The Perfect Fit

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The Perfect Fit

in the GLOBAL
SHOE INDUSTRY

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Marco Polo imagined answering (or Kublai Khan imagined his answer) that the more one was lost in unfamiliar quarters of distant cities, the more one understood the other cities he had crossed to arrive there; and he retraced the stages of his journeys, and he came to know the Port from which he had set sail, and the familiar places of his youth, and the surroundings of home, and a little square of Venice where he gamboled as a child.

Italo Calvino, The Invisible Cities

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PREFACE

The Frailty of Commodity Chains

If you are reading this, it means that humanity has survived the COVID scare of 2020, the virus did not mutate, vaccination worked, and the event is remembered not as a cataclysm but as a great interruption; an interruption in our daily routines, rhythms, relationships, practices. We saw how toilet paper went missing from the supermarket, and we desperately bought brands we had never heard of before. We also switched our consumption patterns, hoping for Amazon and other digital merchants to get us what we needed without the inconvenience of human contact. But the convenience we were used to just wasn't available; packages were delivered much later than usual, if at all; items were not restocked, regardless of whether at a giant chain or a mom and pop shop. We had gotten used to the idea of a frictionless and seamless world, a world that was fully global, with no space not covered in some way by the planetary dream of total connection. This interruption directed our attention to the fact that the global world we inhabit(ed) wasn't exactly as we imagined it. Its stop did not signal that an automated process had come to a halt. Rather, it pointed us toward the fine-tuned work of making sure it never stopped again by paying more attention to the personnel, techniques, and devices that sustained and made the world "global" daily. It wasn't necessarily a world made anew, but it was certainly one that—paraphrasing Dominguez Rubio (2020)—depended on Sisyphean activities, the kind of work that has an end that only signals the beginning of a similar cycle to yield a similar result in the near projected future. The things we are used to having all have to be produced, developed, and distributed, and each of those points in a circuit involves a myriad of people, tasks, and objects that have to be assembled into something relatively coherent to operate in a seamless fashion.

This COVID-19 moment helps us see just how frail commodity chains are on a global scale. And while this vulnerability is easy to notice when it

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x PREFACE

comes to a *détente*, it invites the opposite question about the felicity conditions of commodity chains: How is it that the world of global commodities is built, made to work without breaking points, and kept at such constant pace that we have taken it for granted and accepted it as the condition of our contemporary consumer life? What would it look like to make the work behind the scenes visible?

There are a few candidates to answer this question. Some would point to the political economy and talk about tariffs; other scholars would argue for the role of regulations at the level of world commerce, or of the geopolitical struggle between the US and China for international dominance. In this book I want to suggest a different route, looking instead at the kind of infrastructural work necessary to make sure products (novelty goods in this case) are put together despite geographical distance. And I do this by exploring the work of designers, developers, production managers, fit models, trade agents, and "office girls" in the shoe industry, making sure South Brazil, South China, and New York City are in a contiguous plane.

Female footwear is distinctively individualized, yet at the same time widespread. Fashion supposes—by definition—the supply of constant novelty to consumers. It is a privileged arena to see how commodity chains are sustained, since it combines patterns of repetition and innovation, the monotonous and cheap labor of the factory with the expertise involved in the care of making craft-like products, highlighting a whole series of challenging disjunctures that need to be bridged. Shoe companies have privileged the just-in-time model of work, storage, and product turnover—a model that relies on flexible specialized contractors, which adds an extra layer of complexity in comparison to industries that depend on vertical integration.

Seeing the work of expert care, in situ and unraveling in real time, is a powerful reminder of how the world—as we learned during the COVID pandemic—is not globalized in any final or set way. For five years I followed the women's shoe industry at key clusters of ideation, development, and production. I was able to witness the work of doing globalization, as much as the work of undoing and unraveling it; every attempt to generate stable linkages can be erased or can break down. The work of design is a unique entry point, since shoemaking implies a kind of collective object-creation—with its seasonal emphasis on new products, only for those products to mutate and be consumed in the production process, and for the process to start again—that resembles the Sisyphean labor of keeping "the global" going each and every day.

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The pages that follow untangle what techniques, devices, and personnel were behind the scenes making sure shoes made it to consumers in the US, and in the process unravel another puzzle: what are the dynamics of cultural creation on a global scale? If we can think of infrastructures as ties that bind different locales, how are those relationships forged, maintained, and socially lubricated? What are the stories behind the technicians, designers, fit girls, agents, and managers who are usually made into the black box of commodity development, just a blip into the input-output chart? In answering these questions and making these stories visible, the book aims to specify how microempirical situations can give force or substance to a comprehensive account of global production. By the end of the journey, I hope I will have managed to understand not just the unfamiliar quarters that Khan and Marco Polo referred to, but also—more importantly—how much they are linked to the familiar comforts of our home.

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Chapter 1

FROM HEAD TO TOE

GLOBALIZATION, PERIOD

"My friend Herb McGinnis was talking."

This is how Raymond Carver opens his renowned short story "What We Talk about When We Talk about Love." Carver started many of his critically acclaimed short stories this way: we arrive at a stage that is already set, we must guess who these characters are, what their story is, what is actually going on. This suggestive rhetorical device drops us in the middle of the action, immediately forcing us to ask: what was there before? Is that imagined past the same for everyone?

So I wish to start this book by writing: globalization, period.

This is not a book about the beginning of globalization—when would that be, anyway? In the Mediterranean World of AD 1200? At the dawn of the Mongol Empire in the thirteenth century, or during the Islamic expansion into the Iberian Peninsula? At the European basin in the sixteenth century? During the imperial expansion of the nineteenth century? By the migration explosion before the First World War? Or after the recent transformation of the world of production and communication that has led to many books like this one? Who can possibly say? What we do know is that the stage has been set, the story has already started, and in no way have the players involved been invented anew for the occasion.

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The players constitute a large ensemble, one in which there are multiple agents, both human and nonhuman, collaborating to generate the global as a scale, not only by producing it but also working on maintaining it—and even repairing it when necessary.

And though this globalization story is not a linear narrative but one made out of multiple intersecting storylines and characters, it can be told through one particular cultural object, one that has historically served as a signifier for gender and class. This one object embodies a world of mobility, with materials and people circulating in multiple ways; it tells a story of labor markets and how it affects their movements; and it shows what it means to produce "original" objects in a fast-moving industry that relies heavily on copying and altering preexisting objects and ideas. It's also about the secondary actors behind this object: the infrastructural workers who support the creators' "heroic" work. This book shows how the creation of a cultural object intertwines capital and its movement, personal careers, the processes of coordination that come from producing a craft at a distance, and complementary and competing types of knowledge. In other words, this is a book on shoes.

This book can also be read as an *anatomy of a scale*, which reveals all the agents, processes, and forms of labor that craft the global from the bottom up. In that sense, it is most certainly about how a global craft (shoemaking) is developed, but it is also about how *the global itself is crafted*. Differently put, it is not just about *a* global craft, but about the craft of *the* global, its idiosyncrasies and the details of scale-making. What kinds of material and social processes put globalities together? What kinds of cultural and personal commitments?

Our characters here are designers in Manhattan preoccupied by trends, what young women wear on the streets of Brooklyn, the quality of sketches, or by how to best imitate a shoe from an expensive brand; a Brazilian technician in South China pissed off at the designer who doesn't know the difference between an Italian shoe size 37 and an American size 6; a Taiwanese developer trying to reproduce in cheaper materials the work he has just done for an American brand for their own designs; a Chinese pattern-maker who has to reproduce the measurements given to him for the upper part of a shoe and make it into a paper pattern by hand; or a Chinese fit model who has been trained by an expat technician to best understand how her foot can be used to standardize production for all women's shoes, anywhere they are sold. What all these people share is a viewpoint in which they know themselves to be complementary to other agents whom they need to coordinate with.

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And yet, each in his or her corner of the world, they all imagine themselves as "the" key player in developing a shoe, from beginning to end.

Like many scholars before me, I followed one of the *dicta* of global ethnographies over the last quarter century: to follow the object (Marcus 1995; Clifford 1997). Of course, if we take an infrastructural understanding of what an object is, we need to go beyond the object qua thing, and think also of the knowledges, discourses, forms, templates, tools, and people attached to and stored in them. My threefold strategy was (1) to follow how shoe development for the US market moved from Novo Hamburgo in Brazil to Dongguan in South China; (2) to trace the detailed and widespread knowledge contained in making a shoe; and (3) to follow the careers of the agents who aim to produce an ecology of taste.

WHY SHOES?

Studies of globalization have divided themselves rather neatly. For instance, there are a lot of studies about labor regimes. Thanks to them we know a lot about the gendered character of factory production in the third world, the role of managers in surveillance and control, the search for cheap and docile bodies to occupy places in the factory line, the role that gender and racial stereotypes play in the production of those bodies to begin with, the daily work rhythms and routines in such factories, the exploitative character and low pay that explain the cheap cost of clothing in the US, and the variation of the organization of work depending on whether the commodities involved are state-produced or private. There are also plenty of studies about the role of screens, forms, templates, and some face-to face-interaction in coordinating the generation of knowledge at a distance, whether studying high-end finance, the production of cars, the creation of video games, the work of engineers, or the support networks of scholars in the physical and social sciences.

There is, on the one hand, a robust scholarship on commodities with added value, one that mobilizes ideas and concepts from the sociology of knowledge and from social studies of science and technologies. On the other hand, though, there are very few studies that have explored how knowledge is generated in commodities with relatively low value added to them, such as shoes. This conception of shoes as products without much elaboration is not only a scholarly misconception; world agencies such as the United Nations also classify shoes as a low commodity chain, with light manufacture and low wages, considered only above animal products and byproducts. Studying

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shoes beyond—or before—the factory is a unique opportunity to show how these two scholarships can be combined to scrutinize knowledge generation in low-value-added commodities. Leather shoes are a particularly fruitful case in which to observe this, as they combine the search for cheap labor throughout the globe with the need for a particular kind of expert knowledge: embodied, tacit, informal, localized.

SPEED AND GEOGRAPHY

Shoes are not only the result of cheap labor; rather, they result from the encounter of relatively unskilled work with clusters of expert knowledge. And the geography of that encounter is disjunctured. The two kinds of work coincide in the same place usually for a few years, requiring different strategies to match the work of design and sample rooms and the work of factories, and the coordination, control, and supervision of the former over the latter. Thus, to the coexistence of these two kinds of work—one highly qualified, the other with very little expertise—we need to add a second dimension that contributes to the disjuncture and to the issues of coordination and knowledge transfer I explore in this book: the speed with which factories move, and the changing geographies of control and supervision that result from this.

To wit: much of the shoe production for the US moved from South Brazil to South China in the mid-1990s after a currency readjustment in Brazil made the cheaper part of the labor too expensive. Chinese shoe labor reached its apex in 2004—when almost 80 percent of leather shoes for the women's market were produced in Dongguan, in comparison to the 30 percent still being made there when I finished fieldwork in early 2017. Shoe production has receded to other parts of China and into Southeast Asia. This abrupt movement resulted in all kinds of problems of delegation and control at a distance, and it provides us with a unique case that looks at expertise networks and coordination issues within the production of a low-added-value commodity.

The Perfect Fit studies the design and development of leather shoes for the US women's market, focusing on the multiple coordination issues that result when shoes are designed and developed in between New York and Dongguan (China); on the intimacies that develop between workers with very different backgrounds and skills (US designers, Brazilian and Taiwanese technicians, Chinese and Taiwanese managers, and Chinese and Brazilian fit models); and on the diverse paths that materials and careers follow until they meet on

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the sample-room floor. Instead of another study of global exploitation—be it on the labor regimes of the workers or on the transnational elite networks of owners and managers—I look at another type of work: people in charge of design and development. These people are of course exploited and contribute to the creation of value as well, but a focus on them allows us to explore dimensions of the global production process that are usually occluded by the dichotomies organizing the scholarship.

This ecological view—in the sense that the Chicago School and later scholars of science, technology, and society (STS) have given to the term—is at the service of one important question: how is it that mass-produced shoes are developed as a "global" craft even before they enter the factory? That inquiry is at the service of a larger warrant: to understand the design component that makes relatively inexpensive, beautiful objects and results in customers in the US knowingly buying products from countries with inhumane labor conditions. To paraphrase Walter Benjamin (1974), while it is true that there has never been a document of culture that is not simultaneously one of barbarism, we know—when it comes to mass fashion—a lot about the latter and little about the former. To be blunt, we know why shoes are cheap but very little about how they are made beautiful.

In exploring the global craft of making inexpensive but compelling shoes, I show how knowledge is generated and mobilized. I do so by discussing the processes of apprenticeship of designers, technicians, and fit models; the tension between embodied and disembodied forms of knowledge; the possibilities of codifying and formalizing embodied and tacit knowledge; and the traffic in objects, forms, and people necessary to make correction and approval possible. What are the coordination mechanisms? How is it that things move? And how do they stay the same while being moved from one place to the next?

Answering these questions goes to the heart of an issue that has interested social scientists studying how social and spatial proximity have been able to substitute for vertical integration in production.³ Some of these sociologists and geographers have looked at the process of regionalization and how it relates to the outsourcing of production to the poorer areas of the world. While the regionalization process points at how the cluster of services, workers, and infrastructure generates a spillover effect in which firms learn how to coordinate with one another, outsourcing, on the other hand, refers to how the less elaborated and expensive parts of the process can be shipped to the periphery. Looking at these processes has been a proxy for interrogating the differential rates and speeds at which capital and labor are movable. Key to

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this literature has been the kinds of knowledge that can be moved or mobilized from one context to another. What some scholars have called "sticky" knowledge, which is costly to acquire, transfer, and use in a new location, is in this project a fruitful avenue to study how and when work can be moved from one location to the next (Von Hippel 1994). Part of what I'll be discussing in detail here is how this kind of knowledge—embodied, informal, tacit—can be reproduced, and by which procedures, in lower nodes of the value chain.

OF FETISHES AND COMMODITIES

Objects like shoes have been conceptualized and studied under two different overarching frameworks. Scholars of capitalism—following Marx—have decried the tension between the material and the immaterial character of production, the homogenizing effect of producing for a mass market, and how much procedures like branding (i.e., the signature on the produced object by a singular creator) generate alienation and hide the actual relations of production behind the commodity, underlining its abstract nature. The exchangeable quality of production for profit is presented as the actual reality behind a secondary ghostly presence, one made out of presenting the object as unique and, as such, potentially capable of attachment and identification.⁴

Yet some anthropologists (Kopitoff, 1986; Appadurai, 1986; Lee and Li-Puma, 2002), by bringing together the Marxist theories of production and the work of anthropologists like Marcel Mauss or Brosinslaw Malinowski, have instead focused on the meanings produced as objects circulate, and how even things produced under capitalism can still generate singularization—the personalized attribution of value beyond what it costs to produce something, instead of the homogeneity that one would expect from the production of commodities. While shoes are mass-produced, they still act as fetishes, in most cases as personalized markers of identity, and—as multiple documents of popular culture have shown—as sources of fantasy. (See the whole *Sex and the City* series, for instance, and its obsession with shoes at large and *Manolo Blahniks* in particular.) Designers know this, as they systematically go to shops in New York to observe the routines of friends who shop together—and sometimes of mothers and daughters, who have ingrained shopping in their everyday practices of satisfaction.

So instead of thinking of shoes either as commodities or as fetishes, this book focuses on those who work in producing the logic of difference—designers and developers—which bridges the two ways of conceptualizing

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shoes. In lieu of decrying and denouncing the reality of one as substituted by the other, the two bodies of the ghostly presence of production and potential consumption inhabit the shoe together. Rather than analyzing commodities to unveil the exploitation that is hidden in them, I want to unpack the commodity to reveal other relationships between people that the object, seen as dull and inert, is not revealing. I scrutinize the commodity to show the relationships between people—without assuming from the get-go that we will *only* find exploitative relationships, but keeping that assumption at bay or in suspense, to illuminate other relationships that remain hidden if we only look at the commodity as a container of exploited labor and not much else. It is not, in other words, that a schematic Marxist view gets it wrong, but rather that it takes a part (commodities' exploitative and alienating aspect) for the whole (the commodity as the crystallization of human relationships), in what it could be called a misplaced or misleading synecdoche.

There is of course an economic story to be considered when studying object design and development; it goes hand in hand with one about the realization of desires, and the story can't be exhausted just by the explanation of the relationships of production (on this see Stallybrass 1998). The history accumulated in the object—as I unpack it from its inception to its production—is one in which both people *and* objects are social beings. Looking at design and development allows us to think of production and identification in a different way, one that underscores the strategies for creating singularization (making objects unique or special, and as such not immediately substitutable for any and every other) *within* the process of commodity-making itself.

That cohabitation gives us a good entry point into what historian William Sewell, Jr. (2010) has called the subsumption of desire under capitalism. In his work on the textile industry in Lyon in the late eighteenth and the nineteenth centuries, the historian shows how the success of the early capitalist entrepreneurs in that industry depended both on their ability to coordinate production spatially and temporally, as well as on their providing goods that had consumer appeal in Paris—where the word for fashion was coined, after all. Moreover, his article exploring the beginning of design-oriented capitalism highlights a second dimension central to the kind of work undertaken in this book: how design adds value to the capitalist process without adding hours of labor for input. It did so through the work of Lyonnaise designers who would go to Paris to see what was in fashion and then adapt it a bit and put together their new materials. The parallelisms with the story I narrate here—at a different scale—are staggering.

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Looking at designers allows us to see a key agent in the lash-up between the already existing fashion objects and those only projected by trend forecasters, as well as between the taste of consumers in New York and the productive capacities of sample rooms and factories in Dongguan. Unlike most studies focused either on consumption or on labor at the factories, entering through the sample room allows us to complement the more traditional Marxist view of the political economy of commodity creation with the wondrous interpretation of the accomplishments of capitalism qua modernity and modernism. As advanced by Marshall Berman's (1982) reading of The Communist Manifesto, the idea here is that capitalism can thrive in crisis and catastrophe, that it has been an engine for both reinvention and self-destruction, and that within it tragedy and beauty go hand-in-hand. The last empirical chapter of the book focuses on the tragic dimension of the development of capitalism, as it explores the ruin-like character of what was left behind in Novo Hamburgo, Brazil, and the personal and collective consequences for those living there, as production for export to the US moved mostly to South China.

If the story of globalization is usually presented as one of progress and endless expansion, the last two sections of the book show the unfolding of the global narrative. Novo Hamburgo is the flip side of South China and of the mundane, yet extraordinary, activities of maintenance that make that region what it is. Thanks to that juxtaposition we get to see that (a) there is nothing set or teleological about how globalization unfolds; (b) the projects of order and classification that we associate with globalization are always on the verge of breakdown, almost like a monster storm blowing in on the horizon. In doing this research, I was able to witness the work of doing globalization as much as the work of undoing, unraveling, and disconnecting it—understanding how every attempt at generating stable linkages can be erased or break down.

AN ECOLOGY OF TASTE

I can imagine a lot of scholarly readers most likely don't care about shoes—or at least they like to pretend that is the case. And yet, if you are reading this book, there is a strong chance you have owned or currently own shoes from one of the these brands, which all produce their lines through procedures similar to the ones described here: Aldo, Nine West, Kenneth Cole, Tory Burch, and Michael Kors, among plenty of others. Shoes are ubiquitous everyday objects, all around us.

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The paradox about people who are not interested in fashion is that the less they care about it, the more dependent they are on fashion's expert systems. To put it bluntly, if you do not care about what you wear, there is a strong chance a lot of your choices are shaped by experts who make things closer and easier for you. You are more likely to look to the selections made by designers, trend forecasters, salespeople, and others who compete and coordinate to put together what I've called an "ecology of taste": the relatively finite number of items that are made available after an intense process of curation, selection, and decanting out of all the information available from trends, shopping trips, sales teams. Fashion is not about the management of scarcity but rather about the management of excess (see Abbott 2014) and the different procedures for deciding what to weed out and how to provide stability to an endless set of possibilities.

This process of soaking in can be best seen in a scene from the movie *The Devil Wears Prada*, in which Meryl Streep plays a fictionalized version of legendary *Vogue* editor Anna Wintour. Streep is shown two belts, which to the untrained eye look the same, by an assistant who says, "It's a tough call. They are so different." A second assistant chuckles at the comment, and—after being reprimanded—says, "They look the same to me. I'm still learning about this stuff." Streep's answer—which has been the source of multiple memes and videos online—highlights, synthesizes, and underscores the relationship between detachment towards fashion, expert curation, and choice. Referring to the sweater worn in that scene by the second assistant, she retorts,

This "stuff?" Oh. Okay. I see. You think this has nothing to do with you. You go to your closet and you select, I don't know, that lumpy blue sweater, for instance, because you're trying to tell the world that you take yourself too seriously to care about what you put on your back. . . . However, that blue represents millions of dollars and countless jobs and it's sort of comical how you think that you've made a choice that exempts you from the fashion industry when, in fact, you're wearing the sweater that was selected for you by the people in this room from a pile of "stuff."

The ecological approach (Dominguez Rubio 2015) I'm using to organize analysis and narrative takes into account the kind of knowledge that knowing "this stuff" generates. It does so via the observation of people in "this room"

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across time and space, looking at the work of people in charge of design but observing also *how* that backstage work happens.

In addition to the most obvious actors like designers and trend forecasters, the book shows at the empirical level all the nonmanagerial material care—as Leigh Star (1995) called it—that takes place within the craft itself, via the work of sourcing agents, leather and shoe technicians, fit models, and other usually minor and unobserved players (see, for instance, Entwistle 2009; Mears 2011; Wissinger 2015; Lantz 2016). We can then see how knowledge is coordinated, enacted, learned, and contested. We can also make sure we are reconceptualizing fashion not just as an immaterial practice but as a practice heavily dependent on the intimate knowledge of how materials (leather, lace, cow suede) behave.

Taking an ecological view means thinking of the particular and deliberate ways in which all the things that have to be placed to be able to produce shoes get there, as well as how they are arranged together. I take an infrastructural standpoint and pay attention to both human and nonhuman actors because this approach allows us to see how both object and subject participate in a particular kind of career pattern that ties them to particular assemblages. We get to see how materials arrive at the sample room in Dongguan, as well as the different kind of subjects that navigate their way there. This approach has the double advantage of allowing us to see firsthand the power of the little routines, standards, technologies, devices, and infrastructure that take time to set up. It also explains why capital cannot move somewhere with cheaper labor immediately, as it needs the supervision of these expert clusters of infrastructural knowledge.6 The second advantage is that the interconnection I conceptualized comes from how participants in these overlapping social worlds think about their own craft: over and over during fieldwork, designers, technicians, sourcing agents, and fit models said—in the words of Joao and Rose, two Brazilian developers—"Shoes are made by lots and lots of people!"

HOW DO YOU LIVE IN A WORLD OF SALIERIS?

The movie *Amadeus* presented Mozart as the pinnacle of an irreverent version of how culture is created in which novelty, creativity, inspiration, and originality go hand-in-hand. The movie used as a dramatic counterpart to his genius the figure of another composer, Italian Habsburg court *kappelmeister* Antonio Salieri, who was presented not only as envious of Wolfgang Amadeus

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Mozart but, more importantly for us, as derivative: a formalist who reproduced the same music over and over and over. These tropes are easy to find in different worlds of symbolic production, and its study has resulted in a robust scholarship within sociology. (To mention a few, see the work of authors as disparate as Elias 1993; DeNora 1997; Becker 2013; Bourdieu 1988; Heinich 1996.) What matters to this book is less the debunking of the genius theory of creativity than seeing how people who inhabit an industry that has since its inception organized itself around the idea of novelty, beauty, distinction, and originality cope with the incessant demand for new products to make it to the shops, as well as with the intricate structure of the shoe-producing world.

In transitioning from questions about ecology and its constraints and affordances, I explore in the first part of the book the interactions between the complexity of infrastructural work; how designers, technicians, and others organize their experience; and through which categories of attachment they do so.

Despite the recognition of working interdependence and the ensuing distributed cognition, agents participate in this world called into action by categories of uniqueness. Though authorship of shoes actually does not exist in the way we think of it (there is no signature, no outside recognition of the work of the many under the name of one), practices and careers are still organized by the passion for producing originality and novelty, even if under a different guise. It was common during my fieldwork to see designers and technicians excited as final samples and finalized shoes actually came back from the factory. Designers would claim particular shoes while walking with me on the streets of New York, letting me know, "That shoe is mine!" Technicians and developers—even though their work always came after the work of others—were excited about how some of their proposed solutions altered a shoe as to make it work.

This attachment at the level of craft-making is predicated on two relatively contradictory but related phenomena. First, while copying is a backbone of the industry, people in it are very secretive about their own work, design, sketches, and procedures. I had people ask me to please erase identifying details as much as possible as to not be recognized in interviews; office managers authorized me to take notes but not to take pictures of their facilities; designers asked me not to publish the sketch for a particular shoe (even after I explained to them the pace of scholarly publication), or the names of shops where they go to chase after the shoes they base their designs after, which they call "originals." To honor these requests, I have modified the names of

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specific companies and people in the book to ensure anonymity, although I use the real names of cities, provinces, regions, and public figures.

Second, that restricted version of originality goes hand-in-hand with this: the better the shoe, the more significant the brand, and the more successful the line, the more its authorship is hidden. Only insiders in the industry—who systematically poach designers from one company to the next, which makes the issue of protecting oneself against copying via secrecy more absurd for an outsider—know the head designer behind a particular brand within a particular company. As Roma, one of the many designers I met through fieldwork, explained: "Folks who buy shoes believe behind all this there is an older Italian gentleman who draws inspiration from thin air and just sketches."

GLOBAL INTIMACIES

The connection between the collective process of self-selection and originality, and the way both are sustained by knowledge distributed across multiple actors and locales, results in the recognition of that interdependence as seen in the gratitude and intimacy between designers and support personnel in China. The category of intimacy has been used to map out the interrelated yet distant geographies of how the liberal ideal of citizenship, indentured servitude, colonialism, and slavery were connected in the eighteenth and nineteenth centuries (Lowe 2015), as well as to show the face-to-face ethnic links that sustain the fashion industry behind the scenes (Moon 2014). Little has been made of the fact that intimacy is built both face-to-face and at a distance, and that it crosses over geographical and ethnic lines. Intimacy is sometimes easier to sustain than when constantly in the same location; and it is of a more intense kind than intimacy between coworkers in the same location. This intensity derives from designers arriving in China looking forward to hanging out after working hours with their temporary coworkers— Brazilian and Taiwanese technicians, Chinese office girls—as well as looking for former coworkers who may also be in town. They also travel especially for weddings, and attend end-of-the-year company parties together. Kin, friendship, and intimate relations work as "the connective tissue" that makes globalization possible.

Putting a bigger spotlight on kin, friendship, and intimate relations supposes a shift from narratives treating globalization as the byproduct of just organizational and politicoeconomic arrangements. As the book shows, scale-making is not just a matter of standards, networks of expertise, infra-

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structures, and the like, but also a process that takes place through the intimate lines and vectors created by kin and affective relations.

Intimacy and distributed cognition are closely related, which points to another dimension explored in this book: knowledge is distributed across multiple individuals, forms, templates, devices, and objects at a *global* scale. Most classic studies of how knowledge operates through multiple means and human and nonhuman actors looks at a relatively self-enclosed ecology of how this happens, so there are numerous studies of airplane cockpits (Hutchins and Klausen 1996), engineers solving working problems (Leonardi 2010; Vaughan 1996), or naval ships' maneuvering operations (Hutchins 1995).

One of the warrants for writing this book is to show the collaborative and social production of knowledge on a different scale, extending the classical "worlds/conventions" (Strauss 1978; Becker 1982; Star 1990) approach at a different scale. This necessitates showing both the labor of microcoordination at the level of work practices, as well as the practices that allow for the flattening of the world, the production of the global scale as coming from micro, everyday practices. We see this especially in chapters 4 and 5, where I show the work of generating standards for the shoe industry and how they stem from the interaction between a fit model's actual foot and technicians' careful craft. There are multiple problems of translation between differential rhythms of production and geographies. Some of these are about enrolling actors so they think of the task at hand as the same; some are about producing scalability and translatability, via the stability of the object that gets circulated and moved between locales. In elaborating these challenges, I underscore how The Perfect Fit's analytical purchase is not just about putting shoes together but rather about how the global scale itself is put together and maps out what is at stake: understanding the constant, expert care and coordination work at the micro level that allow for the global scale to actually function, even for a lower-value-added commodity like shoes.

This relationship has, of course, a historical dimension. As hinted earlier, global shoemaking was actually geographically segregated until the mid-1990s, with two clear-cut circuits: one for US mid-tier markets, which used expert labor from Spain, Portugal, Italy, Mexico, and Brazil; and another circuit for cheaper shoes that was put together by Taiwanese entrepreneurs (on this see Hamilton and Kao 2017) and united mainland China with Hong Kong and Taiwan. While US buyers made sure Elche, León, Novo Hamburgo, Veneto, and Estoril were all part of the same map, all of them existed as part of a different world than Dongguan.

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The currency crisis of Brazil in 1994, which ended up revaluing the local currency against the dollar and consequently made the cost of labor "too expensive," gave impetus to US buyers and Brazilian factory owners to explore what would it be like to produce shoes in South China. This relationship was further cemented in 2005, when a second currency crisis killed large-scale production from Brazil for the US market, resulting in the migration to Guangdong province of technicians, developers, fit models, and other kinds of expert work (Kuhn Jr. and Nunes 2012). New York, Novo Hamburgo, and Dongguan all coexist in the same space (as Law 1986 and Hetherington and Law 2000 would have put it); space is not a given, an empty container, but it is rather made and includes problems of distance, coordination, the stability of objects, and the passage points they have to go through.

Exploring the interrelation between scale, knowledge, coordination, and intimacy results in a few important sociological lessons—which I develop more in detail in the conclusion. This allows us to disentangle and re-entangle major taken-for-granted categories usually thought of *a priori* in binary terms, like global and local; the difference between design and production; and how the geographical division of labor has been thought about after the distinction between industrial districts and outsourcing. I am interested in looking at scale-making projects within the development process itself and how this examination results in a different understanding of those binaries.

A LABORATORY OF COMMODITIES

At the theoretical level, this book puts the framework of laboratory ethnography developed by sociologists of knowledge and STS scholars in dialogue with commodity-chain literature and the "follow the thing" approach. Ultimately, I aim to show that globalization is a patterned and unequal process, but it does not happen unidirectionally (on this see Carrillo 2017), nor in neatly divided geographical locations. Although these approaches are by no means entirely compatible, I rely on them to steer me in certain directions of importance.

Like historians of the commodity chain, I emphasize how production and circulation happen in multiple contingent ways, rather than by executive fiat or managerial omniscience. Whether studying the attempt to replicate rubber production in Amazonia (Grandin 2009); how different strains of plantain became the bananas we consume in our supermarkets (Soluri 2005); the interrelations between slavery, sugar plantations in the Caribbean, and

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middle class consumption in Britain (Mintz 1985); the interdependence of cotton, slavery, war, and state-formation in the US (Beckert 2015); the unexpected changes in gender roles in rural Mexico because of the closure of an Illinois appliance factory, and its relocation on the other side of the border (Broughton 2015); or the multiple ways in which coca became cocaine (Gootenberg 2008), this scholarship has emphasized the work of intermediaries in building transnational connections, and how objects are used to trace deeper, hidden relational stories and meanings.

Like anthropologists who study value chains and cycles, I take as an orientation how to think of the production of an object as a career, and the different valuation regimes under which a good can be qualified. When and how are objects commodities (Kopytoff 1986)? When are they decommodified (Appadurai 1986)? When does a thing become an object (Gell 1998; Dominguez Rubio 2016; Gordillo 2014)? When is its value predicated on uniqueness (Velthuis 2005; Karpik 2010; Callon et al. 2002)? When is it predicated on personalization (Kopytoff 1986)? How do particular agents coproduce the object as a multiplicity able to be different things in different contexts (Tsing 2013; Bestor 2004)?

From materiality-centered cultural sociology I've been inspired by work that has explored objects' role in affording and constraining particular lines of action (Molotch 2003; Zubrzycki 2011); the extent to which objects are docile or unruly in their interaction with the infrastructure they generate (Dominguez Rubio 2014); the intersection of multiple—expert and nonexpert—accumulated kinds of material knowledges necessary for the construction of infrastructure (Mukerji 2009, 2010); and my own previous work on how selfhood and particular versions of an object become intertwined over time (Benzecry 2015).

From laboratory studies and the scholarship on science and technology studies, I take their interest in mapping out the connections between multiple sites, not as something taken for granted but as something that has to be empirically traced and unraveled (Latour 2005). Sometimes this happens by looking at the role of virtual microstructures and scenes that produce connections between the sites (as in the work of Knorr-Cetina and her collaborators). The literature on standards and commensuration that has developed from this scholarship has looked at how standards are produced, and yet they are constraining, generating infrastructures and patterns of action attached to them (Bowker and Star 1999; Lampland and Star 2009; Timmermans and Epstein 2010).

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While I know these literatures are disparate and do not cohere into one body of scholarship or a tradition, I would like to highlight how much they all share the emphasis on practice, on the role of routines, and on the centrality of understanding the material world both as a source of resistance and as a processual accomplishment. I believe this choral take on theories in the plural matches well with the multiple agents and geographies presented in the manuscript.

Ultimately, this book aims to bring into the sociology of (global) cultural production insights from the pragmatist-inspired sociology of work (Blumer 1969; Garfinkel 1967; Hughes 1971; Strauss 2001) that have since been developed and turned into common knowledge within the sociology of knowledge and Science and Technology Studies (STS). I'm thinking here of concepts like *translation, inscription, invisible labor, immutable mobiles, infrastructure,* or *boundary objects.*⁷ Low-level commodity production is not usually thought of as a place where knowledge is produced; rather, it is studied either through a global value-chain approach or an attention to shop-floor politics. In this unexpected match between case and theory, I aim to defamiliarize the work of coordinating tacit and embodied forms of knowing.

IN THEIR SHOES

Hasta que choque China con Africa, te voy a perseguir Hasta que choque China con Africa, te voy a preguntar

Sumo, Lo Quiero Ya

Much as the verses in the epigraph for this section, to understand the movement of commodities around the world (until China and Africa collide, the lyrics on the epigraph say) I developed a strategy in which I could both chase the process of shoemaking (*te voy a perseguir*) and inquire into it (*a preguntar*). When studying globalization, the theory-method nexus has usually favored macrolevel approaches. Even those that focus on the micro have emphasized it as an *explanandum* of the macro. Some scholars have worked to generate large-scale accounts of commodity production or network formation (as in the work of Manuel Castells or Gary Gereffi and his collaborators, most noticeably Bair 2009), whereas others have used the ethnographic yet "localized" study of how global forces act in particular locales (mostly Michael Burawoy and his students; see Sallaz 2009, 2019; Hanser 2006; Thayer 2001). A few recent studies have focused on the "production of" culture,

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knowledge, and subjects—or their contestation—by looking at the role of state and market actors in changing colonial and postcolonial contexts.⁸ Less attention has been given in sociology to "friction" (Tsing 2005), the contingency lurking within every link of the large-scale chains, and the notion that each step along a commodity chain is an arena of its own, with actors *in micro* competing and collaborating in real time. So my methodological choices for this book have been anchored in one organizing question: What happens when we look at "the global" as something that needs to be maintained by actors worried in the quotidian about its potential breakdown? What are the routines, techniques, and practices that sustain the scale day to day? And what happens when they do not work?

To trace this, I put myself in the shoes of multiple agents, sometimes for long periods. For instance, I "shadowed" designers for over a year, going with them to shopping and development trips, attended review meetings, sharing their working days. On the other hand, I spent two or three days with sourcing agents trying to figure out their daily routines and understand how they established the worth of one piece of lace over another. I also put myself on the other side of the counter and traveled with an Italian team trying to sell leather to Chinese wholesalers for their domestic market. In between, I spent several days with technicians, sometimes on-site looking at their work, be it with the fit models or at factories supervising that final samples and the shoes to be dispatched look and feel the same; other times I was off-site, usually talking with them over a meal for a few hours—usually in their homes—about their life stories and work routines.

Doing this kind of ethnographic research meant working on- and off-site. It also meant that—while always privileging firsthand observation of routines and interactions—some of the data I produced was the result of "being there" and seeing, hearing, and touching with my own body. When I could not be there, I relied on multiple accounts of work routines as communicated by different agents. And by "different" I mean that I tried not only to corroborate how work happened via other agents from the same team (if the designer said something, I checked with the technician, the fit model, and the developers and managers when available) but also to ask other designers, technicians, and fit models if they worked in the same way.

Lastly, I was shown a lot of routines and spaces. When producing data in that way I adopted what sociologist Margaret Kusenbach (2003) called "going along," focusing mostly on the cognitive, perceptual, and mnemonic evocations generated by the agents walking me along their daily routine, still in

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what naturalist ethnographers call their "natural setting," but organizing the experience of it so as to help me make sense of "what was going on."

Research for this project began in 2012, when I started looking at images from a trend-forecasting site, in a category it called "Global Streets"—where people from different parts of the world posed and served as a resource for designers looking for inspiration for designs and sketches. I collected 3,827 pictures ranging from May 2009 to May 2012. Later in 2013—as I described above—I started "shadowing" a New York design team, visiting their offices weekly, attending some review meetings, and accompanying them on shopping trips, first within New York and then to Miami, Los Angeles, and later—twice in 2014—Europe. In some cases—following the back-and-forth of approval process of three shoe styles—I had access to email communication between designers and their Dongguan office. I also attended two corporate meetings on the West Coast, as well as trade fairs in New York, Miami, and Milan, seeing how designers looked at materials to use in their designs.

My first trip to Dongguan took place in June 2014. I went there with the design team to see their development process. I returned in December 2014, and then twice a year in 2015 and 2016. I spent a total of 107 days in Dongguan during those three years, moving slowly away from the design team into the work of trading offices, sample rooms, and showrooms. I later interviewed technicians, managers, developers, and fit models as well—seventy-nine in total. When possible, I interviewed the designers from the team I followed later, as they were working for other companies. This follow-up enabled me to see how much the work routines I had observed and learned applied in other contexts. I also interviewed designers from other companies as to better compare.

As I encountered the work of Brazilian technicians in South China, I slowly started focusing one part of the research there on their life stories and on the process of how they transferred their knowledge between contexts. Encouraged by them, I pursued a third geographical site, and during the summer of 2016, I conducted research in Novo Hamburgo, in Rio Grande do Sul, and surrounding areas, where the export shoe industry had its heyday during the 1980s and 1990s. In total, I conducted fifty-two semistructured interviews with Brazilian technicians, fit models, and agents at both sites. I also undertook archival and visual research in the Vale dos Sinos region, mainly at the Sindicato dos Trabalhadores do Calçado, and used secondary sources from a local specialized journal, *Jornal NH*. At that site I enlisted the help of a local research assistant, Francieli Ruppenthal, who continued the archival research.

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Much like the dean of global ethnography Ulf Hannerz (Hannerz 2003, 2004) has discussed, this kind of ethnographic work constitutes a polymorphous engagement, where not only the ethnographer has to be in multiple locales and show the linkages among them, but also in which the classic character of long-term immersive work in one site gets transformed into something else: the constant in and out of sites; the multiplicity of activities observation, conversation, reenactment—and forms—face-to-face, text message, Skype, communication via research assistant—used for staying in touch with people in the field; as well as augmentation of something that is intrinsic to the practice of qualitative work itself, its iterative character. The complexity of studying a site that has porous borders and gets drawn and redrawn as questions get established and then refined is magnified by the lack of one actual site where things happen. As I've hinted already, they happen in parallel in multiple sites, but also on screens and sometimes between the same group of people (designers, for instance) throughout multiple contexts: a shopping trip to Los Angeles, an email exchange with developers in Dongguan, a meeting in New York to decide on the sketches to become prototypes, or physically on China or Brazil to work with local teams of developers and technicians.

The modesty of this kind of exploration (Hannerz 2004, 10) or ethnology (Holmes and Marcus 2006, 23) and its relatively limited character from the get-go is also the result of the fact that unlike the more traditional ethnographies of global work, this one studies up (Nader 1972; Gusterson 1997; Ho 2009; Ortner 2010). The Perfect Fit focuses on actors with a certain amount of power and expertise, who in a lot of cases granted me only indirect and absolutely anonymous access to the experiences of their social worlds. Doing this kind of fieldwork was odd at first for those of us trained in the classic techniques of naturalistic observation; it felt like being deployed and constantly waiting. Some days I saw three people and ended up with six hours' worth of tape; some others had a twenty-minute morning conversation and a bunch of missed appointments. Sundays were particularly fruitful days, as most people had the day off and wanted to meet for lunch or breakfast (Brazilians, usually at a German place owned by a Brazilian), visit Starbucks (Chinese fit models), hang out at the hotel (US designers relaxing from work), or visiting them for a whole day with other co-nationals while enjoying a barbecue (Brazilians again).

My access was also intermittent and dependent on intermediaries. This was especially true with some of the Chinese fit models. While the industry

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operates on "work" English—a relatively limited and task-oriented version of the language—and most other people within the industry operate fully within that language in work contexts—that wasn't the case for a lot of the fit models. Whenever I saw them outside work, it was together with an intermediary, either a technician they had worked with or a Chinese expert worker with better English skills who served as a translator and third participant in the conversation. Those interviews became more like long unfolding polyphonic conversations than the classic one-on-one conversation going through a questionnaire.

WRITING AN ETHNOGRAPHY; BUILDING A STUDY OBJECT

There's doors and . . . more doors.

And behind all the doors, there's another inside, and another outside.

And things happen, happen, HAPPENING. It never stops.

Emma Donoghue, Room

This epigraph captures the sheer sense of exhilaration that comes from doing this kind of ethnographic work. Every scene opens up a potential new path for research, and with it a whole series of questions: Shall I learn how to do technical work on a shoe, like one of the senior technicians suggested? Should I follow the sourcing agents to the markets? Once in the markets was it smart to try to understand how leathers make it there? And if I did that, should I have accepted an invitation from an Italian tannery, the showroom of which I visited in Houjie, to go back to Arzignano and see how they process the material? And once there, should I have taken advantage of my Argentinean contacts, and gone to Luján to see where the leather carcasses that are treated in Italy and then used in Dongguan come from?

Every new contact, every new observation—each long and engaging conversation with someone from the industry—opened up a new avenue for exploration that led to one important question for ethnography: where does one stop? Why? How? One of the challenges that accompanies this kind of qualitative scholarship is how to best capture and reveal the bewildering childlike excitement of what happens without resulting in an incomprehensible collection of details without an order or a conceptual story to tell.

The key to understand how to confront this issue, as advocated by my colleague Andrew Deener (2018), might be to explain not the *process of empirical*

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inclusion (as we see in appendixes where we read about the heroic character of the incredible amount of fieldwork we've done, resulting in thousands of pages of notes and transcriptions) as the only way to demonstrate the reliability of our data, but rather to focus on the *process of narrowing down the case*. Doing so allows us to better understand the research process as a collective and institutional project that involves colleagues, students, reviewers, mentors, and editors.

And I want to quote Deener (2018) verbatim here:

How researchers learn to exclude certain subjects, points of data, and alternative analytic themes is difficult to recount and assess, but it is of equal importance to constructing cases. Empirical errors occur when ethnographers misstate or misidentify basic facts as they relate to subjects, situations, events and locations. Empirical errors are different than the observational and interpretive omissions necessary to narrow down and hold constant the units and levels of analysis. Ethnographers should be very concerned about getting the facts right, but they should be equally concerned about getting the case right.

I started with a perspective that combined the literatures on global value chains, outsourcing, and creative industries. I ended up with a laboratory-studies and materiality-friendly account of how global collaboration happens. Following an object meant following also the translation and diffusion of ideas, capital, and work. The focus on designers and office workers slowly produced a different picture of globalization than if I had followed—as other scholars have already done with great gusto and success—the transnational elite or the sufferings of factory or domestic workers. While some of the key ideas were there from the outset (questions about originality and replicability, about how to disembody and recodify informal types of knowledge), they gained definition, logic, and coherence as I encountered the right kinds of questions and the conceptual apparatus to make sense of them. Much as when developing photographs, time adds definition and contrast, adding much clarity to a phenomenon that has been there since the beginning of the project.

In terms of writing, this means that sometimes the book provides copious detail, but that in others it presents the process abstracted instead. Some of these choices have to do with the tension between opening up the description

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too much versus using the material to advance an argument; sometimes it was about the dullness and opacity of doing ethnographic work on these settings and how little some of the scenes "communicate" on their own. In fact, this is what happened at the beginning of the project, as I was trying to make meaning in traditional ethnographic ways of designers sitting in a room, looking at their screens while listening to podcasts and music on headphones. Without access to their exchanges, there was little to do; without being present in their meetings, there was little to communicate. The same thing happens—albeit differently—in the scenes where shoes are being fitted by technicians on fit models: there is nothing paradigmatic, revealing, or "charismatic" about those moments; it's only the accumulation of scenes and their construction as a process that helps the reader understand how fitting works and why it matters to projects of scale-making. Thinking both thick and thin means that sometimes the aim is not the richness of data but rather what Brekhus (2005) calls "thin description," aiming analytically to extract general forms from particular contents, committing the ethnographer to focused observation and developing analytic aims on the available data.¹⁰

OUTLINE OF THE BOOK

The Perfect Fit evokes a journey that starts at a mall in Los Angeles and ends in Dongguan, with stopovers in New York, Hong Kong, northern Italy, Ho Chi Minh City, and southern Brazil. The book is divided in three parts; it has six chapters, a preface, a conclusion, an interlude, and a coda. In the first part I focus on the work of designers, highlighting in chapter 2 all the information they assess and evaluate when finding disparate materials to put together a collection, as well as the noneconomic ways they are rewarded for their work. Chapter 3 focuses on how a shoe goes from sketch to finalized object, to demonstrate the work designers perform and to highlight all the background work by other actors designers have to take for granted to do their work seamlessly, along with the myriad procedures to make sure distance is not a deterrent to craft-making. The book's second part focuses on the work that has been "black-boxed" in the first part, concentrating on opening up what kind of knowledge disputes exist in shoe making, highlighting the work of inside competitors and collaborators (technicians, who build and measure lasts and molds) and the negotiations between different groups about what a shoe is.

As *The Perfect Fit* continues, chapter 4 focuses on fit models and how—as the a priori less-important part of the infrastructure—a female foot is at the

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center of a worldwide assemblage of standardization. Chapter 5 expands on the centrality of fit models by looking at their jurisdictional struggles with technicians, and all the work necessary to "translate" their "ideal" foot to the world of consumers.

The third and last part is preceded by an interlude that presents us with four life stories to show the loss of centrality of Taiwanese entrepreneurs and specialized workers in South China, and their replacement by Brazilian managers and technicians, who moved as US women's shoe production left Novo Hamburgo in Brazil for Dongguan. Chapter 6 explores what happened to Brazil's industry once US production left, scrutinizing the variegated relationship between the active process of ruination and its memorialization.

If chapters 2 to 5 are about sustaining and maintaining, chapter 6 is about the coming-apart of the hard work of keeping a location "global"; looking at what the erosion, decay, and breakdown of globalization looks like. Moving from Dongguan and New York to Novo Hamburgo offered an opportunity to see the material and personal traces that the undoing of the global leaves behind. And the two stories go better together, when we want to highlight—paraphrasing Stephen Jackson (2014)—the hidden history of repair, maintenance, and sometimes breakdown that have always sustained scale-making projects like globalization. The coda takes stock of that history, wondering whether Dongguan will soon become an ex-global cluster, replaced as such by Ho Chi Minh City, and suffer the destructive fate unleashed on the Vale dos Sinos.

Chapter 7 wraps up by bringing back some of the themes from chapter 1, revealing what can be learned about globalization when looking at knowledge generation in a product as quotidian—and with as low aggregate value—as a shoe.

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