

Labor Histories and Carbon Futures

JESSICA GARCIA FRITZ

South Dakota State University

FEDERICO GARCIA LAMMERS

South Dakota State University

Keywords: Labor Histories, Carbon Management, Pedagogy

The link between construction labor and the effects of carbon upon climate and globalized labor forces is not central to architectural education. The next ten years of curriculum design in the Department of Architecture (DoArch) at South Dakota State University posits that long-term carbon management should be tied to core educational strategies. This paper outlines a proposed theory sequence that connects the production of architecture with the ongoing global movement and displacement of people. Long-term carbon management strategies and the history of people's movement across the world are linked through four required classes: Drawing Architecture, Reading Architecture, Writing Architecture, and Practicing Architecture. By positioning carbon footprints beyond technological deterministic outcomes, the relationship between carbon management and the politics of construction labor are foregrounded in the DoArch curriculum.

INTRODUCTION

Indifference towards the politics of construction labor implicates architecture in the violent history of slavery, colonialism and climate change. Seldom taught as the core of architectural education, this history links the climactic effects of carbon to precarious global labor forces that are fueled by expanding capital.¹ The objective of this paper is to propose climate and labor-based pedagogical research at the course and curriculum level in the Department of Architecture (DoArch) at South Dakota State University. As a nascent architecture school in an underserved region of the United States, the faculty in the department have developed a four course theory sequence with links to other sequences in the curriculum that address labor histories and carbon futures.

Historically, the relationship between carbon management and construction labor, which often materialized through the bodies of slaves or voiceless immigrant populations, had been tied to methods of organizing industrialized building sites through skilled and unskilled labor. Following the rapid industrialization of the mid-nineteenth century – the western

professionalization of architects and engineers, and waves of global immigration – “workers were increasingly treated as disposable machine parts and machines were treated as organisms with an internal life that needed to be preserved.”² Technical documents such as drawings, specifications, and calculations supported these relationships and served as agreements that impacted larger techno-industrial systems by connecting conceptualization with materialization.

The voluntary and forced displacement of people across multiple territories and scales is connected to the construction of buildings, rapid-urbanization, rural communities, and public-health. In the last decade, several organizations, such as “Who Builds Your Architecture” and “The Architecture Lobby” have advocated for architects’ role in overlooked questions about the politics of labor. These organizations and the questions they pose are essential to the social, economic, and political dimensions of architectural practice. However, they have not resulted in significant structural changes in the education of architects. Architects’ estrangement from historical labor practices produces a bright-burning nostalgia, which Albert Pope claims, serves to obscure the irrefutable evidence of an environmental crisis by alienating ourselves from the planned obsolescence of buildings.³ In an age of abundant information exchange, it is important to theorize how knowledge is stored and transferred in architecture and construction. Drawings, buildings, specifications, and contracts have bridged the space between conceptualization and materialization, yet retain certain biases concerning construction labor and climate. Exposing these biases in a theory sequence not only closes gaps left in the documents and artifacts, but also challenges grand-narratives that are central to the canonical predilections of architectural education. Making labor-centric aspects of these agreements the center of design education is fundamental to understanding the invisible DNA of carbon footprints, their dynamic nature, and how they may be imagined and managed in the immediate future.

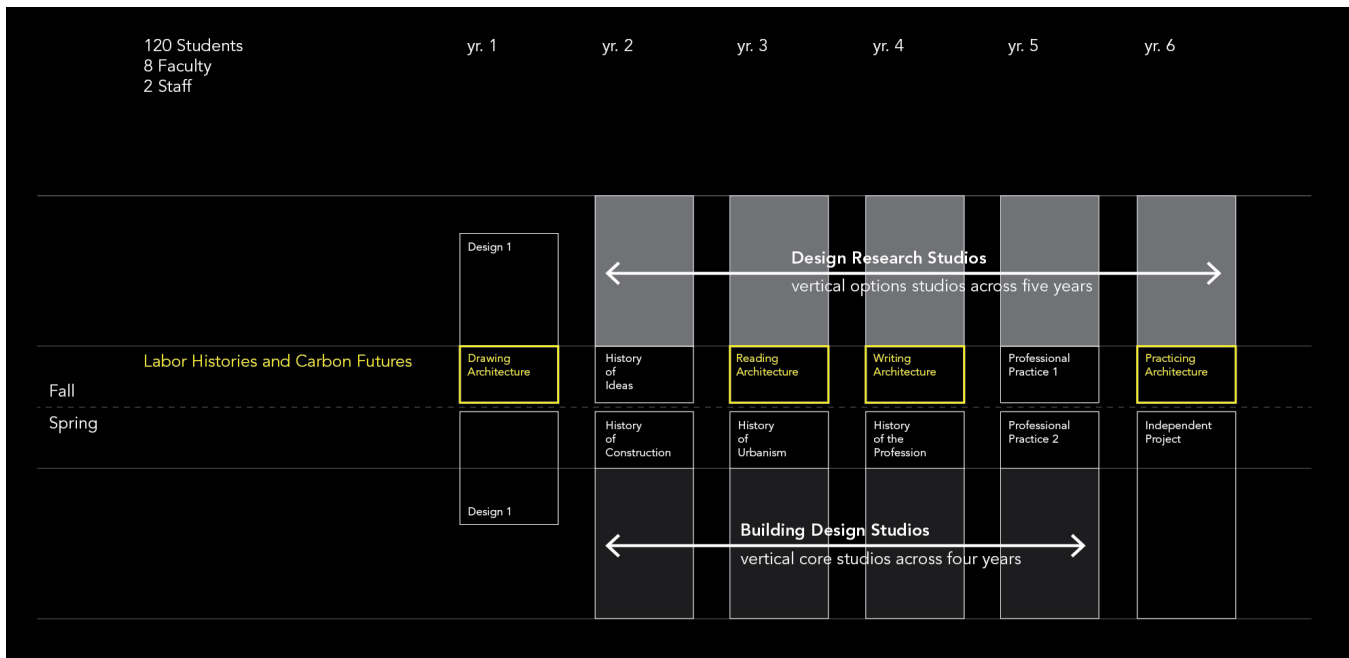


Figure 1. The Labor Histories and Carbon Futures theory sequence in the DoArch curriculum.

MICRO-HISTORIES OR INTRAHISTORIAS

The Spanish poet and philosopher, Miguel de Unamuno, believed that dominant epistemological mechanisms eliminated the collective power of anonymous people and their small histories or intrahistorias.⁴ As a counter practice to “grand-narratives”, accounts traditionally built from the study of prevailing styles, renowned figures, and seminal buildings, intrahistorias offer a close reading of overlooked histories. The cumulative and interconnected effect of these histories questions the exclusion of construction labor from a close reading of the canonical architecture foregrounded in education. The pedagogical approach outlined here examines the reconstitution of environmental ideas around the collection of micro-histories of labor or intrahistorias. We will refer to micro-histories here as focused, over-looked narratives in history rather than singular grand-narratives.

When considering carbon, one twentieth century practitioner of “anonymous histories” was the Italian writer and chemist Primo Levi. Levi’s chapter on “Carbon” from the 1975 collection of short-stories entitled “The Periodic Table”, includes a micro-history of the element.

“Carbon, in fact, is a singular element: it is the only element that can bind itself in long stable chains without a great expense of energy, and for life on earth (the only one we know so far) precisely long chains are required. Therefore carbon is the key element of living substance:

but its promotion, its entry into the living world, is not easy and must follow an obligatory, intricate path, which has been clarified (and not yet definitively) only in recent years. If the elaboration of carbon were not a common daily occurrence, on the scale of billions of tons a week, wherever the green of a leaf appears, it would by full right deserve to be called a miracle.”⁵

Levi’s account of carbon speaks to the element’s perceived dullness, resulting from its ubiquitous presence on earth. A reconstituted interrogation of carbon, however, reveals an exceptionally intricate path taken by the element to enter into existence. In the Department of Architecture, we are interested in the pedagogical consequences of the type of micro-history described by Primo Levi. This path includes understanding the architect’s role in under-examined questions concerning the politics of labor, while connecting these questions to urgent climate and social issues. Placing these questions within a theory sequence intentionally removes them from the grand-narratives that exist within the canon of architecture. Canonical thinking excludes “other narratives”, thereby eliminating their position in theoretical exploration and discourse.⁶ The launch of the Labor Histories and Carbon Futures theory sequence is a first and necessary step for the department. The “continuous contestation, interrogation of facts and power relations, and occasionally revelatory intuitions” described by Joan Ockman in “Slashed” have become core strategies within the DoArch theory sequence.⁷

Ockman's further support of theoretical strategies in architectural education stems from concerns over the demotion or imminent erasure of theory sequences in architectural curricula. In education, traditional theory discourse has been collected in seminal anthologies or survey texts, such as Kate Nesbitt's "Theorizing a New Agenda for Architecture", Michael K. Hays' "Architecture Theory Since 1968", and more recently Krista Sykes' "Constructing a New Agenda for Architectural Theory 1993-2009". For nearly half a century, theory anthologies and other primary texts have connected architecture to philosophical movements, like Phenomenology, Post-structuralism, Deconstructivism, etc. The aim of these publications and their role in education has centered on expanding disciplinary knowledge and establishing the terrain for core philosophical tensions. Yet, the depths, relevance, and methods for establishing these connections have always remained in flux.

Beyond the "end of theory", its connection to history and criticism have also positioned it into a slippery trifecta with history on top. Condensing the three in architectural education has resulted in a risk-free examination of past masters as well as the evolution of ideas, styles, and movements through grand historical narratives.⁸ In the last decade, e-flux and other academic projects have attempted to move beyond this singularity by presenting adaptable forms of theoretical discourse that address the historical dimensions of contemporary architectural issues. From themed journal issues of *Log* to Mario Carpo's recontextualization of theory around media histories, it is evident that theory can break the philosophical rigidity of traditional anthologies and established grand-narratives. In *DoArch*, the past ten years of curriculum design has reflected the condensed history, theory, and criticism trifecta through a focused history sequence, but no theory sequence. Placing theoretical discourse into a separate path is in attempt to break from the enduring static combination of history, theory, and criticism.

THE FIRST THEORY SEQUENCE IN DOARCH

The Labor Histories and Carbon Futures theory sequence frames the beginning and the end of the undergraduate and graduate curriculum through four, three-credit hour courses. It connects two types of vertical studios, Design Research Studios and Building Design Studios, across six-years of architectural education. Finally, this new theory sequence, along with the history sequence, supports the studios by giving students and faculty rhetorical means of examining the micro-histories of labor and carbon. For the sake of clarity, the diagram in Figure 1 synthesizes the *DoArch* curriculum by focusing on the relationship among the Labor Histories and Carbon Futures sequence and the studio and history sequences. The diagram also shows the vertical Design Research Studios in light gray

at the top, offered in the Fall across all five years. These studios are topical investigations either "into", "for", or "through" architecture and are guided by polemical questions that come from contemporary issues in faculty research. Students in all five years of the program are given the option to choose which studio to take based in four to five faculty members' research and proposals for the studio. The Building Design Studios, shown in dark gray at the bottom, are also vertical and are offered in the Spring across four years. Students are guided through two building project proposals in a semester using the same site. These studios are core studios taught collectively by four to five faculty members. The middle of the diagram shows the history sequence outlined in white and the Labor Histories and Carbon Futures sequence, outlined in yellow. The history sequence, which includes professional practice courses, serves as a middle core to the bookends of the theory sequence. The sequence, which was launched as part of the new curriculum in Fall 2020, is composed of four courses: Drawing Architecture in year one, Reading Architecture in year three, Writing Architecture in year four, and Practicing Architecture in year six. Each class connects students with the practice of using various archives (databases, drawing collections, libraries, etc.) to uncover documented micro-histories that are latent with knowledge about architectural labor. Ultimately, students are tasked with how to interrogate, question, and organize information into productive patterns of knowledge that expand rhetorical confidence and build the theoretical discourse of the school around labor and climate.

Drawing Architecture focuses on the gaps between "drawing" as a form of architectural production and construction labor. Since its publication in 1986, Robin Evan's widely quoted essay, "Translations from Drawings to Buildings" has maintained that architects make drawings not buildings.⁹ The essay reaffirms the fifteenth century western tradition of disciplinary and professional prowess that resides in the graphical representation of a building. It also reinforces architecture's indifference toward construction labor. For centuries, the hegemony of the drawing board as the primary context for ideation has excluded micro-histories of the bodies used to construct the worlds imagined on paper and screens. In spite of computational advancements linked to increasingly sophisticated project delivery methods, the connection between energy (carbon management) and construction labor continues to be omitted from many contemporary energy metrics. Teaching drawing as an educational tool for projective imagination is important. Equally important is to teach drawing as a historical instrument of separation from construction labor.

In the Drawing Architecture class, student assessment is based upon the reproduction of annotated, historical drawing sets to include labor and carbon metrics. The footprints of buildings

drawn in celebrated design projects across the world, be they lines of a floor plan or the energy embedded in their material consumption, exclude the footprints of people associated with their construction. By “rewinding” drawings, or looking for clues about the role of construction labor embedded in drawings, it is possible to establish the connection between people in sites of extraction and production. For example, Mabel O. Wilson’s research and scholarship on race and architecture connects the seemingly benign qualities of drawing with the historical dimensions of slavery.¹⁰ Slavery, the first form of invisible, forced construction labor, is absent in the graphical representation of spaces in Thomas Jefferson’s Monticello Plantation, the White House, and many other canonical examples that shape the “grand-narratives” of architecture. Following Wilson’s approach and the work of “Who Builds Your Architecture”, which Wilson also cofounded, the course considers how contemporary drawings link carbon management to the voluntary and forced displacement of people across multiple territories and scales. By annotating these absences of labor and carbon in existing drawings, students are tasked with filling the void left by traditional graphical representation.

Reading Architecture is the second class in the theory sequence. Goals include teaching students how to “read” architecture by combining the reading of texts with the reading of buildings, sites, and their association with the overlooked history of labor. These forms of “reading” require a set of practical operations that enable students to understand and describe the visible and invisible language of buildings alongside the nuances of architectural texts. An initial version of the course was taught in Fall 2020. Like the Drawing Architecture course, the class examines existing documents within the context of their production. When examining different formats of texts and buildings, the class poses the following questions:

Author(s): Who wrote it? Are there multiple authors? What else have they written? What was their motivation to write? Who was given a voice in the text? Who was silenced through the writing?

Date(s): When was it written? How is this period of time relevant to why it was written?

Mode: What type of text is it? Is it a book, an essay, an article in a journal, conference, exhibition text, etc? Is it in print, online or both?

Publisher and Place: Who published the text? What type of texts do they publish? What is the location associated with the publisher? Do they have an ideological position, if so, what is it?

Possible Influence: How has the text influenced a way of living, learning, thinking, working, segregating, extracting? In short, a way of designing architecture or thinking about architecture.

These questions are collected in the primary method of assessment, a Student Journal. Every page of the journal is dedicated to a single week of connecting a text to a building. It takes confidence to speak and think about what we know and more importantly to acknowledge what we don’t know. Many of the overlapping contexts in which texts and buildings exist, highlight their role as silent witnesses to micro-histories. The gaps or silent witnessing by buildings and texts is filled with the role of *prosopopoeia*, a rhetorical device used to give voice to objects and absent or forgotten people. Some texts fill the gaps left by buildings, while some buildings fill the gaps left by text. The class is designed to help students find their own voice by studying micro-histories inherent in the connection between text and building.

Writing Architecture is offered in the final year of undergraduate study. Though a version of the course has not been taught, it intends to explore written agreements that expose relationships on the building site and impact larger techno-industrial systems. Written technical documents, such as specifications, demonstrate political control through the selection or disregard of certain forms of labor and materials on site and have historically served as instruments of colonization. For example, nineteenth century specifications written in the United States identified new territories with raw materials needed for construction. Yet, these seemingly empty territories encroached upon indigenous lands. Examining how historical and contemporary specifications create large territories in the extraction and production of architectural materials along with other agreements like patents and codes is a primary goal of the Writing Architecture course.

Additionally, the class links to the current first version of the Design Research Studio, appropriately named the “Specification Studio”. The studio examines specifications as instruments of political control that have and continue to restructure the social organization of labor. The class introduces students to archived specifications and asks them to closely inspect the media in order to understand historical and contemporary architectural practices. Through this close inspection, students will ultimately develop an office manual and website that propose alternative methods for architectural practice.

Finally, Practicing Architecture is offered in the final year of graduate study and serves as the last course in the Labor Histories and Carbon Futures sequence. Looking at the diagram (Figure 1), the course is intentionally situated after the two professional practice courses positioned in the history sequence. The course is designed to prepare graduate students for a final independent project by reflecting on the content of the first three theory courses: Drawing, Reading, and Writing. At the end of the semester, students are expected to have a detailed work agenda that allows them to pursue their own research project and complete their M.Arch. More importantly, Practicing Architecture asks students to take a position(s) that is reflective of the link between the theory and history sequences in the curriculum. Despite the separation between the history and theory sequences, we share Joan Ockman's position, "There can be no history without theory, there can be no theory without history. History without theory is just one thing after the other. Theory without history is hubris."¹¹ Both sequences weave together to serve as the foundation for the Design Research and Building Design studios.

CONCLUSIONS

Amid the COVID-19 Pandemic and with the launch of the new curriculum in Fall 2020, the Department of Architecture has already initiated a version of the Labor Histories and Carbon Futures sequence. As the first theory-focused courses taught in the department's history, the sequence intends to expose the gaps and biases present in the documents and artifacts of architectural production. A close interrogation of the historical power relations and labor conditions inherent in these documents reconstitutes and/or challenges the grand-narratives explicit in architectural education and allows us to project strategies for future carbon management. Ultimately, the Labor Histories and Carbon Futures theory sequence in the DoArch curriculum is intended to give students and faculty more agency to theorize about the micro-histories associated with the impacts of carbon upon the politics of construction labor in Drawing, Reading, Writing, and Practicing Architecture.

ENDNOTES

1. Who Builds Your Architecture, "Who Builds Your Architecture?: A Critical Field Guide," Who Builds Your Architecture (February 2017): <http://whobuilds.org/who-builds-your-architecture-a-critical-field-guide/>.
2. Beatriz Colomina and Mark Wigley, "News from Nowhere," *Are we Human: Notes on Archaeology of Design* (Baden: Lars Müller Publishers, 2016), 76.
3. Albert Pope, "Accelerated Obsolescence," *Log 47: Overcoming Carbon Form*, ed. Cynthia Davidson, Elisa Iturbe, and Patrick Templeton (Fall 2019): 146.
4. Marcos Garcia de la Huerta, *Reflexiones Americanas Ensayos de Intra-Historia* (Santiago: LOM Ediciones, 1999), 19.
5. Primo Levi, "The Periodic Table," *The Complete Works of Primo Levi Volume II*, ed. Ann Goldstein (New York: Liveright Publishing Corporation, 2015), 941.
6. Marrikka Trotter, Gabriel Fuentes, and Joseph Bedford, "Canonical vs. Non-Canonical," *e-flux architecture* (April 2019): <https://www.e-flux.com/architecture/curriculum/260412/canonical-vs-non-canonical/>.
7. Joan Ockman, "Slashed," *e-flux architecture* (October 2017): <https://www.e-flux.com/architecture/history-theory/159236/slashed/>.
8. Peggy Deamer, "Architecture History/Criticism/Theory," *Asymmetric Labors: The Economy of Architecture in Theory and Practice* (New York: The Architecture Lobby, 2018), 34.
9. Robin Evans, "Translations from Drawing to Building," *Translations from Drawing to Building and Other Essays* (Cambridge: The MIT Press, 1997), 152-189.
10. Mabel O. Wilson, "Notes on the Virginia Capitol: Nation, Race, and Slavery in Jefferson's America," *Race and Modern Architecture: A Critical History from the Enlightenment to the Present*, ed. Irene Cheng, Charles L. Davis II, and Mabel O. Wilson (Pittsburgh: University of Pittsburgh Press), 23-42.
11. Joan Ockman, "Slashed," *e-flux architecture* (October 2017): <https://www.e-flux.com/architecture/history-theory/159236/slashed/>.