

林中物流：

描绘瓦尔登湖及其全球本土化资源传递

Logistics in the Woods:

Mapping Walden and its Glocal Resource Relays

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摘要 ……

尽管近来景观都市主义将关注点放在农业乌托邦和分散聚落策略方面，但《瓦尔登湖》，或称《林中生活散记》，这部经典的保守主义著作，作为一种自我审视的、与世隔绝的田园实验，仍在景观业界被屡屡谈及。笔者目前的项目——“边缘运作”或称“林中物流”，对《瓦尔登湖》进行了“量化分析”。利用梭罗的经济妙语和城市外周者的视角，“边缘运作”项目跳出瓦尔登作为一个城郊地区的定位，而是将其向外拓展——无论是薪柴从林区到壁炉的运输过程，还是由邻近的铁路线建立起的与全球市场的沟通联系——通过重现美国南北战争前波士顿的（国内）消费模式，讲述这段气候控制、工业化及其城市/城郊资源系统在不同视角下的历史。

本文先后描述了该项目的起源，并通过更大范围的研究来追溯梭罗物质生活状况。而后，“边缘运作”中的“重测瓦尔登”一节描述了梭罗于1846年采冰活动的经历。由此——通过科学史、统计学、测量学和后结构主义建筑理论中的间接资料——人们得以探讨这些活动是如何与量化测绘，以及能够反映出景观都市主义的典型特征的图形化过程之间的呼应关系。与凯勒·伊斯特林的《番茄世界》或皮埃尔·比朗格勒的当代研究一样，“边缘运作”强调了（走向工业化的）农业及其潜在竞争、社会经济矛盾和政治问责之间复杂的、动态的且基于过程的联系。

关键词 ……

瓦尔登湖；全球化；物流；田园风格；测绘；都市主义

Abstract ……

Despite recent Landscape Urbanist interest in agrarian utopias and dispersed settlement strategies, *Walden, or Life in the Woods*, a canonic conservation text, is still often read in landscape as an inward-looking and isolated pastoral experiment. My current project, *Edge Operations or Logistics in the Woods*, “runs the numbers” from Walden. Appropriating Thoreau’s economic witticism and peri-urban position, *Edge Operations* works outward from Walden Pond — from woodlots to fireplaces, from adjacent rails to global markets — re-constructing the (domestic) consumption patterns of antebellum Boston for an alternate history of climate control, industrialization, and its (sub) urban resource systems.

This essay describes the origin of this project and examines the larger research used to trace Thoreau’s material encounters. Sections from “Re-Surveying Walden”, one chapter of the *Edge Operations* project, then map Thoreau’s descriptions of the ice harvest of 1846. These, with secondary sources — in history of science, statistics, surveying and post-structural architectural theory — are explored for their resonance with quantitative mappings and the process diagrams typical of landscape urbanism. As in Keller Easterling’s “Tomato World” or Pierre Belange’s contemporary research, *Edge Operations* highlights the complex, dynamic, and process-based alliances of (industrializing) agriculture, its lurking contests, socio-economic conflicts, and political culpabilities.

Key words ……

Walden; Globalization; Logistics; Pastoral; Mapping; Urbanism

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1 林中生活

《瓦尔登湖》，或称《林中生活散记》，是一本以作者亨利·大卫·梭罗自身于1846-1847年间在瓦尔登湖及林区进行的一种自耕农试验式的生活经历为（基本）原型的著作（经修订并最终于1854年出版）（图1，3）。梭罗对于其社交性的、季节性的日常活动，以及对野生动植物的见闻的反复描述被后人从多个角度进行了解读：有人认为这是一种真正的隐居于荒野，有人认为这是一个擅自侵占

者发出的文明批判，也有人认为这是对诗情画意的移居郊区生活的拙劣模仿。如此不同的解读源于梭罗混合在其作品中的冷嘲热讽的社会评论、浪漫的文学隐喻和自然穿插的历史描绘。除了这些文学体裁的原因，《瓦尔登湖》背后所具有的更广泛的地理意义——身处由工业和农业市场专业化造成的边缘地带和产业结构的变革之中，周围设有新建的非茨堡铁路线和电报线路——使得该书在科学史、文学史、环境史以及技术史领域中都掀起了重大的争

论——正是由于其在上述领域内的关键意义，《瓦尔登湖》也成为了景观设计史上的重要话题。

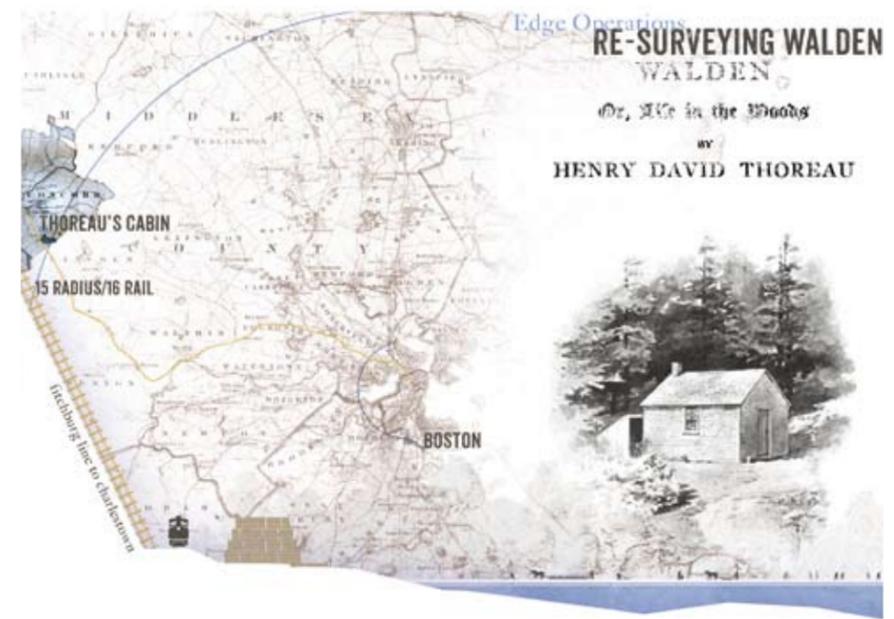
2 局限的景观视角

从设计学科内部的角度而言，人们对《瓦尔登湖》的理解还较为保守，大多将之视为描绘常见的景观和富有想象力的隐居生活方面的典范著作。约翰·布林克霍夫·杰克逊则认为其是“仅限于都市中产阶级市民中的，对寂谧的独居生活和亲近

未受破坏的自然的浪漫感受”^[2]的代表。莱奥·马克思在《花园中的机器》一书中对杰克逊的解读进行了重申，但他认识到，瓦尔登绝不是“未受破坏的”。对于马克思而言，《瓦尔登湖》中关键的一段是梭罗谱写了一篇铁路路基在春天解冻消融的狂想曲。在梭罗的描述中，路基的诸多侵蚀方式及它们奇妙的相似之处，在自然、社会、制度与工业等领域间奏出了和谐之音。在他的这种意象中，“世上没有一物是无机的。”^[3]

两年前，作为宾夕法尼亚大学景观都市主义课程的研究生以及Stoss景观都市主义设计事务所的一名助理设计师，我会对阅读梭罗作品的想法嗤之以鼻。为什么要把时间浪费在如此先验抽象的意象上呢？但是后来，我在通勤途中偶然读到刊登在《柜橱》杂志上的格雷汉姆·D·伯奈特的《电网的歌唱》一文。其中，伯奈特探讨了对技术发展常常持怀疑态度的梭罗如何能够为“电报竖琴”的声响所着迷，“‘电报竖琴’……之于我，总如同那不愿忆起的启示一般。它将康科德与雅典联系在一起，又将二者带向了极乐世界。它令我陶醉，使我清醒。”^[4]在读过梭罗田园诗般的文字后，伯奈特将文学阐释与音调史及技术史相结合。他对早期的电报线路安装过程进行了探究，强调了早期电报线路的单线结构如何在瓦尔登的风中摇摆，甚至“歌唱”。梭罗对电报的致情之深，将在1847年当时看似是一种直白而单调的陈述，变为一首浪漫而华美的诗篇。

简而言之，伯奈特解析性的敏锐视角激发了我的思考：在瓦尔登湖及林区的社会物质流通中，还有哪些其他的文学隐喻和平凡的物流环节？如果我们用对不断变化的景观“进行考究”的方式来思考梭罗，那或许将会发现他书中那些清晰鲜明的意象并不一定是无据可循的。^[5]或许，只不过是身为景观都市主义设计师和景观史学家，还没有像伯奈特那样从历史的角度来解读这些意象；或许《瓦尔登湖》大量章节中的新奇的足迹、构筑物类型和全球本土化经济活动还有待我们去发



1. 林间小屋——瓦尔登湖地区区位图 © Meg Studer
1. Cabin location — Walden’s Metropolitan location map © Meg Studer

掘研究。

3 林中物流

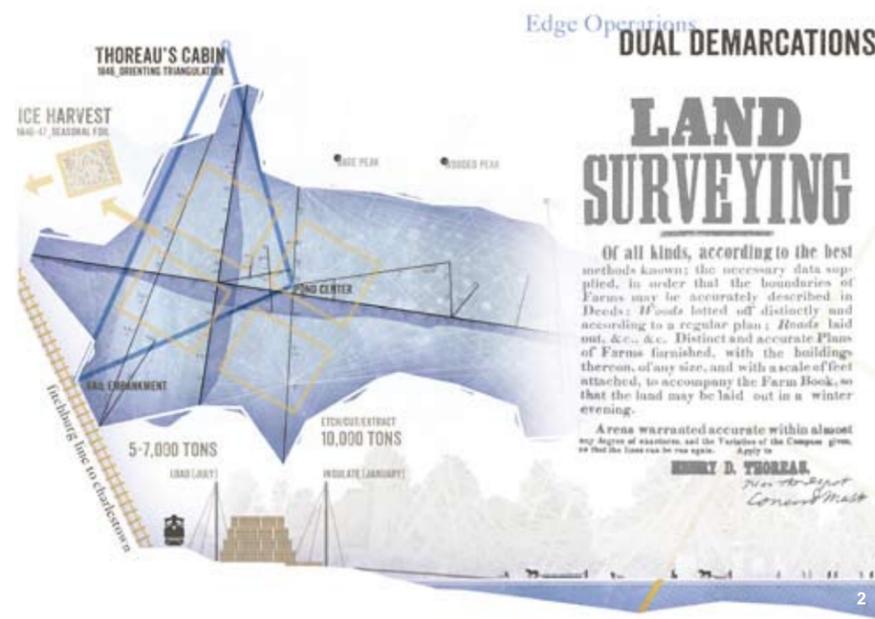
因此，2012年秋天，我开始了“边缘运作”（或称“林中物流”）项目。当我开始通读《瓦尔登湖》时，我被两种类型的研究所吸引：第一种是将梭罗关于瓦尔登湖地区活跃的商业、农业和非定居式居住形式的描写置于文学史的语境下来思考的传统研究。^①第二种是近来聚焦于梭罗所描述的南北战争前的科学、勘测和土地利用政策之间的环境研究。^②在这两种研究语境下，《瓦尔登湖》似乎正以一种理想的姿态有待人们来重读其中关于资源的流动与传递的叙述，从而对梭罗从那些连接起物质环境和社交世界、区域性的抽象意象之间的物资衔接所作出的文化上的、经济上的批判进行梳理。“边缘运行”项目由此跳出瓦尔登作为一个城郊地区的定位，而是将其向外拓展——无论是薪柴从林区到壁炉的传递过程，还是由邻近的铁路线建立起与全球市场的沟通联系——从而再现南北战争前波士顿的消费模式。在我看来，瓦尔登湖是重现气候控制、工业化及其城市（城郊）资源体系的

空间化历史脉络的一个关键节点。

我的第一组地图标题为“重测瓦尔登”，以“冬天的湖”（第14章）作为切入点（图1-10）。在《瓦尔登湖》有关冬季的描写片段中，梭罗将他的最小化勘测标记做法与采冰业中“侵入式的、低效式的”采冰活动进行了对照（图2）。在试图重现波士顿的采冰活动的过程中，我的目标是将梭罗对于冰块贸易的批评和其对在世界范围内进行冰块贸易的幻想这看似矛盾的二者置于当时特定的语境中来解读。正如伯奈特对电报的探索一样，梭罗所描绘的绝非是漠然于世的理想主义愿景。无论是农民的年历还是商业的专著，他零散的引文都反映出1）制冷与铁路，以及2）冰碛和全球船运的历史共生现象。因此“重测瓦尔登”系列地图对这些物流链进行了测绘，将其在1830-1860年间对于农业专业化、都市食物供给，以及支撑北方工业化的全球进口贸易性的深刻影响进行了视觉化表达（图6-10）。

4 定位“边缘运作”

在研究这一系列问题时，我渐渐对梭罗一书中的几个方面有了更进一步的了



解，这些方面，尤其是他对1) 南北战争前的科学，和2) 周期性测量与统计的关注，与当代对于大数据、区域数据视觉化的关注非常契合。我想花一些时间通过间接研究和“重测瓦尔登地区”来查看这些具体的例子。我认为它们是当我们重新审视《瓦尔登湖》时，发现其是如何与景观都市主义对农业都市主义、分散聚落策略，以及全球贸易链方面的关注相吻合的——例证。^[6]

4.1 系统结构和南北战争前的科学

一些间接作品探讨了梭罗采用系列的、反复的描述手法，在自然历史与文学体裁之间相互转换的技巧。在《看到新世界》中，劳拉·达索·沃斯探讨了梭罗的写作手法与亚历山大·冯·洪堡的唯物主义研究方法之间的关联：探索、收集、测量与联系是他们二者的共同之处。她将洪堡的“Ansicht”（德语，意为视觉合成）方法与《瓦尔登湖》每个章节中组诗性的、对称式的结尾直接联系起来^[7]。作为景观设计师，我们很熟悉洪堡绘制的图像：生态类型横断面图、（大气中的）等温线图，以及一系列水系/山系断面图。

如果我们将梭罗组诗性的结尾视作如同洪堡所绘制的一系列图像般的分析性论证，那么《瓦尔登湖》中的情节可以很容易地用类型学的方式来解读：与同一章节中，通过反复的描述来体现物质参与的不同尺度，从而在同一章节中对个体化方式和产业化方式进行对照。^③

例如，如果我们“重测瓦尔登”，可以看到那些初期的成果性图表——反映出了劳动力增长、工具手段的丰富、组织复杂性的提升——都来自于梭罗自身的描述。在“冬天的湖”一章中，他列举了采冰工作的5个实例：1) 简易的饮水/垂钓用孔、2) 线性探测和测线、3) 工厂主、4) 工业化采冰作业，以及5) 在印度的消费——瓦尔登湖水“已经和恒河的圣水混合了”。我把梭罗不同的开采和分配过程依照相关的类型用图表加以展示，关注点小大到可直接饮用水的取水孔，大到南亚次大陆的船运过程，而不是仅仅关注于最终的结果（图4，5）。因此，从类型学的视角来看，梭罗所描绘的架构性图景可以用周期记录（讨论见下文）的方式来表示，并以此作为研究和推测产业的区域效应和外部性的基础。

4.2 区域和田园的量化测量

还有一系列研究从科学描述转向制图记录，着重于测量——梭罗所记载的1849-1862年间的商业活动——是如何从观念上影响了他在自然历史、民权和废奴运动等方面的写作。在《土地测量员梭罗》中，帕特里克·楚拉展示了梭罗在论述个人权威和当局权威之争中常常采用制图记号、三角点和国家记录的形式。到19世纪50年代《瓦尔登湖》修订并出版时，梭罗不仅对官方的区域土地的数据来源与类型一清二楚，而且，根据楚拉的解读，梭罗对它们进行了与他的文学作品同样精心巧妙的处理。因此，如果我们对《瓦尔登湖》中那些针对那些惯于读图且具有官方论调的读者而写的尖刻记述进行重新解读的话，那么只有将《瓦尔登湖》置于相关工业和国家统计的语境下，并把这些档案数据置入修正过的GIS地图中，才能理解。

例如，在“重测瓦尔登”组图中，我从《1848年美国年鉴》的记述开始，依据其中的数据去了解区域和国家消费模式，对梭罗自己可能在修订《瓦尔登湖》时参考的资料进行研究。^④然后我扩充了这些原始资料，从而对有关制冷与冰上运输的间接的、空间上的影响进行研究。我阅读并重现了统计研究、船运记录和马萨诸塞州卫生委员会的乳品改革建议及其他政策（图6-10）。

5 超越和谐的“生产性”景观

在对更大尺度上的市场、交通及立法压力这些重塑了瓦尔登湖、康科德和波



士顿（及其他等等）的元素进行描绘的过程中，在我多重视角的解读下，梭罗拥有了“诗人兼勘测员”这一看似奇怪的组合身份。梭罗的卓越远见——他不是“就湖论湖”，而是把瓦尔登湖向更大的范围扩展（借助为数不多的必要辅助手段）——是对“田园景象”以及对在殖民、经济、甚至统计方面体现出的这种教化式“总体观”的有意驳斥。^[8]而且，梭罗的记述正是恰到好处地铺设在这些意象、目的和“看不见的操控之手”的协调之中。通过使用物质和物流链具体化——在瓦尔登湖的冰碴和奴隶产品之间，在冻结的湖水和次大陆棉花贸易之间——我绘制的地图使理解梭罗的废奴思想和对市场的批评变得更容易（图9，10）。

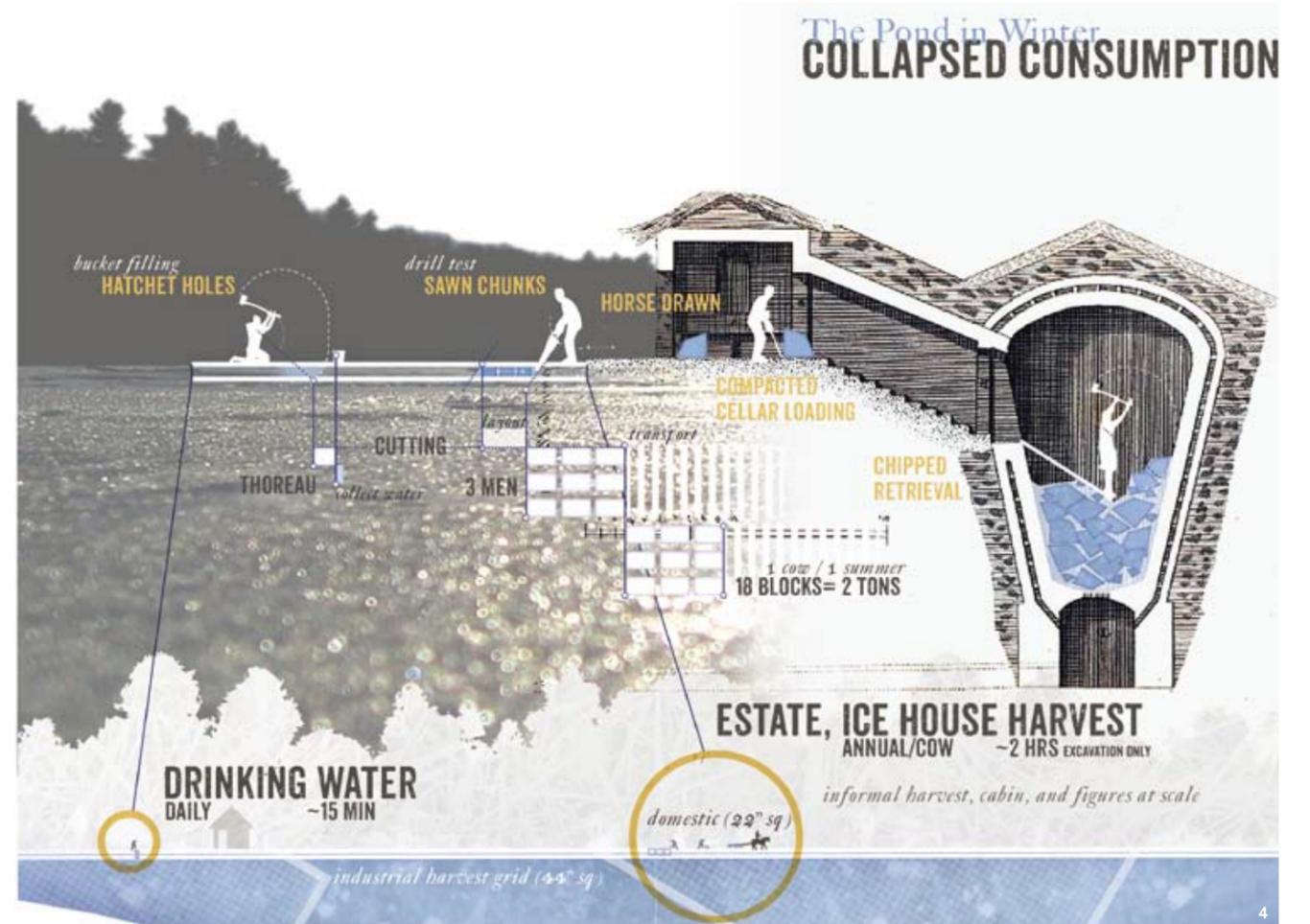
作为一名活跃的设计师，就农业、优化物流和地缘政治的外部效应的当代研

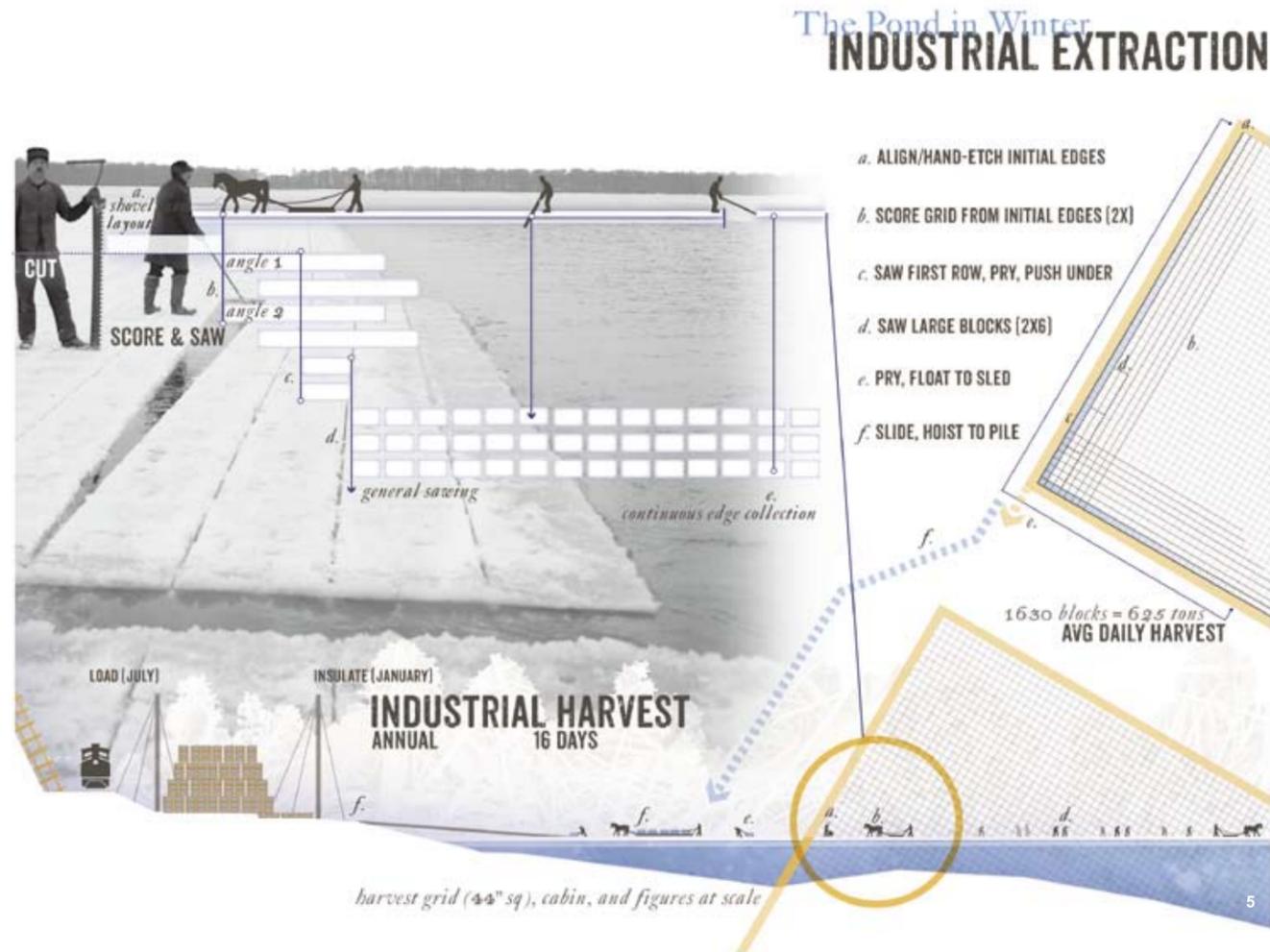
究，我常常求诸凯勒·伊斯特林的《埃希多》（注：墨西哥合作农场）和皮埃尔·比朗格尔的《农艺景观》。^{[9][10]}重温《瓦尔登湖》的收获也大致如此：强调一种复杂的、动态的和基于过程的联合，这种联合是由产业化农业及其潜在竞争和社会经济矛盾、其全球本土化方式及举措构成。具有讽刺意味的是，重读梭罗为使人们从自给自足的田园梦意象，或“生产性”景观的和谐愿景这一过于简单的想法中惊醒提供了新的途径。

2. 双重边界——瓦尔登湖、调查和采冰的双重边界 © Meg Studer
3. 现场照片——被铁路切断的瓦尔登湖地区 © Meg Studer
4. 传统采冰方式——冰上打洞取水与冰窖储冰 © Meg Studer
2. Dual demarcations — Dual demarcations of the Pond, surveying and ice harvests © Meg Studer
3. Site photo — Rail cut-through at Walden © Meg Studer
4. Traditional harvest — Ice encounters: Drinking holes and landlord harvests © Meg Studer

注释

- ① 下列文献均是很好的例子：Buell, L. (1995). *Environmental Imagination: Thoreau, Nature Writing, and the Formation of American Culture*. Cambridge, MA: Belknap Press of Harvard University Press. Sattelmeyer, R. (2000). *Depopulation, Deforestation, and the Actual Walden Pond*. In R. Schneider, L. Buell (Eds). *Thoreau's Sense of Place* (pp. 235-243). Iowa City: University of Iowa Press.
- ② 进一步讨论请参见：Walls, L. D. (1995). *Seeing New Worlds: Henry David Thoreau and Nineteenth-century Natural Science*. Madison, WI: University of Wisconsin Press. Chura, P. (2010). *Thoreau the Land Surveyor*. Gainesville, FL: University Press of Florida.
- ③ 文学评论家经常将《瓦尔登湖》中的季节循环和昼夜交替作为一个整体来关注。在整个书中，梭罗根据不同语境在“钟表”时间和“自然”节律间不时转换；同样，他也在空间上和技术上使“手工”和“工业”形成了对照。
- ④ Wyeth, N. (1848). *The Ice Trade of the United States*. In *The American Almanac* (pp. 175-180). Boston: Little & Brown. 在梭罗的1853年版和1854年版中（此间他将有关收获的描写从9段删减到6段），他打趣地误导读者去阅读《新英格兰农民与波士顿耕种人》。





1 Life in the Woods

Walden, or Life in the Woods was based (loosely) on a homesteading experiment by Henry David Thoreau at Walden Pond and Woods in 1846 - 1847 (revised and finally published in 1854) (Fig. 1, 3). Thoreau's iterative descriptions of his daily activities, social, seasonal, and wildlife encounters have been read in multiple ways: as authentic wilderness withdrawal, as squatters' civil critique and as parody of picturesque, suburban migration. Such varying interpretations spring from Thoreau's mix of sardonic social commentary, romantic literary tropes, and natural history episodes. In addition to these genre manipulations,

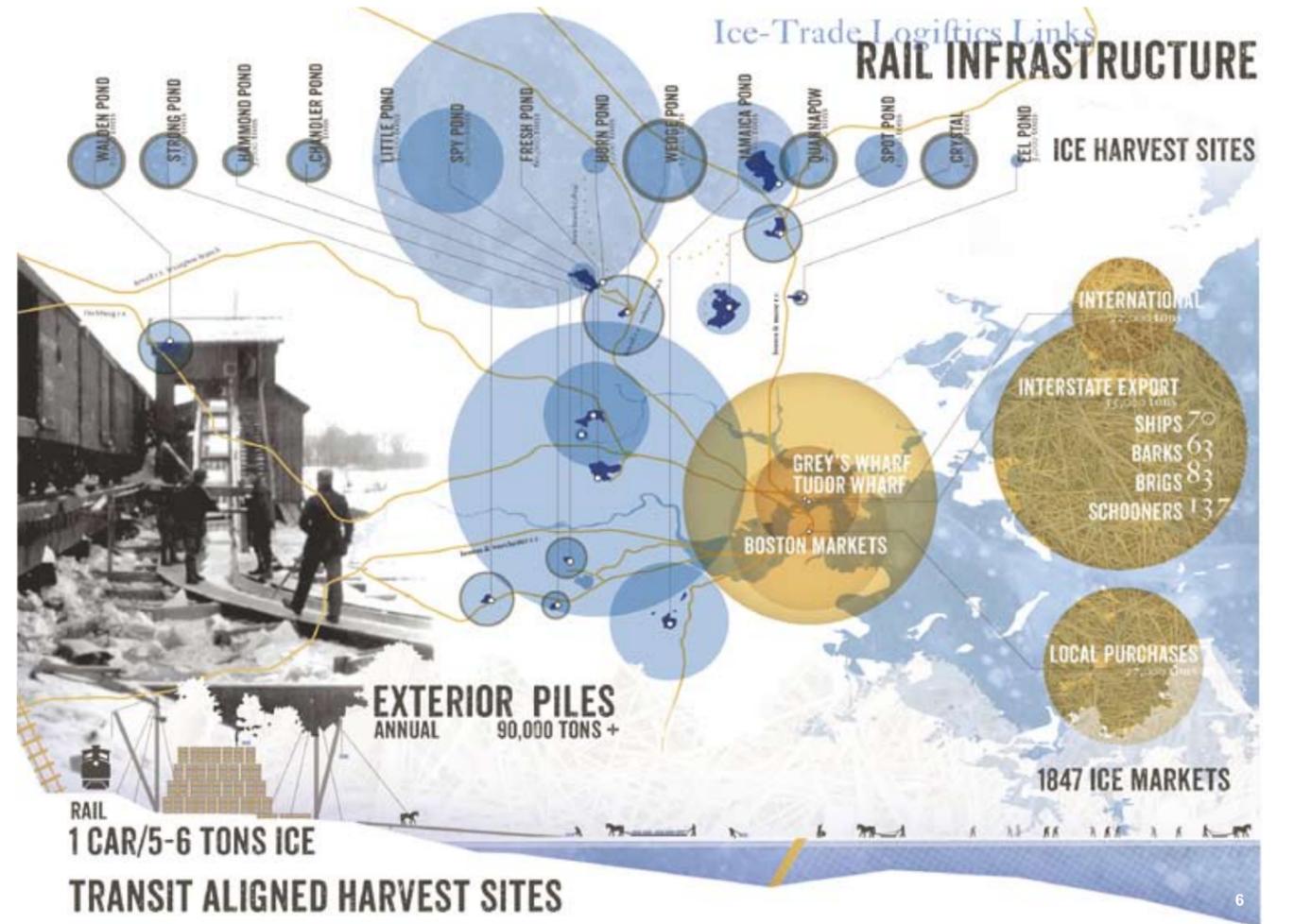
Walden's larger location — adjacent to the new Fitchburg rail and telegraph lines, amidst the fringe fields and shifting occupational structures catalyzed by industrial and agromarket specialization — has made Walden key to debates in the history of science, literature, environment, technology, and thus, synthetically speaking, landscape architecture.

2 Limited Landscape Perspectives

From within the design disciplines, Walden has been read conservatively, as exemplary of common landscapes and imaginative withdrawal. John Brinckerhoff Jackson considered it emblematic of the "romantic feeling for solitude and for

closeness to unspoiled nature... confined to middle-class urban citizens."^[2] Leo Marx, in *Machine in the Garden*, reiterates Jackson's interpretation, but recognizes that Walden was far from "unspoiled". For Marx, the key episode is Thoreau's rhapsody on the melting railway banks in the spring. In Thoreau's description, the bank's eroding forms and their fantastic resemblances reconcile nature, society, institutions, and industry. Within the imagination, "nothing is inorganic"^[3].

Two years ago, as a graduate of Penn's landscape urbanist program and an associate at Stoss, I would have scoffed at the idea of reading Thoreau. Why spend time on such transcendental imagery? But then, during my



daily commute, I stumbled across Graham D. Burnett's "The Singing of the Grid", in *Cabinet*. In this essay, Burnett explores how Thoreau, typically suspicious of technological development, could nonetheless claim to be infatuated with the songs of "the telegraph harp.... Always the same unrememberable revelation to me. It allies Concord to Athens and both to Elysium. It intoxicates me, makes me sane."^[4] After reviewing Thoreau's georgic references, Burnett combines literary exegesis with tonal and technological history. Retracing the early mounting practices, he highlights how the single-wire structure of early telegraph lines at Walden vibrated, or sang, in the wind. Thoreau's affective

appreciation of the telegraph was as literal and humdrum in 1847 as it was a case of romantic embellishment.

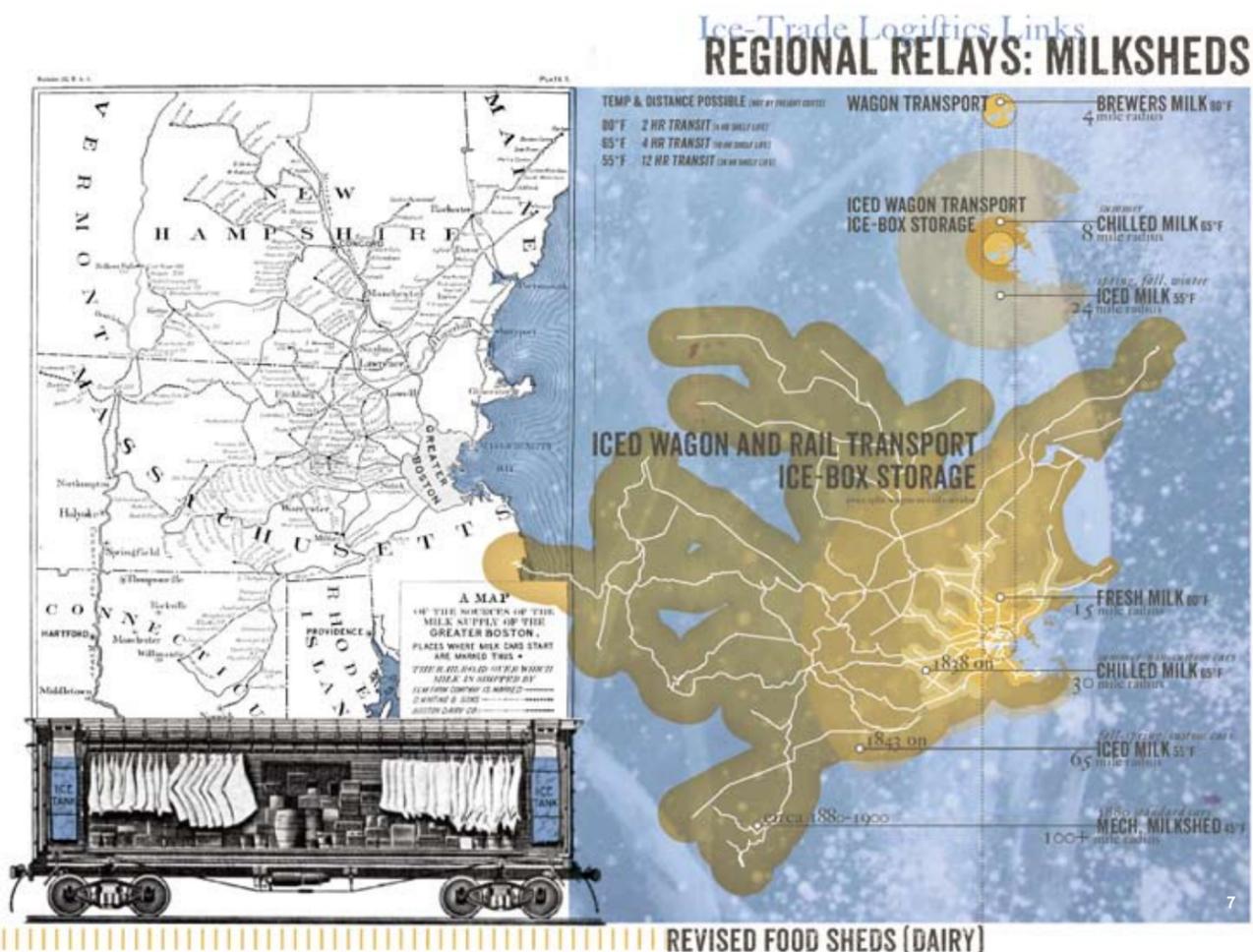
In short, Burnett's shrewd tectonic attention made me wonder, "what else was lurking between literary metaphor and mundane logistical links, in the socio-material relays of Walden Pond and Woods?" If we think of Thoreau as "taking measure" of shifting landscapes, perhaps his eidetic images did not necessarily lack rigor.^[5] Perhaps, it was just that we, as landscape urbanists and historians, had yet to read these images historically, as Burnett had done; perhaps we had yet to excavate the novel footprints, tectonic typologies and

glocal economic engagements embedded in Walden's extravagant episodes.

3 Logistics in the Woods

Thus, in fall 2012, I began my current project, *Edge Operations* or *Logistics in the Woods*. As I started to read through Walden, I gravitated toward two types of research: First, a contextualizing tradition within literary history situates Thoreau's

5. 工业化采冰方式 © Meg Studer
6. 铁路基础设施——沿采冰场地布设铁路线 © Meg Studer
5. Industrial harvest — Ice encounters: Industrial harvests © Meg Studer
6. Rail infrastructure — Transit aligned harvest sites © Meg Studer



depictions in relation to the active commercial, agricultural, and itinerate settlements at Walden Pond.^① Second, recent environmental research focuses on Thoreau's relationship with antebellum science, surveying, and land-use politics.^② Given these two contexts, *Walden* seemed ideally poised for re-reading as resource streams; mapping Thoreau's cultural and economic criticism in terms of the material links bridging physical site to social world and territorial abstraction. *Edge Operations* thus works outward from Walden's peri-urban position — from woodlots to fireplaces, from adjacent rails to global markets. In doing so it reconstructs antebellum Boston's

consumption patterns. In my reading, the pond becomes a key interpretative node for drawing out the spatialized history of climate control, industrialization, and their (sub)urban resource systems. My first series of maps, entitled "Re-surveying Walden," took the "The Pond in Winter" (Chpt. 14) as their point of departure (Fig. 1 - 10). In *Walden*, these winter episodes are where Thoreau contrasts his minimal surveying marks with the ice-industry's "invasive and inefficient" harvesting practices (Fig. 2). In mapping Boston's ice industry, my aim was to contextualize Thoreau's seemingly contradictory criticism and global reveries on the ice trade. As in Burnett's telegraphic

excavation, Thoreau's allusions are far from indifferently idealist. His scattered citations, from farmer's almanacs and mercantile literature, point toward the historical symbiosis of 1) refrigeration and rail and 2) ballast ice and global shipping. "Re-surveying Walden" thus maps these logistical chains, visualizing profound effects, between 1830 and 1860, on agricultural specialization, urban food supplies, and the global imports underpinning northern industrialization (Fig. 6 - 10).

4 Recognizing Edge Operations

While researching this series, I became familiar with several aspects of Thoreau's

work that are resonant with contemporary interest in visualizing big, territorial data, in particular, his engagement with 1) antebellum science and 2) period surveying and statistics. I would like to take a moment to look at these specific examples, using secondary research and "Re-surveying Walden". I think they exemplify how *Walden*, when remapped, dovetails with landscape urbanist interest in agrarian urbanism, dispersed settlement strategies, and global logistics chains.^[6]

4.1 Serial structures and antebellum science

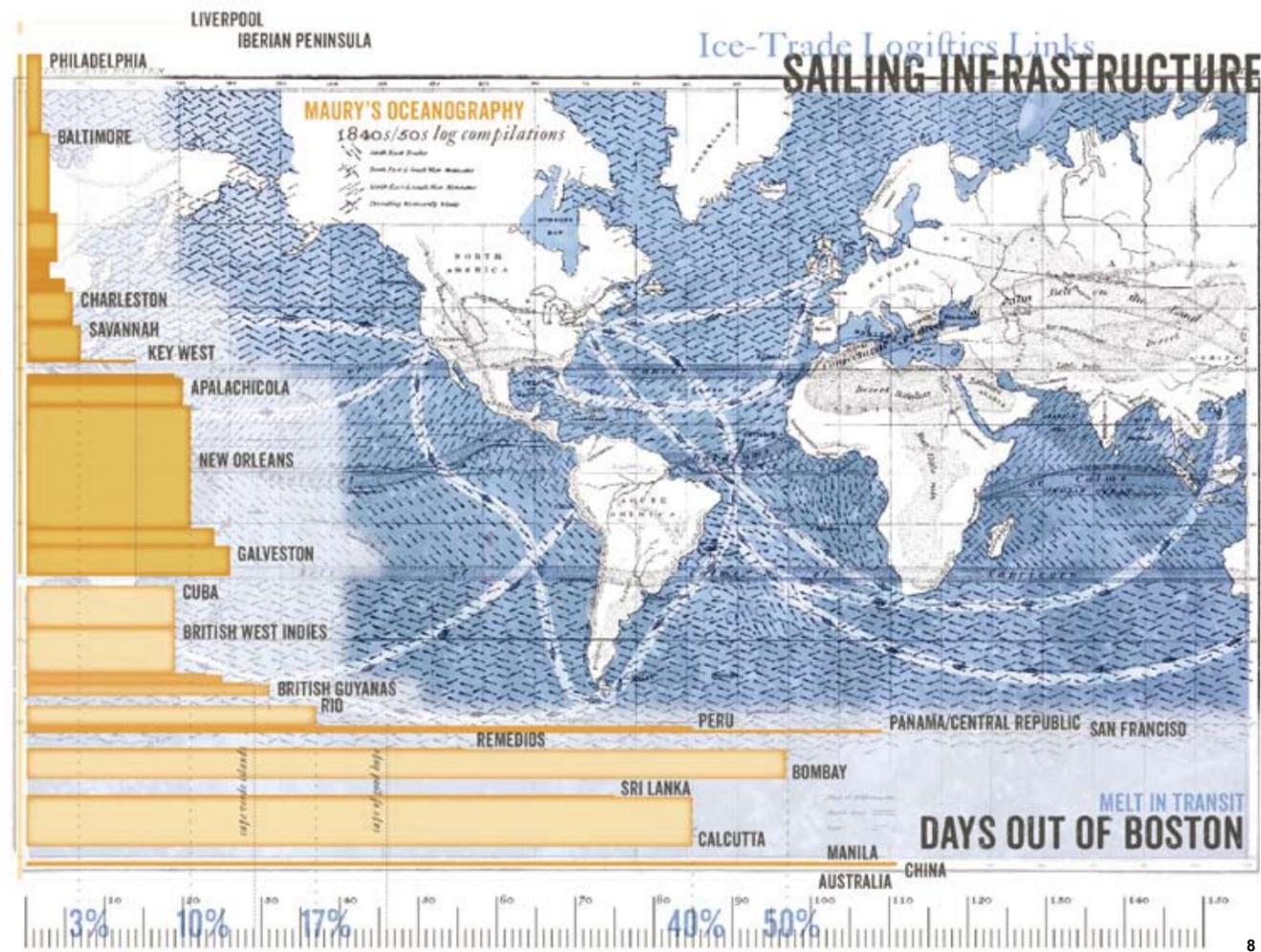
Several secondary works explore Thoreau's adaptation of serial, iterative descriptive devices, transferring techniques

mutually between natural history and literary genres. In *Seeing New Worlds*, Laura Dassow Walls explores Thoreau's writings in relationship to the materialist research methods of Alexander Von Humboldt: explore, collect, measure and connect. She draws a direct line between Humboldt's "ansicht" (visual synthesis) methodology and the cyclic, symmetrical closure of each chapter in *Walden*^[7]. As landscape architects, we are familiar with Humboldt's graphics: eco-type transects, isotherm (atmospheric) mappings, and serial river / mountain sections. If we re-read Thoreau's cyclic closures as analytic arguments akin to Humboldt's serial diagrams, the episodes of

Walden easily translate into typologies; his iterative encounters map the different scales of material engagement, comparing individual and industrial approaches within the same chapter.^⑧

For example, if we return to "Re-Surveying Walden", the initial harvesting diagrams are drawn from Thoreau's own description, staged in terms of increasing labor force, instruments, and organizational complexity.

7. 运输牛奶——区域内运输：牛奶场区 © Meg Studer
8. 航行基础设施——改善的海洋地理与交通环境 © Meg Studer
7. Rail milk — Regional relays: Milksheds © Meg Studer
8. Sailing infrastructure — Improved oceanography and transport © Meg Studer



In “The Pond in Winter”, he presents five instances of ice engagement: 1) simple drinking / fishing holes, 2) linear sounding and survey lines, 3) landlord and 4) industrial ice extraction, and finally 5) consumption in India, as Walden water, “mingled with the sacred water of the Ganges”. Instead of focusing only on that final sublimation, I diagrammed Thoreau’s different excavation and distribution processes as related types, working from immediate drinking holes to sub-continental shipments (Fig. 4, 5). Thus, read typologically, Thoreau’s skeletal sketches can be filled out with period records (to be discussed below) as the foundation for researching and extrapolating the regional effects and externalities of industry.

4.2 Surveying Territories and Pastoral Quantities

Turning from scientific depiction to cartographic records, an additional array of research has focused on how surveying, Thoreau’s commercial profession from 1849 - 1862, conceptually inflected his writings on natural history, civil rights, and abolition. In *Thoreau the Land Surveyor*, Patrick Chura demonstrates that Thoreau’s negotiation of personal and civic authority often took the form of selecting cartography symbols, triangulation points, and state records. By *Walden*’s revision and publication in the 1850s, Thoreau was not only familiar with bureaucratic, territorial data sources and types but, in Chura’s reading, treated them with the same cunning and craft as his literary sources. If we thus re-read Thoreau’s acerbic accounting as both addressing a cartographic and administratively attuned audience, it only makes sense to contextual *Walden* amidst relevant industry and state statistics, layering this archival data into modified GIS maps.

For example, in the “Re-Surveying Walden” series, I started with 1848 *American*

Almanac accounts to fill in regional and national consumption patterns, working from materials that Thoreau likely referenced in his own *Walden* revisions.^④ I then supplemented these sources to develop the secondary, spatial impacts of refrigeration and iced transport. I mapped census studies, shipping logs, and, among other policy, dairy reform recommendations from the Massachusetts Sanitary Commission (Fig. 6 - 10).

5 Beyond “Productive” Landscape Harmony

In drawing the larger market, transport, and legislative pressures reshaping Walden, Concord, and Boston (and so on), my synthetic scale may seem an odd match for Thoreau, the local poet-surveyor. His perspectival position, peering up and out from the pond (with interspersed aids), is a deliberate inversion of “pastoral prospects” and the colonial, economic, and even statistical use of such enlightenment “over-views.”^[8] And yet, it is precisely in negotiation with those images, ends, and “invisible hands” that Thoreau’s accounting is pitched. By fleshing out the material and logistical links — between Walden’s ballast ice and slave products, between its frozen water and the sub-continental cotton trade — my maps make it easier to locate Thoreau’s abolitionist alliances and market critiques (Fig. 9, 10).

As an active designer, I have often turned to Keller Easterling’s “El Ejido” and Pierre Bélange’s “The Agronomic Landscape” for contemporary examinations of agriculture, optimized logistics, and geo-political externalities.^{[9][10]} The benefit of revisiting *Walden* is thus similar: to highlight the complex, dynamic, and process-based alliances of industrializing agriculture, its lurking contests and socio-economic conflicts, its glocal means and measures. Ironically, re-

reading Thoreau is an additional way to guard against self-contained images of pastoral resolution or a simplistic idea of “productive” landscape harmony.

NOTES

- ① Good examples are: Buell, L. (1995). *Environmental Imagination: Thoreau, Nature Writing, and the Formation of American Culture*. Cambridge, MA: Belknap Press of Harvard University Press. Sattelmeyer, R. (2000). *Depopulation, Deforestation, and the Actual Walden Pond*. In R. Schneider, L. Buell (Eds). *Thoreau’s Sense of Place* (pp. 235-243). Iowa City: University of Iowa Press.
- ② To be discussed further are: Walls, L. D. (1995). *Seeing New Worlds Henry David Thoreau and Nineteenth-century Natural Science*. Madison, WI: University of Wisconsin Press. Chura, P. (2010). *Thoreau the Land Surveyor*. Gainesville, Fla: University Press of Florida.
- ③ Literary commentators have often focused on the seasonal and diurnal cycles across Walden as a whole. Throughout, Thoreau rhetorically shifts between “clock” time and “natural” rhythms, in much the same way that he shifts, spatially and technologically, between hand and industrial encounters.
- ④ Wyeth, N. (1848). *The Ice Trade of the United States*. In *The American Almanac* (pp. 175-180). Boston: Little & Brown. Thoreau, of course, playfully misdirects readers to the *New England Farmer* and *Boston Cultivator* in his 1853, 1854 edits (while trimming down the harvesting description from nine to six paragraphs).

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- [2] Jackson, J. B. (1970). *Jefferson, Thoreau and After*. In: E. Zube (Ed), *Landscapes* (pp. 6). Amherst: U Mass Press.
- [3] Marx, L. (1964/2000). *The Machine in the Garden* (pp. 261-262). New York: Oxford University Press.
- [4] Burnett, G. D. (2011). *The Singing of the Grid: Thoreau’s electro-Aeolian redeemer*. *Cabinet Magazine*, (41), pp 63.
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- [7] Walls, L. D. (1995). *Seeing New Worlds Henry David Thoreau and Nineteenth-century Natural Science*. Madison, WI: University of Wisconsin Press.
- [8] De Bruyn, F. (2004). *From Georgic Poetry to Statistics... ”* *Yale Journal of Criticism* (17.1), pp. 107-139.
- [9] Easterling, K. (2007). *El Ejido*. In: *Enduring Innocence: Global Architecture and Its Political Masquerades* (pp. 39-62). Cambridge, MA: MIT Press.
- [10] Bélange, P., Roth, C. (2011). *The Agronomic Landscape*. *GAM*, (07), pp. 167-182.