Preceding pages: The 1.5-million-square-foot IKEA distribution center, Tejon Industrial Complex

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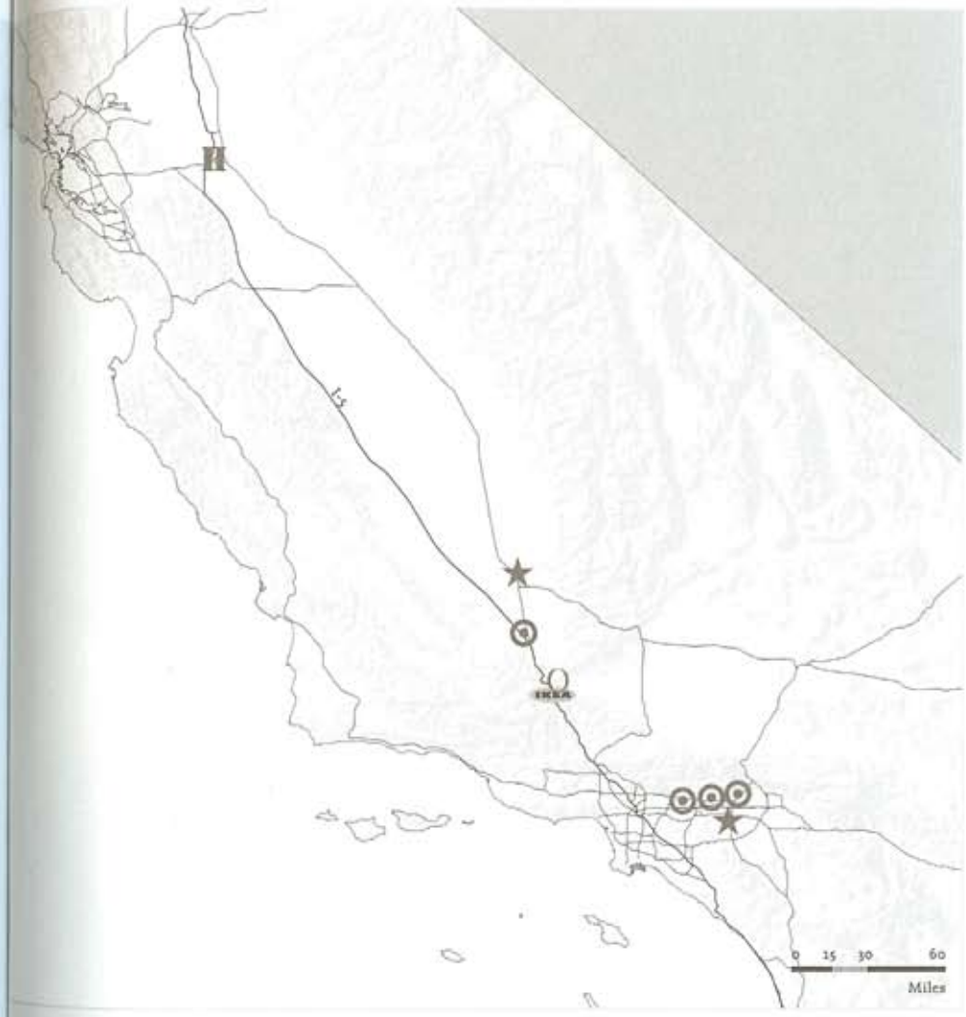
CONSUMERS GONE WILD

DISTRIBUTION

Descending out of the "Grapevine" north of Los Angeles, the I-5 is a river of asphalt traversing a mountainous landscape of suburban communities, day-trip ski areas, and crystalline reservoirs. As the freeway exits the mountain pass to make a four-hour beeline through California's Central Valley to San Francisco, the Tejon Ranch Industrial Center comes into view. Rows upon rows of shipping containers, lined up like nursing puppies along a linear array of loading docks, feed 1.7 million contiguous square feet of fully automated warehousing. Emblazoned with signs saying "IKEA," "Oneida," and "Petro," Tejon Ranch Industrial Center is the warehousing and distribution center of the future: a super-size box building and trucking "amenity" spread over cheap land like an unleavened pancake.

The Tejon Ranch Industrial Center marks the southernmost outpost of the latest territory to replace downtown Los Angeles as the container transfer hub linking the Ports of Los Angeles and Long Beach with the rest of the continent. The Ports of Los Angeles and Long Beach are monstrous, dominating North American shipping; together they receive more than three times the cargo volume of the next largest American port, the port of New York and New Jersey.[1] But this size is increasingly a liability making these ports potential targets of environmental regulations, labor demands, and terrorist attacks. By siting these new distribution centers outside of the city, shippers create a buffer of goods to hedge against

[1] United States Department of Transportation, "Freight Facts and Figures 2006," Figure 2-7. Top 25 U.S. Foreign Trade Freight Gateways by Value: 2005 ($ billions), 2006, http://ops.fhwa.dot.gov/freight/freight_analysis/nat_freight_stats/docs/06factsfigures/fig2_7.htm.



Super-distribution centers

Source: author and companies' Web sites

contingencies while reducing their reliance on the San Pedro ports, taking on shipments from ports in Seattle, Oakland, San Diego, and other points on the West Coast. These retailers, which include some of the biggest players in the American economy—giants like Wal-Mart, IKEA, Home Depot, and Target—array their distribution centers across the valley floor like so many tomato and alfalfa fields.

Regardless of its desire to suppress the fact, Los Angeles has long been a port town. The ports of Los Angeles and Long Beach—together the largest in the nation and ranked in the top ten in the world in terms of container handling—feed the collective production of the Far East economies of China, Singapore, and Taiwan to the city, and beyond it, to the United States.[2] According to the online journal *Industrial Real Estate*, "the nation sucked in more than 120 million tons of containerized merchandise in 2004, up 140% from 50 million just a decade before."[3]

Slowly moving a giant, post-Panamax vessel carrying up to 12,000 shipping containers from one deep-water port in Hong Kong to another in Los Angeles is relatively uncomplicated and so cost-effective that for many years this has been enough to offset the costs of "drayage" (moving the containers off ships to warehouses and then to retail outlets) either by rail or by truck. Massive underwriting of the goods-handling infrastructure by local governments has kept the cost of shuttling goods rapidly through the Southern California metropolis low. Running adjacent to Alameda Boulevard, the $2 billion, 23-mile-long open trench of the Alameda Corridor conveys trains from the Ports of Los Angeles and Long Beach to rail yards near the city's downtown and on to points beyond in Kern County and the Inland Empire. Allowing double-height, stacked trains to pass while eliminating traffic conflicts at over 200 intersections between the ports and downtown, the corridor mitigates many drayage problems such as unfortunate collisions between passenger vehicles and trains full of televisions, blouses, and microcomputers. The corridor's effortless, below-grade flow through the city encourages the myth that consumer goods move freely around the world, benefiting everyone who gets their cut.

Roughly 60% of the goods coming through the Ports of Los Angeles and Long Beach are distributed to the Southern California region, while only one-third make their way onto local railroads (most notably via the Alameda Corridor) for distribution to the Midwest, South, and East Coast.

It is this character as a throughput city that has ultimately marked the landscape of Los Angeles more than water, more than cars, and more than movies. The transfer of shipping containers from ships to trains, trucks, container transfer buildings, retail outlets, and even homes, has been supported by a particularly voracious and narcissistic consumer whose ideal home is the city of Los Angeles itself, but whose influence radiates outward along truck routes and rail lines to the rest of the country. Shipping containers, the main actors in this supply chain logistics ballet, perform the task of squeezing the diverse material variety of the world's production—the global Play-Doh of consumer goods—through millions of 8' X 8' X 20' TEUs (Twenty-foot Equivalent Units). The appetites for material wealth known in the Middle Ages as gluttony, avarice, and covetousness— refigured today as super-sizing, consumer desire, and status consumption—have become smooth, featureless, and manageable through containerization.

Oneida distribution center, Tejon Industrial Complex

Tejon Industrial Complex

[2] Port statistics compiled from the U. S. Department of Transportation's Bureau of Transportation Statistics for 2004.

[3] Matt Hudgins, "Rising Tide of Imports" in *Industrial Real Estate*, April 1, 2006, http://nreionline.com/mag/real_estate_rising_tide_imports/index.html.

Containerization is brilliant at masking material disparity. The perfect foil, shipping containers represent the sterile latex barrier between the inequities of globalized industrialization (child labor, indentured servitude, subsistence living) and the fetishized individuality of the consumer—the belief that our possessions define our identity, indeed, that such an identity even exists.

The movement of consumer goods through the city creates an urban dialectic, as humans compete with their possessions for open space on roads and in the domestic interiors in which goods eventually accumulate. The physical impact of freight traffic on the city of Los Angeles has been to void out and genericize the externalized built environment while at the same time exerting an opposite force of hyper-internalization consisting of the construction of fantasy environments within the private realm, a force based almost exclusively on the accumulation of consumer goods. To walk down a street in Los Angeles is to become isolated in a public, transitory space of blind facades and low, blank walls where the only escape is to slip behind the line of private property, into the control space of consumer constructs. It is no surprise that the city that distributes such goods also fabricates the images of their desire. Hollywood may exist solely to excite the appetites of those that live outside the city, thereby feeding the city's true economy of relentless imports. Beyond the walls of the studio, much of the city is used as a film set, large quantities of empty enclosed space acting as stages for the production of images—a counterpart to the empty box buildings that warehouse and distribute the goods themselves—the talismans of consumer desire that accompany the image.

Any utopian image of Los Angeles's freeways is undone by the heaving eighteen-wheelers that shuffle goods from port to destination, posing serious risks to the safety of passenger vehicles, mere bulbs of metal gathering like small pinballs between troughs of container-laden trucks. Small vehicles are stung by sharp metal debris, bed-sheet-sized tire blowouts and a lack of visibility. The result is that the much-exalted experience of driving the area's freeways has been replaced by a kind of furtive stop-and-go along fortress-like walls of container-laden trucks bumper to bumper from Los Angeles to Seattle. Surface streets do not fare much better. Several transportation projects are on the boards today in Los Angeles to reshape roads, alleys, and driveways in older urban core areas to accommodate truck movements. Entire neighborhoods and interstate highways are sacrificed for the movement of goods. In part because of the purely spatial and physical strains placed on the city, the trend away from agglomerated infrastructural projects toward a more fragmented approach is well underway.

Too Late for Just-in-Time The new warehousing super-centers of Kern County represent a fundamental shift in shipping. The unprecedented rise in the volume of goods moving through container ports has negatively impacted port cities like Los Angeles, generating enormous amounts of pollution and traffic, and new laws—some already in place, some still being drafted—limit the rate and density of container movements throughout urban areas. In 2006, after the Southern California Air Quality Management District demonstrated that San Pedro (the city surrounding the Port of Los Angeles) has the highest rate of lung cancer in California, a new "Green Ports" plan was enacted, demanding that dock-side electricity be provided to ships so that they can turn off their diesel engines while in the port.[4] Rising costs of fuel have further degraded the efficiency of ground shipping. Demands by organized labor are impeding the relentless round-the-clock operation of the ports. On the West Coast, a longshore workers' strike in 2002 underlined the vulnerability of "just-in-time" goods movement through Los Angeles and other ports that closed over a five-week period.

[4] Janet Wilson "A Trade Boom's Unintended Costs," *Los Angeles Times*, April 23, 2006.

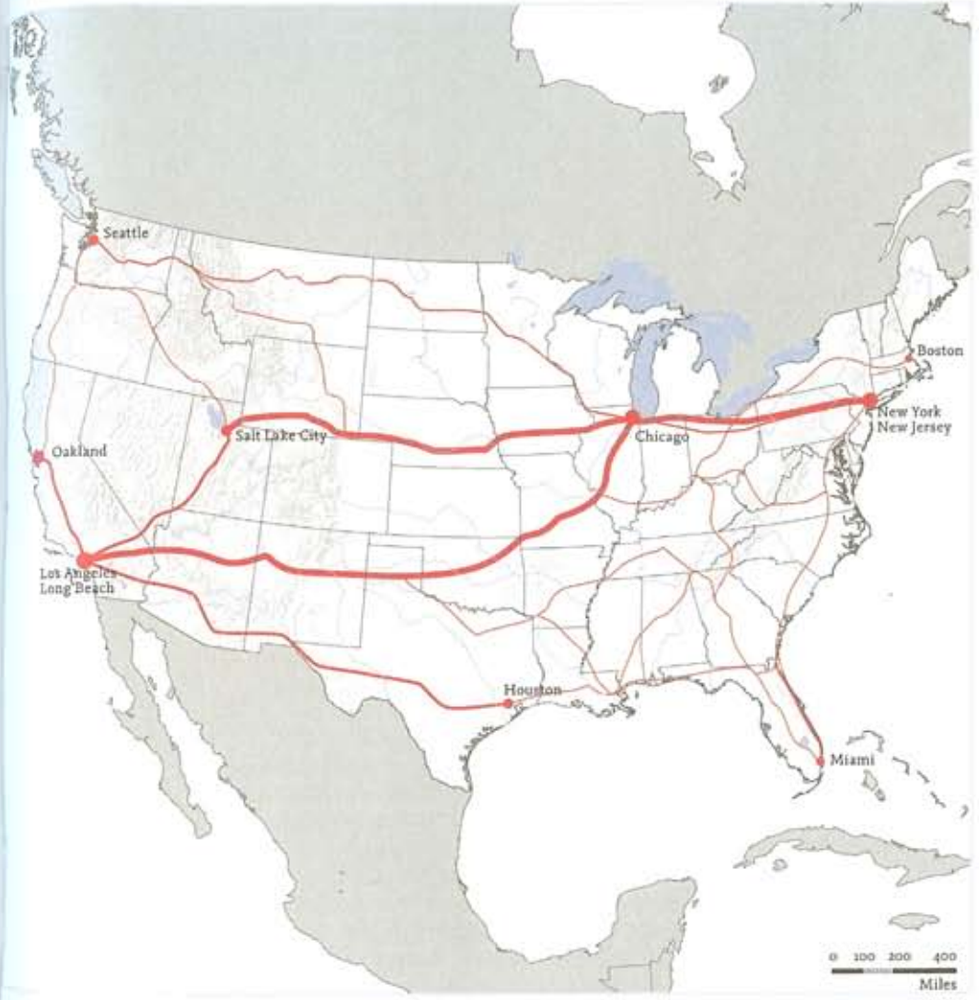


Diagram of Intermodal Trade Flows through the Ports of San Pedro Bay, 1998

Source: author, derived from Federal Highways Administration Office of Freight Management and Operations, "Multimodal Freight Analysis, 2000"

Faced by these threats to the cheap, reliable flow of products, importers are now considering other options, such as longer waterborne shipping routes to ports closer to final points of sale, outsourcing the port operations themselves to union-free land in Mexico, and a return to "traditional" warehousing strategies of storing goods over a longer term. The much-vaunted Alameda Corridor may soon be an infrastructural dinosaur.[5]

The future of goods infrastructure now lies far beyond any individual port and well into the hinterland where goods can be stockpiled in case of a "national emergency," such as a five-week delay in the arrival of Christmas merchandise.[6] In other words, the era of "just-in-time" shipping may be coming to an end in favor of a return to the age-old strategy of storing stuff nearby until it's needed. The significant difference from past strategies, however, lies in the Promethean scale of contemporary consumer demand, what one container historian refers to as "the bigness complex."[7]

Los Angeles-based shippers have traditionally moved goods out of the port to points east for warehousing and distribution. This is unlikely to change, given the 1% vacancy rate of industrial land around the port and the fact that even communities far from the ports, such as Ontario and Riverside, are now considered too expensive for warehouse construction. Moreover, the strategy on the West Coast, where 40% of the nation's consumer goods arrive (60% of which come from China), is to spread risk among several ports: Seattle, Oakland, Los Angeles/Long Beach, and San Diego. This is accomplished almost entirely through truck transport along the I-5 corridor as it barrels through California's Central Valley.

Only ten years ago, the largest warehouses enclosed approximately 500,000 square feet. Still, there was one prescient, notable exception: in 1991, Wal-Mart quietly constructed a 1.2-million-square-foot warehouse in the Central Valley, well before IKEA, Target and Home Depot followed suit. Variously called "container buildings" and "big box buildings," modern warehouses are intermodal buildings, fixed in place yet existing as links in a fluid supply chain of ships, trains, trucks and containers to which they must respond and adapt.

As William Mitchell observed, there exists in addition to all manner of "retail fronts," a corresponding "architectural back" consisting of the supply chain infrastructure that allows goods to arrive on demand at specific, physical locations around the world.[8] This architectural back has surpassed in cost and architectural importance any notion of a "front" for big box buildings. It is evident that more money is spent on the building envelope in terms of dock doors, special materials handling equipment, and site access to the rear of these buildings than is spent on the architecturally mediocre storefronts and office lobbies tacked onto the front of such buildings. One has only to pass along the loading-dock side of a warehouse or retail building to observe the subtle details that connect buildings to the supply chain. Attached by a weather-sealed gasket to the roll-up doors of the building, shipping containers come to rest.

The tractor cabs that hauled them long gone, containers sit idle, spanning between a retractable steel leg and the loading dock aperture. The interface is critical and proprietary: an individual retailer's materials handling strategy is often closely guarded. The IKEA facility at Tejon Ranch, for example, is sited behind high fences, locked gates and is

[5] Stephen P. Erie, *Globalizing L. A.: Trade, Infrastructure and Regional Development* (Stanford, CA: Stanford University Press, 2004).

[6] Jack Kyser, "A Huge Ripple Effect: Dockworkers' Strike Would Hurt the Economy." *Los Angeles Times*, September 13, 2002.

[7] Marc Levinson. *The Box* (Princeton: Princeton University Press, 2006), 231-245.

[8] William Mitchell, "Transarchitectures Symposium," (lecture, Getty Center, Los Angeles, June 6, 1998).

completely inaccessible to the public, even by appointment. Using techniques imported from Europe, IKEA's American warehouse is more closely guarded than the Port of Los Angeles in the age of terrorist attacks.

Signs of the emerging importance of warehousing came from an unlikely source. One week in 2001, the American Institute of Architects' newsletter announced the completion of a "large warehouse/distribution center" in Ontario by Bastien Architects, a California-based architecture firm, and Western Realco, a developer.[9] The A. I. A. is not known for promoting buildings on the fringe of design practice—apparently unless the building is very, very big. In this case, the warehouse covered some 1.1 million square feet of new, contiguous space. The same architect and developer team had recently completed an 818,000 square foot warehouse for the Home Shopping Network in Fontana. Since then, approximately a dozen such "super distribution centers" have been built each year in the U. S., each measuring a minimum of 1.5 million square feet of contiguous, single-story space.[10]

As Keller Easterling presciently observed in her 1999 article about containers and intermodal transport, "the containerization of goods has contributed to a new pattern of production and distribution that has not only altered the points of switching between highway and rail but has formatted the buildings that populate airport cities."[11] The formatted building—the intermodal

[9] "Bastien: Architect's Big Boxes Getting Bigger." *AIA Online*, April 27, 2001.

[10] Cory Restad, Tejon Ranch Company representative, interview with author, Tejon Ranch, September 1, 2006.

[11] Keller Easterling, "Interchange and Container: the New Orgman," *Perspecta* 30 (1999): 120.

building, in fact, continues to evolve and populate cheap real estate and good highways. The reliance on truck traffic is also a departure from the 1990s investment in true intermodality, between ship, rail, truck, and building, relying on trucks both for bringing goods to and from these distribution hubs. As a matter for architects to consider, the container itself is hardly interesting as an object retro-fitted for human habitation; rather, it is the extent to which more and more building types are being formatted with the specific aim of integrating fixed sites into the intermodal supply chain, or the extent to which buildings are already intermodal containers that pique our interest.

A step down in size from the super distribution center and a degree more open to the public, the Big Box increasingly infiltrates the city. Formerly limited to the postsuburban periphery, according to a study prepared by the Public Law Research Institute of the University of California, for the purposes of defending municipalities in California against the incursion of forty new Wal-Mart supercenters cited a Columbia University study: "Big Box architecture [can be defined] as 'large windowless, rectangular single story buildings with 'standardized facades' that 'seem to be everywhere and unique to no place, be it rural town or urban neighborhood.'"[12]

The similarity of the Big Box to the super-distribution center prompts the question: where does the supply chain actually end? At what point do buildings stop being containers for goods and start becoming machines for defining consumer-driven identity? Once goods come into contact with the consumer, does the supply chain stop or does it continue?

Evidence suggests that finer grained shipping extends the goods supply chain right into the home. At the receiving end of the global supply chain, grossly distended McMansions have become little more than small-scale intermodal transit hubs, sites where goods are delivered on an almost daily basis by small trucks, SUVs and automobiles to reside until they become obsolete or undesirable, at which point they are stored indefinitely in public storage units, returned into a flow of recycled and second-hand goods distribution or, even more likely, shipped off to the growing, toxic mountains of the city's landfills.

Homebuilders have responded by reformatting the house into a warehouse. According to the National Association of Home Builders, the average home size in the United States was 2,330 square feet in 2004, up from 1,400 square feet in 1970 even as average family size decreased and real income remained stable. Today it is as important to house things as people. Walk-in closets, walk-in pantries, storage rooms, wine cellars, multi-car garages, entertainment rooms, and personal gyms proliferate. The existence of entire neighborhoods of 20,000-50,000 square-foot homes in major urban centers is not unusual anymore and at least one builder has introduced the classic, warehouse-building methodology of tilt-up slab construction to the home-building industry, constructing his own, 10,150-square-foot home and 4,300-square-foot garage using foam-filled concrete panels.[13]

Nor does it end there: with the proliferation of questionable home equity loans during the real estate boom in the first part of the decade, the house itself became a three-dimensional credit card, its insubstantial construction dematerialized further by speculative withdrawals to fund goods to fill its vast, waiting spaces.

[12] Columbia University, Graduate School of Architecture, Preservation, and Planning, "A Vision for New Rochelle: Plan for Revitalizing the City Park Neighborhood", May 2001 http://www.columbia.edu/itc/architecture/bass/newrochelle/extra/big_box.html quoted in Public Law Research Institute of the University of California, "California Responses to Supercenter Development A Survey of Ordinances, Cases and Elections," 2004, www.uchastings.edu/site_files/cslgl/plri_big_box_paper_04.pdf, 9-10.

[13] Ed Sauter, "Tilt-Up Construction: Not Just for Box Warehouses Anymore," *The Nation's Building News*, May 29, 2006, http://www.nbnnews.com/NBN/issues/2006-05-29/Building+Systems/index.html.

Containers lined up at a distribution center

The End of the Supply Chain? Is there any hope in this relentless world of shuttling things? Under the continuous calculus of capital, the global distribution of wealth has not kept pace with efficiency of the global distribution of goods. As agglomeration strategies break down under pressures to diversify dependence on specific ports and to fragment warehousing, perhaps a similar breakdown in capital expenditures in the global shipping complex will enable small and medium-sized entrepreneurs to participate more directly in the requisition of labor and goods overseas at a smaller, more manageable scale. Until it does, containerization will remain the sinister embodiment of oppressive retail practices to depress prices and of a culture of "consumers gone wild."