneticist Warren Weaver (1955), a pioneer in the field, writes: “When I look at an article in Russian, I say: ‘This

is written in English, but it has been coded in some strange symbols. I will now proceed to decode” (18). He also described the need to “descend, from each language, down to the common base of all human communication—the real but as yet undiscovered universal language—and then re-emerge by whatever route is convenient” (23).

Such an approach, which treats language as code, has proved a dead end in machine translation (see Kay 2003, Neilson 2010). Today rule-based methods have all but been replaced with corpus-based approaches, which deploy statistical techniques and huge libraries of translated texts to move between languages. The results are sketchy and often only partly legible. It as if culture has taken its revenge against logistics. But what is the politics of all this?

Benjamin’s vision of a universal language may have been undermined by machine translation techniques but his writing supplies us with at least one powerful image to describe the fate of contemporary translation. In the first of his “Theses on the Philosophy of History” (1968, 253), he writes of an “automaton” that can play a winning game of chess. The contraption, which makes it appear as if the game is being played by a “puppet in Turkish attire,” actually conceals an “expert chess player” who guides “the puppet’s hand by means of strings.” Benjamin uses this image to argue for the role of theology in supporting and driving historical materialism. Today, when the theological drive toward a universal language has been displaced by machine translation, this image of the mechanical Turk has a much more cynical connection to the business of translation. In 2005, Amazon opened its platform Mechanical Turk (<https://www.mturk.com/mturk/>), a web-based service that offers users the possibility to bid to perform paid work by completing various tasks that cannot be fulfilled by artificial intelligence. As the FAQ for the site explains, “[t]oday, we build complex software applications based on the things computers do well, such as storing and retrieving large amounts of information or rapidly performing calculations. However, humans still significantly outperform the most powerful computers at completing such simple tasks as identifying objects in photographs—something children can do even before they learn to speak.” Not surprisingly, this model of microcontracting, pioneered by Mechanical Turk, has also found its ap-

plication in the translation world, particularly via sites such as <http://ProZ.com>, which allow translators to submit quotes to perform translation jobs, often cleaning up the results of machine translations. The site claims to serve “the world’s largest community of translators” and to be the “*number one source* of new client’s for translators.” In this way, the glitches in machine translation routines have become occasions for the crowd sourcing of labor in the most precarious and flexible of circumstances.

In his article “The Freelance Translation Machine,” Scott Kushner (2013, 2) explores how online translation platforms such as ProZ.com negotiate “the encounter between the computational and the human in the service of capital.” He is interested in how “algorithmic power” harnesses “human thought, precisely because it does not conform to machine logic.” The task of the translator, in the context of sites like this, is to “complete the algorithm” in a way that obscures the act of translation or makes it appear automated, despite the fact that the translator exists in a social world (4). Kushner explains that ProZ features social networking tools that allow clients to rate the work of translators. The 300,000 freelance translators who work on the platform pay for membership, bid for jobs, accumulate a record of ratings and have the opportunity to display credentials and qualifications on the site. Vendors are granted easy access to a global workforce by filling out a submission form that specifies language pairs, number of words, and deadlines. This has allowed ProZ to emerge “as a temporary stand-in for the ultimate translation dream: friction-free machine translation” (12).

Platforms like ProZ reinforce what Sakai (1997) calls homolingual address, posing as if it is possible to translate seamlessly between languages that are conceived as always already separate entities. At stake is “the idea of the unity of language,” which makes it possible “to systematically organize knowledge about languages in a modern, scientific manner” (Sakai 2009, 73). In observing that “such an idea is essential for any standardized, automated, algorithmic approach to translation,” Kushner (2013) draws an interesting parallel. ProZ, he comments, is interested not in the contents of translation but rather in the protocols that allow it to occur in as frictionless a manner as possible. To this extent, translation becomes a logistical proposition: “ProZ.com is no more interested in

a translation project's contents than a barge captain is in the contents of the shipping containers piled upon his deck." Furthermore, the "smooth functioning of the translation industry under globalization demands conceptual containers ('unified languages') just as transoceanic transport requires uniform containers." With this parallel between container shipping and the workings of online translation platforms, Kushner suggests a strong relation between the protocols and algorithms of the global logistics industries and the protocols and algorithms that facilitate the "do loops" of contemporary freelance translation practice. He is fully aware, however, that platforms like ProZ require humans to tease out "the finer points of language and its social wrappings" and recognizes that these "social wrappings are the stuff of Sakai's (1997) 'heterolingual address.'" He thus understands the freelance translation machine to develop "an interface connecting (and simultaneously separating) the homolingual and the heterolingual, the machine and the human" (Kushner 2013, 13). But what are the politics of this implied association of the homolingual with the machine and the heterolingual with the human? Is the politics of heterolingual address something more or less than an attempt to salvage *humanitas* from logistical operations?

On Seamlessness

Writing with Sandro Mezzadra, I have posed the question of the politics of translation as one of the rubbing up of concepts against material circumstances. Taking our cue from a comment by Gramsci on a speech delivered by Lenin in 1922, Sandro and I seek to derive a political concept of translation that reaches beyond the linguistic and cultural dynamics usually implied by the term. In particular, we are interested in how the question of translation becomes constitutive for political organization in a globalized world—an aspect of translation that is strongly evident in political struggles concerning migration and border crossing. We also seek to understand "the role of translation in the operations of capital" to provide a "framework for analysing the conditions under which translation can become a tool for the invention of a common language for contesting capital" (Mezzadra and Neilson 2013a, 276). Capital is a social relation that reduces all differences to a homogeneous measure of value, and, to this extent, it functions like a

regime of homolingual translation. The heterogeneity of labor—which means its fragmentation beyond the figure of the waged industrial worker—offers a counterpoint to this homogeneity but also poses the problem of organization across different borders and social, cultural, and economic boundaries. The challenge of translating between disparate and divergent struggles is one of the most pressing political tasks of the day.

Logistical supply chains provide a privileged point of intervention for this challenge. This is because they organize and connect labor forces in the name of capital. The aim of supply chain management is to make the operations of such chains as efficient as possible. Software optimization is a crucial part of these efforts, which must continually balance the leanness of the chain, or its ability to eliminate redundancies and function in a responsive just-in-time manner, against its agility, or capacity to route around disturbances such as resource shortages or labor strikes. As Tsing (2009) writes, supply chains focus “our attention on questions of *diversity* within structures of power” (149). They link up dissimilar firms, distant locations, and distinct labor forces, showing “that diversity forms a part of the *structure* of capitalism rather than an inessential appendage” (150). Logisticians dream of creating a seamless world, where borders and differences become not barriers to be overcome but parameters within which to establish efficiencies. In practice, however, they know that designs and programs encounter obstacles and frictions of all kinds and even contribute to their creation, from traffic bottlenecks to unruly workforces. The analytical temptation is to associate such disturbance with the human element in logistical transactions. Society and culture become interruptive forces that disrupt the efficiency of capital’s logistical operations, playing havoc with relations of interoperability and value creation.

Earlier I outlined how the question of interoperability relates to that of translation, but it is important also to register the link between translation and the production of value. In the *Grundrisse*, Marx famously draws a parallel between translation and the role of money in facilitating circulation and making possible the universal exchange of commodities. He writes about “ideas which first have to be translated out of their mother tongue into a foreign language in order to circulate, in order to become exchangeable”

(1973, 163). This is a familiar metaphor but it is worth considering how this logic of exchange relates to the question of capital's turnover, or the process of circulation by which it turns through commodity production to resume its original monetary form. It is this process of turnover that logistics seeks to optimize or render more profitable. The dream of seamless production is strongly linked to that of smooth and efficient circulation. Indeed, in contemporary global production networks, where objects and knowledge move constantly between distant sites, these processes become ever more indistinguishable. It thus seems to make sense to equate or draw a parallel between the homogenizing logic of capital's exchange and the creation of logistical standards and protocols that facilitate its turnover. The concept of homolingual translation provides a powerful tool for understanding both of these movements.

There is limited analytical grip, however, in equating homolingual translation with a mechanical action that is upset by the unpredictability of the human. The example of translation platforms like ProZ, already discussed above, shows how the social context of translation can contribute precisely to the appearance of a seamless movement between supposedly distinct and comparable languages. Perhaps here the Deleuzian notion of the machine, which describes a complex assemblage that crosses the human and the technical, is more applicable than that of the mechanism, which designates a technical apparatus. In any case, the social dynamics of translation and logistical operations appear inextricably linked. This link becomes evident in the historical context of contemporary capitalism, in which the production and transfer of knowledge is a privileged domain of value creation.

I do not wish to suggest that logistics provides the primary or the only ambit of contemporary capital's operations. As I have argued with Sandro Mezzadra (Mezzadra and Neilson 2013b), it is crucial to approach the logistical dimension of global capitalism in the context of its financial and extractive operations, which intersect the logistical domain in complex ways. This article points to a privileged link between the dynamics of translation and those of logistics. Doubtless it would be possible to make a similar argument about the workings of finance or extraction. But the case of logistics is interesting in this regard because it is a practice that enables and drives the material forms of global mobility that have made trans-

lation a pressing social and cultural issue. To insist on a relation between translation and subjectivity in the context of logistics is to raise the question of the labor of translation. It is to highlight the unrest, energy, and movement that are constitutive of translation as well as the bodily and cognitive relations that make it possible. It is also to emphasize the susceptibility of such labor to processes of abstraction and measure which are enmeshed in capital, state, and law. The tension between such abstraction and what Marx calls labor's "form-giving fire" (1973, 361) not only crosses bodies and minds but also shapes the heterogeneity of global space and time. Piecing apart these tensions and uncovering their political potentialities requires an analytical attention to the intersection of translation and logistics.

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