Murals

by

Mariana Medrano

B.A. ARCHITECTURE PRINCETON UNIVERSITY, 2017

SUBMITTED TO THE DEPARTMENT OF ARCHITECTURE IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF ARCHITECTURE

AT THE

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

JUNE 2023

© 2023 Mariana Medrano. All rights reserved.

The author hereby grants to MIT a nonexclusive, worldwide, irrevocable, royalty-free license to exercise any and all rights under copyright, including to reproduce, preserve, distribute and publicly display copies of the thesis, or release the thesis under an openaccess license.

Signature of Author:

Mariana Medrano Department of Architecture May 1, 2023

Certified by:_____

Deborah Garcia Pietro Belluschi Teaching Fellow Thesis Supervisor

Accepted by:

Leslie K. Norford Chair, Department Committee on Graduate Studies Professor of Building Technology

THESIS SUPERVISOR

Deborah Garcia, MArch Pietro Belluschi Teaching Fellow MIT School of Architecture + Planning

READERS

Alia Farid, SMVisS Research Artist and Sculptor

Oana Stănescu, MArch Visiting Lecturer in Architecture MIT School of Architecture + Planning

Acknowledgements.

Dedicated to all who accompanied me closely these last few years, and to those newer companions whose voices cannot be separated from the work herein presented.

MURALS by Mariana Medrano

Submitted to the Department of Architecture on May 1, 2023 in partial fulfillment of the requirements for the Degree of Master of Architecture.

ABSTRACT

This project emerges from the desire of making a mural for the interior space of an abortion clinic. In 2023, in the United States, reproductive agency is a threatened right, which makes abortion clinics spaces of resistance, alternative narratives, and radical care. The history of the care provided in clinics is older than what we may ever trace, because reproductive agency is a practice aided not only by contemporary medical professionals but also by the natural world itself. There is a historic plethora of herbs, roots, flowers, et cetera, that have been employed as abortifacients: Plants that when consumed cause the uterus to contract, thus inducing a miscarriage, or abortion. This practice, which unfortunately today is largely lost as a collective social knowledge, intersects with murals in that plants also provide us with pigments. A mural for an abortion clinic holds the ambition of elevating this historic narrative of reproductive care and agency by encoding knowledge in pigments, a lost history in images. For this project, a catalog of abortifacient plants and their corresponding pigments was created to inform the making of a mural. The pigments themselves were extracted and synthesized from organic matter, and each plant was considered as rooted in intersectional histories of medicine, power, gender, colonialism, divinity, and color.

THESIS SUPERVISOR Deborah Garcia TITLE Pietro Belluschi Teaching Fellow

TABLE OF CONTENTS

- 8 Introduction
- 12 Pigments and Flora
- 32 Mural for a Clinic
- 34 Bibliography

LIST OF FIGURES - All images presented are property of the author

- 6-7 Fig. 1 Block print A
- 8-9 Fig. 2 Block print B
- 12/13 Fig. 3 Block print C
- 14 Fig. 4 Block print sweet flag
- 16 Fig. 5 Block print tansy and wormwood
- 18 Fig. 6 Block print pomegranate
- 20 Fig. 7 Block print milk thistle
- 22 Fig. 8 Block print mugwort
- 24 Fig. 9 Block print cotton
- 26 Fig. 10 Block print black hellebore
- 28/30 Fig. 11 Block print pennyroyal, salvia, and blue cohosh
- 32-33 Fig. 12 Sketch garden diagram

A MURAL





MIT ARCHITECTURE

FOR A CLINIC

introduction



Fig. 2

I begin with the strangeness of the singularity of "abortion clinics" as a discrete typology, undeniably separate from categorically similar places. To define an abortion clinic only as a healthcare facility would deem it close enough to any other medical profession's offices, which ultimately in 2023, in the United States, is simply not accurate. For instance, abortion clinics often use bullet-proof glass for all exterior windows, the main functions happen tucked away in basements, clients often face harrassment as they enter the premises, and there are metal detectors and extensive defensive protocols on entry. Going to the dentist or ophthalmologist does not remotely resemble going to an abortion clinic.

How can the space of an abortion clinic, hereafter a clinic, be then categorized? A healthcare facility with the added elements of bunker and fortress covers the defensive nature of a clinic. But, what then to make of this defensiveness, in terms of the potential nature of a clinic as typology? We may begin by remembering that a clinic's labor is broadly feminized labor, not in the sense that it only serves women, but in the sense that its focus is on reproductive care and agency. The activities that doctors undertake within the walls of a clinic are subjected to demonization by certain groups in society, which have made it their inquisitory mission to propagandize and mobilize against clinics despite clinics themselves being lawful, resounding in the echo of a witchhunt.

9

A Mural for a Clinic thus emerges from the desire of making a mural for the interior space of an abortion clinic. Muralism is the medium of choice to synthesize the possibility of an architectural intervention with the potential to visibly represent information for the occupants of a clinic, whether they be providers, staff, or patients. The reasoning behind this impetus is that abortion as a practice is mired in the polarized lens of the contextual politics and amnesiac collective memory surrounding it. For example, may it be remembered that the term "quickening" was a historically dominant method by which a pregnancy's viability was determined; that is, a pregnancy was not deemed as such until after there was noticeable movement from a fetus inside the womb. Before quickening began, an abortion was not taboo, and was only thought of as returning the body to its natural cycle of menstruation. May it be remembered that across cultures and time, there has been knowledge about how to consume certain herbs to induce a miscarriage; and that of these herbs, known as abortifacients, many are in common use and include parsley, sage, rosemary, and ginger.

Indeed, the history of reproductive care is older than what we may ever trace, because reproductive agency is a practice aided not only by contemporary medical professionals but also by the natural world itself. There is a historic plethora of herbs, roots, flowers, et cetera, that have been employed as abortifacients: Plants that when consumed cause the uterus to contract, thus inducing a miscarriage, or abortion. Abortifacient plants intersect with murals in that plants also provide us with pigments. *A Mural for a Clinic* holds the ambition of elevating this historic narrative of reproductive care and agency by encoding knowledge in pigments and a lost history in images. For this project, a catalog of abortifacient plants and their corresponding pigments was created to inform the making of a mural. The pigments themselves were extracted and synthesized from organic matter, and each plant was considered as rooted in intersectional histories of medicine, power, gender, colonialism, divinity, and color.







Fig. 4

sweet flag, acorus calamus

also known as vacha, semi-aquatic and native to India. associated with ayurvedic medicine.

parts used; root.

uses; insecticide, aids with depression and epilepsy, effective in treating rheumatic pain and swelling; aids in childbirth or abortion by causing uterine contractions.



Fig. 5

(left) tansy, tanacetum vulgare

parts used; flowers, leaves.

uses; insecticide, has been documented as aiding in abortion but is also poisonous in certain quantities.

(center) wormwood, artemisia absinthium

parts used; leaves.

uses; to create the liquors absinthe and vermouth, central nervous system stimulant.



Fig. 6

pomegranate, punica

granatum

parts used; seeds.

uses; food, making of liquor and wine.



Fig. 7

milk thistle, *silybum marianum*

parts used; seeds.

uses; antioxidant and antiinflammatory qualities, aids in liver repair, serves as an antidote to death cap mushroom poisoning, may aid in stopping cancerous cell growth, known abortifacient.



Fig. 8

mugwort, artemisia vulgaris

parts used; roots, stems, leaves, flowers.

uses; aids with anxiety, digestion problems, irregular periods.



Fig. 9

cotton, gossypium

parts used; roots.

uses; textiles, aids with menopause symptoms, aids to induce childbirth and to bring on menstruation.



Fig. 10

black hellebore, *helleborus niger*

parts used; flower.

uses; though poisonous, has been employed to treat melancholy and epilepsy, known abortifacient.



Fig. 11

(left) pennyroyal, mentha pulegium

parts used; flowers, leaves.

uses; may be used as disinfectant for clinical spaces, known abortifacient.

(center) salvia

parts used; leaves.

uses; broad medicinal plant, known abortifacient.



Fig. 11

MIT ARCHITECTURE

(right) **blue cohosh**, caulophyllum thalictroides

parts used; stem.

uses; though berries and roots are poisonous, consumption of blue cohosh aids in inducing labor.

mural

What *Murals* proposes is fundamentally about process, craft, and intimacy. A garden is a space defined not by its boundaries but by its life cycles. Therefore, what is represented in this project is the author's process of learning about each plant, the pigments that can be extracted from them, how to compelte this process of extraction, and of encoded representation.

gouden washer dinic

61000



Fig. 12

BIBLIOGRAPHY

- Dugoua, Jean-Jacques, et al. "Safety and Efficacy of Blue Cohosh (Caulophyllum Thalictroides) during Pregnancy and Lactation." *The Canadian Journal of Clinical Pharmacology = Journal Canadien De Pharmacologie Clinique*, U.S. National Library of Medicine, 2008, https://pubmed.ncbi.nlm.nih.gov/18204101/.
- 2. Federici, Silvia. *Beyond the Periphery of the Skin Rethinking, Remaking, and Reclaiming the Body in Contemporary Capitalism.* PM Press, 2020.
- 3. Federici, Silvia. *Caliban and the Witch: Women, the Body and Primitive Accumulation*. Penguin Books, 2021.
- 4. Kistin, Kistin J, and Alyssa D Newman. "Induction of Labor with Homeopathy: A Case Report." *Journal of Midwifery*; Women's Health, U.S. National Library of Medicine, 2007, https://pubmed. ncbi.nlm.nih.gov/17467597/.
- Luis, Angelo, and Fernanda Domingues. "Screening of the Potential Bioactivities of Pennyroyal (Mentha Pulegium L.) Essential Oil." *Antibiotics* (Basel, Switzerland), U.S. National Library of Medicine, Oct. 2021, https://pubmed.ncbi.nlm.nih.gov/34680848/.
- 6. "Milk Thistle." Mount Sinai Health System, https://www.mountsinai. org/health-library/herb/milk-thistle.
- The National Gallery, London. "Fading of Yellow and Red Lake Pigments." Fading of Yellow and Red Lake Pigments I Vermeer and Technique I Research I The National Gallery, London, https:// www.nationalgallery.org.uk/research/about-research/the-meaningof-making/vermeer-and-technique/fading-of-yellow-and-red-lakepigments.
- Pakrashi, A, and N Bhattacharya. "Abortifacient Principle of Achyranthes Aspera Linn." *Indian Journal of Experimental Biology*, U.S. National Library of Medicine, Oct. 1977, https://pubmed.ncbi. nlm.nih.gov/606650/.
- Rao, Rama B, and Robert S Hoffman. "Nicotinic Toxicity from Tincture of Blue Cohosh (Caulophyllum Thalictroides) Used as an Abortifacient." *Veterinary and Human Toxicology*, U.S. National Library of Medicine, Aug. 2002, https://pubmed.ncbi.nlm.nih. gov/12136970/.
- 10. Ray, Sarbani Dey, et al. "Pharmacological Basis of the Use of the Root Bark of Zizyphus Nummularia Aubrev. (Rhamnaceae) as Anti-Inflammatory Agent." *BMC Complementary and Alternative*

Medicine, U.S. National Library of Medicine, 23 Nov. 2015, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4657250/.

- 11. "Sedge, Sweet." *A Modern Herba*l I Sedge, Sweet, https://www. botanical.com/botanical/mgmh/s/sedges39.html.
- 12. Tomasini, Eugenia P., et al. "Characterization of Pigments and Binders in a Mural Painting from the Andean Church of San Andrés De Pachama (Northernmost of Chile) - Heritage Science." SpringerOpen, Springer International Publishing, 19 Oct. 2018, https://heritagesciencejournal.springeropen.com/articles/10.1186/ s40494-018-0226-x.

MEDRANO