

Learning to Dye in the Anthropocene:
Environmentalism in Natural Dyeing in the United States from the 1960s to Today

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Introduction

I learned natural dyeing from Sasha Duerr while an undergraduate in the textiles department at California College of the Arts. With Duerr, students learn not only technical skills related to dyeing, but the environmental impacts of plant dyeing. Attention to human and environmental health as impacted by the fashion industry was at the front of mind for many students and several faculty members at the college during the early 2010s, and classes like Duerr's offered an opportunity to experiment with and learn about methods and materials which were framed as a safer, more beneficial option than traditional techniques. After many years of practice and opportunities to learn from—and work with—natural dyers, some of whom did not engage environmental concerns in their practice, I was introduced to Dede Styles, a natural dyer in Swannanoa, North Carolina. The natural world is central to her practice. Through a series of oral history interviews, I got to know Styles and her practice more deeply, and recognized resonances with the environmentally engaged approach to natural dyeing I learned from Duerr. As a craft practitioner, designer and artist who has grappled with ideas of sustainability, environmental crisis and the shift towards the Anthropocene context in my own work, Duerr and Styles' relationships between practice and the natural world struck me as deserving of further study.¹ How do their

¹ "The Anthropocene is a proposed geological epoch dating from the commencement of significant human impact on Earth's geology and ecosystems, including, but not limited to, anthropogenic climate change." Wikipedia Contributors, 2019, "Anthropocene," Wikipedia, Wikimedia Foundation, January 10, 2019, <https://en.wikipedia.org/wiki/Anthropocene>. There has been some debate over the appropriateness of the term Anthropocene, and many proposed alternatives, including Capitalocene and Chthulucene. For more about the critiques and proposed alternatives, see T.J. Demos, *Against the Anthropocene: Visual Culture and Environment Today* (Berlin: Sternberg Press, 2017.); Donna J. Haraway, *Staying with the Trouble: Making Kin in the Chthulucene*

practices relate to the practices articulated in texts which were engaging environmental issues in the 1960s and 1970s? How have contemporary environmental concerns changed the ways that dyers like Duerr and Styles practice their craft? Ultimately, how have contemporary movements in art offered new tools to interpret and situate such work and to understand shifts within the discipline, specifically social practice art and art activism which were not part of the mid-century lexicon?

To begin answering these questions, it was necessary to focus my inquiry on contemporary practitioners who engage with environmental concerns through their practices, with implications for the field at large. Duerr and Styles are dyers who directly engage contemporary environmental concerns through their work, their writing and their teaching. From my initial research into their work, I began to explore texts of natural dyers who had informed their work, and others writing contemporaneously in the 1960s and 1970s. I approach this research as both a scholar and a natural dye practitioner. The texts and dyers included in this essay are drawn from those who have had a deep impact on not just my practice, but the field of natural dyeing in North America in a contemporary art context.

To approach the vast breadth of literature on the subject, I looked specifically at texts which were influential on others, tracing the credits, acknowledgements and

(Durham, NC: Duke University Press, 2016).; Kathryn Yusoff, *A Billion Black Anthropocenes or None* (Minneapolis, MN: University of Minnesota Press, 2019).

bibliographies of books and pamphlets published by large publishing houses, self-published works and a range in between. The question guiding the selection of texts is concerned with how natural dyers relate to the environment through their practice. The texts and dyers receiving greater attention here are those who have included writing which directly engages the question of the environment and nature. The earliest texts reviewed are those written in the 1960s and 1970s, both for the sake of focus and for their temporal relevance in terms of larger cultural trends of environmental awareness and action in the United States.

In the twentieth and twenty-first centuries, writing about natural dyeing has been a practice typically restricted to instructive description, historical documentation or scientific analysis. Description and historical documentation appear in the form of how-to texts or examinations of material and technical histories in which materials, their sources, applications, and cultural importance (primarily economic in the North American context) are the focus. Notable texts in these genres include: co-authors Jo Boutrup and Catherine Ellis' *The Art and Science of Natural Dyes*; Yoshiko Wada's *Shibori: The Inventive Art of Japanese Shaped Resist Dyeing*; and Mohammad Shahid and Faqeer Mohammad's "Recent advancements in natural dye applications: a review."² For example, Wada's text on Japanese resist-dyeing techniques was a first of

² One of the most popular and thorough contemporary natural dyeing texts that includes technical description, information and instructions, see: Jo Boutrup and Cathrine Ellis, *The Art and Science of Natural Dyes: Principles, Experiments, and Results* (Atglen, PA: Schiffer Publishing Ltd., 2018). One of the most widely cited scientific analyses and reviews of the potential for natural dyestuffs in industrial applications, see: Mohammad Shahid and Faqeer Mohammad, "Recent advancements in natural dye applications: a review," in *Journal of cleaner production* 53 (2013): 310-331.

its kind in the English language, bringing detailed historical information, technical descriptions and detailed imagery to dyers and fiber artists in the US and other English-speaking areas.³ Interest in—and writing about—natural dyeing surged globally in the 1960s and 1970s and has continued since, with interest waxing and waning throughout the last few decades of the twentieth century. In the early twenty-first century, interest in natural dyeing is again on the rise, with a proliferation of writing, social media images and videos focused on process.⁴

While the majority of texts about natural dyeing focus on documentation of techniques and their historical sources, the primary element that interests me is a rise in ecological concerns and environmentalism. The surge of writing about natural dyeing in the 1960s and 1970s coincides closely with a societal rise in ecological concerns and environmentalism. Similarly, an interest in natural techniques in the first two decades of the twenty-first century aligns with increasing interest about climate change.⁵ As the nuances of environmental changes and ecological concerns have shifted over the last sixty years, so have the ways in which natural dyers draw connections between their practices and ecological issues. Contemporary dyers with environmental concerns have a distinct point of connection and philosophy. This is visible in the ways that they write about their practices and the ways that ideas about

³ Yoshiko Iwamoto Wada, Mary Kellogg Rice and Jane Barton, *Shibori: The Inventive Art of Japanese Shaped Resist Dyeing* (Tokyo: Kodansha International, 1983).

⁴ As of March 16, 2022, a search on Instagram for the hashtag #naturaldye yields almost 900,000 results. YouTube has removed their search result counter, but a Google Video search for “natural dye” on the same date yields almost 9 million results.

⁵ Although the term “climate change” was first coined in 1975 by Columbia University Professor Wally Broecker, it did not enter common usage until the turn of the twenty-first century.

nature and “the natural” show up in their work.⁶ In the following review of natural dyeing literature from the 60’s onward, I will examine how natural dyers wrote about ecological concerns in the context of their dyeing practices. Further, I examine how contemporary trends in craft pedagogical strategies and developments in social practice art and art activism are present in contemporary practice through an examination of two United States-based dyers, Sasha Duerr and Dede Styles. Notably, there is a difference in some contemporary practices of natural dyeing and writing on the subject from the mid-twentieth century: there is a shift towards practices related to social practice and art activism not present in the earlier erudition. Scholars considering the role and place of art activism such as T.J. Demos have argued that the specificity of art activism practices have the potential to counter a universalizing logic in the aesthetic language of the Anthropocene. Natural dyeing is a medium with incredible potential for control and precision when considered in contrast to synthetic dye materials, which are engineered to eliminate the potential inconsistencies of natural materials that impact lightfastness, durability, potency and other important

⁶ Weaver Tali Weinberg and the design duo Blond and Bieber demonstrate very different ways of addressing environmental concerns in their work. Weinberg creates handwoven data visualizations of changing global, regional and local temperatures both as a form of documentation and of grieving. She uses natural dyes to color her pieces, but her practice is focused primarily on weaving as a mechanism for understanding and documenting climate change, rather than a focus on natural dyeing as an environmentally or socially engaged practice. Blond and Bieber is the design studio of Essi Johanna Glomb and Rasa Weber who received widespread media coverage of their textile printing experiments with algae, shown at Dutch Design Week in 2014. Glomb and Weber presented algae-based dyes as a cleaner alternative than toxic synthetic dyes used in the industry, and built a mobile printing station to demonstrate their process and materials at major European design industry events. For more on Weinberg’s work, see Tali Weinberg, “About The Woven Climate Datascares,” *Tali Weinberg*, accessed March 29, 2022, <https://www.taliweinberg.com/datascares>. For more on Blond and Bieber’s algae dyes, see Benedict Hobson, “Blond and Bieber’s dyes made from algae ‘don’t harm nature at all,’” *Dezeen.com*, December 3, 2014, <https://www.dezeen.com/2014/12/03/movie-blond-and-bieber-algaemy-dyes-made-from-algae-video-interview/> and Essi Johanna Glomb and Rasa Weber, “Algaemy,” Blond & Bieber, March 29, 2022, <https://blondandbieber.com/algaemy/>.

considerations for dyeing fiber. Contemporary practitioners like Duerr and Styles blend natural dyeing with social practice approaches, bringing people into closer relationships with one another and demonstrating how their direct environment can add to their work. Both Duerr and Styles are engaged in this blended pedagogical and making practice: Styles in particular uses her public teaching to introduce people to plants which grow locally, and the importance of those plants to the local biosphere. This is a new function of natural dyeing education in institutional settings: not just passing on technical knowledge, but modeling a participatory and implicated way of being.

In the following section, I will situate the term “natural dyeing” through reviews of selected literature of the 1960s and 1970s: Rita J. Adrosko’s *Natural Dyes and Home Dyeing* (1968), Palmy Weigle’s *Ancient Dyes for Modern Weavers* (1974), Arnold and Connie Krochmal’s *The Complete Illustrated Book of Dyes from Natural Sources* (1974), Jack Kramer’s *Natural Dyes, Plants & Processes* (1972) and Ida Grae’s *Nature’s Colors: Dyes from Plants* (1974).⁷ The ways that ideas about the natural world and the environment are discussed and included in the authors’ works will be contextualized

⁷ Rita J. Adrosko, *Natural Dyes and Home Dyeing* (Formerly Titled: *Natural Dyes in the United States*) (New York: Dover Publications, 1971). Palmy Weigle, *Ancient Dyes for Modern Weavers* (New York: Watson-Guption Publications, 1974). Arnold and Connie Krochmal, *The Complete Illustrated Book of Dyes from Natural Sources* (New York: Knopf Doubleday, 1974). Jack, Kramer, *Natural Dyes, Plants & Processes* (New York: Scribner, 1972). Ida, Grae, *Nature’s Colors: Dyes from Plants* (Columbus, OH: Macmillan/McGraw-Hill, 1974).

with larger cultural concerns about the environment and environmentalism at the time, specifically looking at the cultural impact of Rachel Carson's *Silent Spring* (1962).⁸

⁸ Rachel Carson, *Silent Spring* (New York: Houghton Mifflin, 1962; Reprinted 40th Anniversary edition. New York: Houghton Mifflin Harcourt, 2002). Citations refer to the 2002 reprinted edition.

What's natural about natural dyeing? Reviewing the literature

What is meant by the term “natural” dyeing? The term is vague yet culturally loaded.⁹ Natural dyers have tried to grapple with distinctive adjectives in explaining the practice. In the practice of dyeing cloth, “natural” is a signifier of difference. “Natural dyeing” typically refers to a practice of extracting chemicals produced by plants or animals to color cloth rather than using synthetic chemicals produced by humans. Many synthetic pigments are molecularly very similar to their naturally occurring counterparts, with slight changes made to them to give chromatic stability and permanence. In her 1971 book *Natural Dyes and Home Dyeing*, scholar Rita J. Adrosko indicates that, as a modifier, “natural” comes to be applied to dyeing practices and materials only after the development of synthetic dyeing technology in the mid-nineteenth century, when an alternative form of dyeing (synthetic dyeing) becomes widespread.¹⁰ She also writes that natural dyeing has been and continues to be practiced on an industrial scale, only being displaced as the norm by synthetic dyes after the discovery of aniline dyes in the mid-nineteenth century.¹¹

⁹ In his entry on “nature” in *Keywords*, Raymond Williams points to the shifting ideas around nature through the Enlightenment and Romantic movements via the concept of “state of nature.” Williams identifies a binary relationship constructed between these two positions: on the one hand, the Enlightenment approach of technological progress and on the other, the Romantic ideal that “learning from Nature” can heal the ills of an overly technical society. Raymond Williams, *Keywords: A vocabulary of culture and society* (New York: Oxford University Press, 1985), 223.

¹⁰ Adrosko, *Natural Dyes and Home Dyeing*, 9-12.

¹¹ Adrosko, *Natural Dyes and Home Dyeing*, 9.

Adrosko draws a clear divide between natural dyes as those derived from living and non-living sources found in nature and synthetic dyes manufactured by humans. She comes down firmly on the side of the synthetics in her assessment of natural dyeing in her 1968 publication *Natural Dyes and Home Dyeing*. Originally published as United States National Museum Bulletin 281 under the title *Natural Dyes in the United States*, the text was a combination of Adrosko's own historical assessment of natural dyeing in the United States and a revised reprint of a 1935 United States Department of Agriculture Miscellaneous publication by Margaret S. Furry and Bess M. Viemont titled "Home dyeing with natural dyes."¹² At the time, Adrosko was Associate Curator for the Division of Textiles at the Museum of History and Technology, and this bulletin was highly influential, cited by all of the other contemporaneous natural dyeing authors I reviewed including Palmy Weigle, Arnold and Connie Krochmal, Jack Kramer and Ida Grae. Adrosko is specifically thanked by the Krochmals in their acknowledgements.¹³ In spite of her work's impact, Adrosko seems unconvinced the effort is worth the result as far as natural dyeing is concerned. She writes, "Although fine, dependable commercial dyes are on the market, devotees of natural coloring materials derive a nostalgic pleasure from handling vegetable materials and extracting uniquely 'impure' colors from them. It is this latter group who would find that experimentation with untried plants might turn up unexpectedly interesting results."¹⁴ Adrosko's project offers a

¹² The edition cited in this essay is the 1971 edition published by Dover Publications, which is available in its entirety on Archive.org along with many of the other twentieth century dye books discussed.

¹³ Krochmal, *The Complete Illustrated Book of Dyes from Natural Sources*, 9.

¹⁴ Adrosko, *Natural Dyes and Home Dyeing*, 12. A note about quotations: Throughout this paper, I have followed the Chicago Manual of Style 17's recommendation that block quotations should be used when the quoted text is 100 or more words. See section 13.10: Choosing between run-in and block quotations, accessed March 31, 2022

narrative summary of the history of natural dyeing in the context of dyeing as an industry to contextualize a body of historic recipes.

Of particular interest to theorists, practitioners and educators is Adrosko's distinction between the purity of synthetic (what she calls commercial) dyes and the impurity of natural dyes. She points to myriad factors that impact colors derived from natural sources, and it is in their variability that she finds their only possible appeal: “Natural dyestuffs produce offbeat, one-of-a-kind colors. No two dye lots are identical, each having subtle differences due to impurities peculiar to the particular plant material used. Thus the very characteristics of natural dyes that often made them the despair of earlier dyers appeal to today’s craftsmen searching for the unique.”¹⁵ While Adrosko documents these historic recipes and practices in her text, she does not advocate for their use. She herself was not a natural dyer. She was a textile historian and curator at the Smithsonian, an institution with its own agenda and role. Adrosko made significant contributions to the field, primarily in her historical studies of the economic importance of natural dyeing in the colonial US, and in her work on the Jacquard weaving, an important technological advance in the textile industry with economically significant impacts. Although not a natural dyer herself, she discusses the intangible particularity of natural dyes that makes them attractive; she identifies the impurities she claims have

through Warren Wilson College proxy, <https://www-chicagomanualofstyle-org.proxy191.nclive.org/book/ed17/part2/ch13/psec010.html>.

¹⁵ Adrosko, *Natural Dyes and Home Dyeing*, 3-4.

been eliminated by synthetic dyes as the very thing that makes them compelling to natural dye practitioners.

Natural dyer and writer Palmy Weigle taught weaving and dyeing at the Hudson River Museum, the College of New Rochelle and the Brooklyn Botanic Gardens, where she also guest edited a volume of the gardens' periodical focused on natural dyeing.¹⁶ Weigle draws the same distinction as Adrosko between natural and synthetic dyeing in her 1974 how-to text, *Ancient Dyes for Modern Weavers*: "There are dyes that are made from materials found in nature such as roots, fruit or leaves—these are natural dyes. Then there are dyes made in laboratories from combining purified or isolated components—these are synthetic dyes."¹⁷ She continues, "frequently, natural dyes are incorrectly contrasted with chemical dyes. All dyes have a chemical make-up, just as all fibers have a chemical composition."¹⁸ Weigle draws the same distinction as Adrosko in terms of the sources of the dye materials, and similarly characterizes natural dyes as containing impurities which are absent in synthetic/chemical dyes. She also blurs the false dichotomy between natural and synthetic dyes, pointing out that natural dyes are, in fact, chemicals themselves. This is addressed by both Duerr and Styles in their work, and it is striking to see it acknowledged in literature from the 1960s and 1970s. Duerr often tells her students natural doesn't mean safe.¹⁹ Styles says that

¹⁶ Palmy Weigle, ed., "Natural Plant Dyeing: A Handbook," *Plants and Gardens* 29, no. 2. (Brooklyn, NY: Brooklyn Botanic Garden, 1973).

¹⁷ Weigle, *Ancient Dyes for Modern Weavers*, 12.

¹⁸ Weigle, *Ancient Dyes for Modern Weavers*, 12.

¹⁹ Sasha Duerr, *Soil to Studio*, (class lecture, California College of the Arts, Oakland, CA, January 2013).

people watching her demonstrations often say ““Oh look, it’s natural dyes, no chemicals!”” and she corrects them, explaining that there are plenty of natural things that can be dangerous, like poison ivy and death angel mushrooms.²⁰ Weigle’s writing coincides with the publication of several other dyeing books and articles (newspaper and magazine) on the practice besides the ones already cited.²¹ Weigle connects the increased interest in natural dyeing to increasing interest in the natural world. She writes: “Today a new appreciation of ‘natural’ color has developed. It stems in part from an increased interest in the environment and it is not surprising, therefore, to find the artist-craftsman insisting on using natural dyes...”²² The connection Weigle identified between people’s interest in natural dyes and the natural world seems to have resonance today, as both Duerr and Styles, though avid proponents of natural dyeing, still point to the complexity of its material reality.

A more effusive endorsement for the beauty in the variability of natural dyes comes from Arnold and Connie Krochmal’s *The Complete Illustrated Book of Dyes from Natural Sources* (1974). Arnold was a professor of botany and Connie a writer. They both taught at North Carolina State University and wrote collaboratively for years,

²⁰ Dede Styles, in conversation with the author, November 2020.

²¹ A few examples: Alma Lesch, *Vegetable Dyeing: 151 Color Recipes for Dyeing Yarns and Fabrics with Natural Materials* (New York: Watson-Guption Publications, 1970).; Jean Murphy, 1971, “A Fan of ‘Silly Old Weeds,’” *The Los Angeles Times*, June 10, 1971, <https://www.newspapers.com/image/384817580>.; “Natural Dyes and Home Dyeing,” *Craft Horizons* 32, no. 6 (1972): 71.

²² Weigle, *Ancient Dyes for Modern Weavers*, 9.

primarily about plants and their many uses.²³ Clearly enamored with plants, the Krochmals come down firmly on the side of natural dyes. They write:

One of the most fascinating aspects of natural dyes is the variability and unpredictability of the colors one can expect, even under what appears to be uniform conditions. The plants themselves vary, depending on their age, soil conditions, and growing conditions... All of this, we feel, adds to the pleasure and spice of using natural dyes and provides a charming variability not approached by synthetic dyes. The warmth of natural colors has a glow, the glow of nature and man working in close conjunction. To us even a less than ideal color has a warmth and beauty to it, when we think of the plant and the circumstances under which the plant grew.²⁴

For the Krochmals, the impurities and inconsistencies noted by Adrosko are the desirable result of—and impetus for—natural dyeing. Similarly, garden writer Jack Kramer describes in his 1972 book, *Natural Dyes, Plants & Processes*, how he discovered natural dyes through local weavers.²⁵ Through the local craft community, Kramer saw the variety of colors and applications for naturally dyed yarns, and began to experiment with the process himself. His book is full of recipes and images of samples dyed by himself and weavers and dyers from his community, Marin County, in Northern California. Kramer's writing focused heavily on natural gardening methods, eschewing chemical inputs and advocating for biodiversity within home gardens to promote ecological health.²⁶ Like the Krochmals, Kramer was a plant lover first, but his friendships and connections to local craft communities brought him to natural dyeing.

²³ Before their venture into dyeing, Connie Krochmal had published a book about natural cosmetics.

²⁴ Krochmal, *The Complete Illustrated Book of Dyes from Natural Sources*, 2.

²⁵ Including Mary Martinez and Ida Grae. I want to acknowledge here that Kramer learned from women artists in his community for this book.

²⁶ See Jack Kramer, *The Natural Way to Pest-Free Gardening* (New York: Charles Scribner's Sons, 1972). Kramer, *The Free Earth Guide to Gardening* (New York: Pinnacle Books, 1974). Kramer, *Natural Gardens: Gardening with Native Plants* (New York: Charles Scribner's Sons, 1973).

He writes: “Now, of course, dyeing plants to color yarns is enjoying a renaissance. I no longer wonder what makes people spend their time going through the various processes. I know. The pages that follow contain this information. It is yet another way (and an immensely satisfying way to a garden writer) in which plants contribute to our world. In these natural-dyed yarns we see nature at her best enriching our lives for years to come.”²⁷ Kramer’s perspective aligns with the Krochmals’ as someone who is not a textile artist but a lover of plants and the natural world, who appreciates the beauty and the potential of vegetation in a varied range of contexts. This flora-oriented approach to dyeing points to future shifts from the industrial pollution-focused environmentalism of the 1960s and 1970s to the more holistic approach to conversations about the environment which characterize the Anthropocene.

One of Kramer’s contributors, Ida Grae, was a weaver and natural dyer who wrote and published her own book two years later, titled *Nature’s Colors: Dyes from Plants*. Grae showed her weaving work widely and taught classes in weaving and dyeing at Dominican College and the College of Marin. She described her arrival at natural dyeing as “inevitable” given her passion for both gardening and weaving.²⁸ Grae’s writing focuses more on the experiential qualities of the process and how the natural dyer experiences it, particularly collecting dye materials, rather than on the superiority of natural materials over synthetic. “Many natural substances and plants

²⁷ Kramer, *Natural Dyes, Plants & Processes*, 16.

²⁸ Eloise Dungan, “Dye Pots in Her Garden,” *The San Francisco Examiner*, December 13, 1974, <https://www.newspapers.com/image/461177056>.

contain dye,” she writes, “Once this fact is realized our attitude toward nature undergoes a change. A new kind of seeing occurs. One begins to notice more than just an occasional flower or a dramatic grouping of trees. The anonymity of greenness disappears. Individual plants stand out, the way a friend's face stands out in a crowd.”²⁹ Grae’s focus is upon the relationship between the natural dyer and the natural world, rather than an overt value judgment about the superiority or inferiority of natural dyes in comparison to synthetic dyes. She indicates clearly that there is something worthwhile in natural dyeing and deriving colors from plants, insects and minerals in her surroundings. She points to the “flat, hard” appearance of synthetically dyed textiles and appreciates the “nuance” of natural dyes, but the terms purity and impurity are absent from her writing.³⁰

Adrosko, Weigle and the Krochmals use language of purity and impurity to distinguish natural dyeing from synthetic dyeing. Kramer does not employ the purity/impurity language, though his writing, like the Krochmals’, is heavily driven by an appreciation for plants and the natural world. Both Weigle and Grae were weavers, taught weaving and other fiber arts through academic institutions and incorporated natural dyeing practices into their fiber practices. Grae’s writing demonstrates the specific and variable qualities of natural dyeing materials and method through the way her studio practice and her gardening practice come together in her work. All of these dyebook authors approached their subject differently, even though each of them

²⁹ Grae, *Nature’s Colors*, 16.

³⁰ Grae, *Nature’s Colors*, 25.

engages a relationship with the environment in some way. This variability in approaches reflects the plurality of the practice, but each of them considers, in some way, what is natural in natural dyeing, what aspect of the practice relates to the environment and why that is important or valuable. As Weigle points out, there were contemporary cultural movements and awareness related to environmentalism which provides some context for why the environment came into so much writing about natural dyeing.

The water we're swimming in: Environmentalism from the 1960s to now

Rachel Carson's *Silent Spring* was published in 1962, bringing to mainstream attention the detrimental impacts of large-scale industry and, specifically, chemical pollution on the environment. Her explanations of the unintended consequences of widespread pesticide use brought modern environmental concerns to the fore for many people and helped to raise general consciousness of the damage industry was doing to the natural world. Significantly, the environmental damage and destruction Carson identified and wrote about was focused on the impacts of industrial chemical pollution, and told a story that was very clearly focused on the harmfulness of synthetic chemicals and the environmental damage they could cause to the natural world.³¹ *Silent Spring* detailed the damage that widespread DDT use had caused to wildlife, particularly to birds, whose eggshells were thinned and their reproductive cycles thus threatened by the concentration of chemicals in their system, which were in turn consumed by smaller animals and insects and microbes. Carson and others' work led to reform, to policy change and restrictions on the use of DDT, heightened awareness about chemical use in general and is credited as a main driver in the formation of the United States Environmental Protection Agency.³²

Environmental pollution was a major social and political issue during the 1960s, and the range of responses to the environmental concerns at the time in this literature

³¹ Carson, *Silent Spring*, 1.

³² US EPA, "The Origins of EPA," US EPA, November 19, 2018, <https://www.epa.gov/history/origins-epa>.

is varied, as we see with Weigle's recognition of the increased environmental awareness alongside her reminder about the chemical nature of natural dyes. From the language the Krochmals and Kramer use in their books about natural dyes, it is clear that they value the colors derived from plants above those from synthetic chemicals. The publisher's dust jacket description of Kramer's book, *Natural Dyes, Plants & Processes*, begins "Here is an interesting and rewarding back-to-nature project describing the wealth of plant material that can give us beautiful colors, soft and subtle or strong and vibrant, in ways no artificial dyes can equal. Flowers, weeds, berries, barks, and lichens are the sources of these natural dyes."³³ This promotional material, which was worded to sell the work to the general public, is telling in that it reveals something about the cultural moment and the importance of the nascent back-to-nature movement.

Contemporary environmental concerns have built on the work of scholars like Rachel Carson; environmental pollution continues to be an issue around the world and the realities of climate change are beginning to settle into collective consciousness.³⁴ Today, environmental issues like pollution and destructive extraction are still important but the focal issue has transitioned to climate change, though all three are

³³ Publisher's dust jacket description of the book in Kramer, *Natural Dyes, Plants & Processes*.

³⁴ For more on the current climate crisis, see Joel Wainwright and Geoff Mann, *Climate Leviathan: A Political Theory of Our Planetary Future* (New York: Verso, 2020).; Naomi Klein, *This Changes Everything: Capitalism vs. the Climate* (New York: Simon & Schuster, 2014). Klein's *This Changes Everything* was called "the most momentous and contentious environmental book since *Silent Spring*" by the New York Times Book Review. Rob Nixon, "Naomi Klein's 'This Changes Everything,'" *The New York Times*, November 6, 2014, <https://www.nytimes.com/2014/11/09/books/review/naomi-klein-this-changes-everything-review.html>.

interconnected in terms of causation, advocacy and activism. In the first two decades of the twenty-first century, increased awareness of the harm being done to the natural world and human health by the fashion industry was driven both by activist groups like Greenpeace and by sustainability think tanks like the Ellen MacArthur Foundation.³⁵ From chemical runoff at dyeing factories to the proliferation of microplastics in water systems and the industry's reliance on exploitative labor and petroleum byproducts, the fashion industry came under scrutiny, and its list of sins was long. Fashion brands like Patagonia, now considered among the most ethical labels in the industry, began advertising campaigns telling customers not to buy their products until they fulfilled public commitments to clean up their production.³⁶ Alongside this scrutiny of the fashion industry, activism against oil and gas companies and their activities has received a significant amount of media attention as protestors have blockaded and sabotaged drilling and pipeline projects across North America, and students have called on their universities to divest from oil companies.³⁷ Climate change activists and political theorists such as Andreas Malm and visual studies and Anthropocene scholars such as T.J. Demos have advocated for more direct action and critical attention and

³⁵ "Detox My Fashion," Greenpeace, Accessed March 29, 2022, <https://www.greenpeace.org/international/act/detox/>. Fashion, "Overview," Ellen MacArthur Foundation, Accessed on March 29, 2022, <https://ellenmacarthurfoundation.org/topics/fashion/overview>.

³⁶ Cameron Clarke, "Why Patagonia's off-the-wall advertising asks customers to think twice before buying its products," *The Drum*, February 22, 2017, <https://www.thedrum.com/news/2017/02/22/why-patagonias-the-wall-advertising-asks-customers-think-twice-buying-its-products/>.

³⁷ Examples of actions and blockades against oil pipelines include the struggle against the Dakota Access Pipeline construction (also known as #NODAPL), the ongoing occupation and blockade of the construction of the Coastal GasLink Pipeline in Wet'suwet'en territory, and the Paddle in Seattle sHell no! demonstration. For more about student divestment activism see StudentNation, "RISD Students Stage First Fossil Fuel Divestment Sit-In," *The Nation*, April 29, 2013, <https://www.thenation.com/article/archive/risd-students-stage-first-fossil-fuel-divestment-sit/>.

recognition of that action in recent years, demonstrating the extent to which the response to climate change has amplified.³⁸

So far, I have reviewed the varied ways writers considered the natural and the environment in relation to natural dyeing, with a focus on plants. While Weigle has pointed to the chemicals present in natural dyes, the authors treat the second component of natural dyeing, the mordants and modifiers, with an equal range of attention and concern. The most overtly chemical components of natural dyes present a challenge to neatly drawn boundaries between natural and synthetic as respectively safe or hazardous. I have also introduced some cultural context for the environmentalism which pervaded the period in which these texts were written, as well as context for the contemporary tenor of environmental attitudes. In the following section, I examine how this literature addresses the complexity of mordants and modifiers. I then draw connections between the literature and the ways in which Sasha Duerr and Dede Styles address concerns in their contemporary natural dyeing practices. These connections ultimately illustrate the complexity of the materials used in natural dyeing and demonstrate how those materials defy neat categorization as safe. I will then move to a review of how each dyer engages the complex questions of the natural and the environment in the current age of environmentalism, characterized by concerns about climate change.

³⁸ The title of Malm's 2021 book *How to Blow Up a Pipeline* is particularly provocative. Andreas Malm, *How to Blow Up a Pipeline: Learning to Fight in a World on Fire* (New York: Verso, 2021).

As Weigle did in 1974, Styles expresses frustration with the lack of nuance many people display when encountering natural dyes, and describes the chemicals of natural dye pigments as being essentially the same as synthetic chemicals but for their origins. “All of the molecules that make the color attached to the fiber, that’s chemicals,” says Styles, “It’s carbon and nitrogen and hydrogen... The difference is that instead of getting my chemicals at the store, I got them from a plant. A plant made them using energy from the sun. It built those structures in its little cells, and I’m getting them out.”³⁹ This description of natural dyes as having a chemical composition relates closely to the way Weigle described the chemical nature of natural dyes, but in both cases, the point is focused on the source of the pigments. There are three key material elements in natural dyeing, however, and pigments are only one of them. The other two components—water and mordants—receive less attention in the context of what is or is not considered natural. Mordants are used to fix dye pigments to fiber at a molecular level and are also called fixatives for this reason. Modifiers shift the color of the dye and can also be mordants, though are not always. Mordants present something of a problem for understanding natural dyes as inherently and definitively safer than synthetic dyes simply by virtue of their presence in nature. The natural dyers whose texts we have reviewed all treated mordants and modifiers differently, and Duerr and Styles have also each responded differently to the question of mordants and safety. By understanding how dyers respond to this natural but not necessarily safe component

³⁹ Styles, in conversation with the author, November 2022.

of natural dyeing, we can begin to understand the ways that dyers understand and navigate the complexities of the process.

Many instructional dye books of the mid-twentieth century include recipes and instructions for using materials that today are considered far too dangerous and harmful for recreational home applications, particularly powdered heavy metal salts used as mordants.⁴⁰ Many of these metal salts, such as potassium dichromate (chrome), stannous chloride (tin) and blue vitriol (copper), are now commonly accepted to be harmful for human health and eschewed by many natural dyers. Fixatives and modifiers continue to be purchased from industrial suppliers with few exceptions. Ferrous sulfate may be substituted with a homemade iron solution made from soaking metal objects containing iron in a solution of water and vinegar, but aluminum sulfate cannot be easily produced or replaced by the natural dyer as it is a mineral which must be mined. Here the slippage in “natural” comes into play.

Aluminum sulfate and other metal salts occur naturally, but their collection, refinement and distribution are almost exclusively the domain of industrial processing. While the texts reviewed above do all mention safety, the range of concern and recommended precautions vary widely. The Krochmals offer the recommendation to

⁴⁰ In this section I will draw on both the dye books I have reviewed as well as my own material knowledge as a natural dyer to provide information and context about how natural dyeing works. A mordant is a chemical added to a fiber or a dye bath to create a more stable chemical bond between the fiber’s dye sites and the dye molecule. The addition of a mordant changes the bond from a hydrogen bond, which is weak, to an ionic bond, which is comparatively very strong. Mordants and fixatives are commonly used in both synthetic and natural dyeing except in the case of vat dyes such as indigo, which are chemically very different from bath dyes where mordants are used.

“handle all chemicals with care” and acknowledge that some of the chemicals they mention “can be poisonous,” but that is the extent of their warnings.⁴¹ They do not address the origins or physical sources of listed mordants and modifiers, though they do include suppliers from whom they can be purchased. Kramer does acknowledge that some of the metal salts are harmful or poisonous—specifically tin and chrome—but simply recommends using them outdoors with caution and keeping them labeled and away from pets and children.⁴² Adrosko opens the section on “Preparation for Dyeing” with the following disclaimer: “A NOTE OF CAUTION: Keep dye material out of children’s reach. Some of these substances are poisonous, and may cause skin irritation.”⁴³ Weigle, who has already demonstrated an awareness of and desire to communicate the chemistry of natural dyeing, has a particularly thorough section on mordants. In *Ancient Dyes for Modern Weavers*, she begins the chapter on mordants with precautions and four rules for using chemicals safely. She also includes two pages of description of each of the mordants and modifiers included in her book, even detailing areas where different metal salts are mined, or where modifiers such as potassium bitartrate (cream of tartar) are produced.⁴⁴

Ida Grae takes another approach, listing commonly used mordants, including the more hazardous ones referenced in each of the other books so far reviewed, but she opens the list of required chemicals by identifying the most easily accessible and

⁴¹ Krochmal, *The Complete Illustrated Book of Dyes from Natural Sources*, 31.

⁴² Kramer, *Natural Dyes, Plants & Processes*, 34-38.

⁴³ Adrosko, *Natural Dyes and Home Dyeing*, 66.

⁴⁴ Cream of tartar is a byproduct of winemaking.

“nonpoisonous” chemicals (pickling alum, which is not the same as potassium alum, and cream of tartar, both of which are used in cooking) and telling the reader that “a beginning dyer can decide to limit himself to this mordant pair and accept the limitations of color range and fastness. Why not? It has been my philosophy to encourage students to use simple, natural means.”⁴⁵ Grae’s more cautious approach and recommendation is very similar to the approach Duerr has taken: limiting and eliminating the use of added chemicals wherever possible. Styles, on the other hand, is slightly more open to chemical use, including copper in her recipes, though she works outdoors and offers instructions for proper use and disposal of the mordants.⁴⁶ Each of their approaches makes sense within their respective practices: Duerr came to natural dyeing because she was looking for materials that would not adversely impact her health, and Styles came to natural dyeing through a local craft institution, then incorporated her own passions and expertise in plants and education later in life. For Styles, the emphasis is on getting to know the plants that connect people to the natural world where they live. For Duerr, the emphasis is similarly on connection, whether between an artist and their materials, an individual and their community, or a human and their plant neighbors.

Despite its complexity and material hazards, the clear relationship between interest in natural dyeing and environmentalism speaks to the practice’s ability to help people feel closer to “nature” and more distant from harmful industry. There is also a

⁴⁵ Grae, *Nature’s Colors*, 25.

⁴⁶ Styles, *Wild Mountain Time*, 9-10, 48.

turn in more recent practice which draws on this appeal of the natural and the murkiness of complex material practices, as well as contemporary trends in art activism and social practice art. This shift brings natural dyeing into a relationship with contemporary environmentalism that has changed from the 1960s and 1970s but still contains some of the same concerns. Neither Duerr nor Styles are advocating simply for a turn from harmful synthetic chemicals to safer natural ones. This is itself a dramatically oversimplified distinction in what is really a much more complicated assemblage of materials. Instead, they attempt to foster connected, complicated and specific relationships with—and increased thoughtfulness about—the materials they use to engage others in that thoughtfulness. Just as authors of the 1960s and 1970s engaged natural, chemical and environmental concerns in a range of ways, Duerr and Styles construct complicated ways of relating through their own practices which reflect the interconnected and holistic views of environmentalism in the Anthropocene.

Natural Dyeing as Social Practice: Everything we need is already here

In my first natural dyeing class, my classmates and I looked at a map of dye plants around the California College of the Arts' Oakland campus and surrounding urban neighborhood.⁴⁷ It was September 2012, and Sasha Duerr, my professor, talked to us about best practices for foraging as we prepared to go out and collect materials from our urban environment to dye small fabric swatches. I had never imagined that the plants I grew up with in the developed suburbs of my hometown could do so much more than decorate the backdrop of a suburb or a city. An hour or so later the class clustered around the pots full of English ivy, redwood cones, oxalis, eucalyptus bark and sweetgum leaves gently simmering on burners in the college's dye studio. We added our small swatches of silk, wool, cotton, linen and rayon fabrics and watched as they start to take on the colors we teased out of the collected plant materials. Like strange teas, the material began to release color into the water, and the fabrics we dropped into the pots started to soak it up almost immediately. But the range of colors was nothing like tea. Yes, there were browns, but vivid, deep ones in shades of dark woody red or steely purple-gray, bright, almost neon yellow, and reds and grays that appeared almost purple. There is a magic to the first natural dyeing experience that captures the imagination and makes the world seem full of promise and mystery. I have seen my own students experience that same transformative moment. Beyond that initial wonder lies the potential for a lifetime of study and experimentation, but it is that

⁴⁷ The map was the result of a project undertaken by Duerr and Susanne Cockerell's students in 2011 and was inspired by David Allen Burns and Austin Young's Fallen Fruit project. <https://fallenfruit.org/about/>.

moment of wonder and delight that Duerr and Styles use to draw students in and to encourage them to learn and experiment.

Like Grae suggests, Duerr avoids using harsh chemicals wherever possible. Previously a painter, Duerr developed sensitivities to the materials she used in her oil painting, which became so severe she had to stop using them while still an undergraduate. She began looking for alternative materials which she could use for color in her work, ones which would contain fewer of the harsh chemicals that triggered her headaches and nausea, eventually coming to natural dyeing and textile practices. This change in medium created space for Duerr to draw connections between her art practice, the world of environmental advocacy and her childhood spent at a biodynamic farm in Maine and led her into artistic and design responses to the environmental impact of the fashion industry. Duerr approached this new medium through techniques and strategies she learned from her involvement in the Edible Schoolyard project and Slow Food movement, which emphasized building personal connections to place, objects, color and clothing through looking at a color's origins, and its impacts on the environment and human health.⁴⁸

Drawing on these connections, Duerr co-founded the Permacouture Institute in 2007 with Katelyn Toth-Fejel and Deepa Natarajan. A play on the biodynamic design practice of permaculture, the Permacouture Institute draws on social practice

⁴⁸ Sasha Duerr, *Natural Colors: Vibrant Plant Dye Projects for Your Home and Wardrobe* (New York: Watson-Guption Publications, 2016), 2-4.

strategies to connect a wide range of participants including “chefs, farmers, perfumers, herbalists, florists, vintners, activists, and educators to explore modern social and environmental ways to reconnect with and revive the use of natural color.”⁴⁹ Duerr’s natural dyeing practice relies heavily on experimentation with whatever plants are immediately available, using the basic formula of water, dye material and fiber to create color. She looks for materials which do not require the use of mineral or metal mordants, and processes such as solar oven or long infusion dyeing, which do not rely on direct heat to create color. Duerr even uses seawater, rainwater or other water sources typically frowned upon by natural dyers, to explore her interest in the effects that might result from the minerals and other material present in the water source local to where she is dyeing.⁵⁰ The emphasis for Duerr is not on achieving a specific shade, or even a replicable or particularly stable one, but on drawing connections between the dyer, the constituent parts of the dye and the process, all of which are specific to the location in which the dyeing occurs. To Duerr, “working with plant color is one of the easiest and most accessible ways of connecting with the cycle of our ecologies...you can begin with the wayward white wool sweater in the back of your closet that you haven’t worn and the leftover by-products of your favorite meal before they hit the compost pile.”⁵¹ Natural dyeing for Duerr is about drawing connections, engaging with the living world around you and seeing the potential for color which you can only get to

⁴⁹ Duerr, *Natural Color*, 7.

⁵⁰ Sasha Duerr, *Natural Palettes: Inspiration from Plant-Based Color* (New York: Princeton Architectural Press, 2020), 21.

⁵¹ Duerr, *Natural Color*, 8.

know through experimentation and the experience gained by practice and close-looking.

Duerr writes in her 2016 book, *Natural Color*: “Dyeing with plants means more than simply replacing synthetic materials with natural ones—it means changing the way we care for and interact with our natural environment.”⁵² Care and interaction are at the core of Duerr’s practice and she brings them into her teaching practices by drawing on strategies from social practice and art activism. During her MFA work at CCA (then California College of Arts and Crafts), Duerr made that connection more explicit within her practice, combining her textile and fiber studies with techniques and strategies from social practice, a field coming into a phase of maturity at that time and in that space.⁵³ Her classroom for her CCA-based Soil to Studio course is ever-changing and often outside or off-campus. The college’s garden, the nearby UC Berkeley Botanical Gardens, Tilden Park and the Berkeley Art Museum are just a few spaces her classes have visited or worked. In any and all of these spaces, encounters and conversations with the general public occur with frequency, and Duerr always stops to explain what is going on, and encourages her students to do the same. Duerr’s CCA classes often cohost campus events with social practice and community arts courses taught by Susanne Cockrell, bringing students out of the studio to create

⁵² Sasha Duerr, *Natural Color: Vibrant Plant Dye Projects for Your Home and Wardrobe* (Berkeley, CA: Watson-Guptill Publications, 2016), 5.

⁵³ California College of the Arts was the first art college to create a standalone Social Practice program in 2005, three years after Duerr finished her MFA studies. Robin Cembalest, “How to Speak Artspeak (Properly),” *ARTnews.com*, October 31, 2013, <https://www.artnews.com/art-news/news/how-to-speak-artspeak-properly-2328/>.

both color and connections through events like “Weed Your Wardrobe” which combine clothing swaps with natural dyeing and garden work days.⁵⁴

Duerr encourages her students, both in her university classes and myriad other spaces where she teaches, to find their materials in their immediate surroundings, which for students at CCA means urban spaces of varying density. She introduces her students to color differently than many other color theory approaches might; she does not start with the primaries, the building blocks of creating different shades and their relationships to one another. Instead, Duerr starts with the ground where she and her students stand, and experiments with the materials on hand. This means finding plants in all their forms, including food waste and plants that thrive in highly developed spaces, such as wild fennel or oxalis in the San Francisco Bay Area.

Styles uses a similar focus on observation and connection-drawing in her demonstrations and workshops.⁵⁵ Styles learned to dye from a member of the Southern Highland Craft Guild (SHCG) when she was a child and first encountered spinning and natural dyeing, crafts that she would pick up and carry with her for the rest of her life. Styles, herself a member of the SHCG, demonstrated natural dyeing at the biannual fairs in Asheville, North Carolina.⁵⁶ Her natural dye practice and demonstrations serve both as a continuation of a culture of craft in Appalachia

⁵⁴ Weed Your Wardrobe 2013 was documented as part of the class’ participation in the Local Wisdom Project. See Figure 5 for an example, and the Flickr page which hosts more documentation of the multi-faceted and interdepartmental work day.

⁵⁵ Laurie O’Neill, “Natural Dyeing with Dede Styles, Part I – Identification,” *Slowly She Turned*, June 3, 2013, <https://slowlysheturned.net/2013/06/03/natural-dyeing-with-dede-styles-part-i-identification/>.

⁵⁶ Styles, in conversation with the author, November 2020.

supported and shaped by organizations like the SHCG, and as an opportunity to teach people about the plant and insect life sharing their regional home. Styles is deeply aware of the historic craft practices in the region developed in association with organizations like the SHCG, as well as those practiced by the Cherokee people whose ancestral homelands are the area around Asheville and Swannanoa where she lives. For her, natural dyeing helps her nurture the relationship between herself and her homeplace and is a way to connect back to all of the peoples who lived there before her, Indigenous and colonizer alike. In her self-published dye plant identification book, *Wild Mountain Time: Native Dye Plants*, Styles writes: “In this age where our lifestyle has separated us from the original source of all we need, gathering plants for dye, learning where to look and when to gather them, helps us to become more like those before us who lived closer to the earth.”⁵⁷ For Styles, natural dyeing is both a historical practice, as well as a contemporary opportunity to teach people about the importance of plants and green spaces. The educational and connection-drawing components of her practice are underscored in the presentation and structure of her book, which is modeled after plant identification books and emphasizes the appearance of the plants as they grow in nature and how to find and harvest them, unlike books like Adrosko’s or Weigle’s which place much greater emphasis on the recipes and the colors they produce.⁵⁸

⁵⁷ Dede Styles, *Wild Mountain Time: Native Dye Plants* (Swannanoa, NC: Published by the author, 2019), 47.

⁵⁸ See figures 7, 8 and 9 for examples from each text.

Through demonstrations at fairs, as well as a few workshops taught through other fiber and craft schools in the area, Styles has been able to bring education about the plant and animal community of Swannanoa and Asheville to many more people, of all ages. In an interview, Styles told me, “one of the most political things that I do is teach other people to care about the forest, to care about the climate, to care about the green world, to care about other people.”⁵⁹ As she writes, “plants make our life on this planet possible and rich in many ways. If we lose sight of this fact, if we fail to respect this concept in everything we do, we diminish all life on this planet.”⁶⁰ For Styles, this is crucial, and she deploys her experience and belonging in an institution and tradition of craft education to not only teach the craft of natural dyeing, but to teach people to look, to see and to care. Styles is much less concerned with industrial alternatives or replacements, telling me she has tried to dye with the commercially available natural dye extracts which have become popular and easily accessible through online retailers like Botanical Colors and Maiwa, but she prefers working with plants.⁶¹ Natural dyeing for Styles is both a historical practice and one that can offer contemporary practitioners and learners an opportunity to connect more directly with the natural world. Working with processed extracts eliminates this crucial connection point and the key part of Styles’ process that opens up space for communication and education. Without the recognizable plant material and actively collecting it from where it grows, Styles could not illustrate the connections between the dyer and the natural

⁵⁹ Laurin C. Guthrie, “Natural Born Subversive: Dede Styles on Living and Dyeing in Swannanoa, North Carolina,” *Southern Cultures* 28, no. 1 (Spring 2022): 79.

⁶⁰ Styles, *Wild Mountain Time*, 2.

⁶¹ Styles, in conversation with the author, March 2021.

world that she highlights in her practice. Styles and Duerr both emphasize care and a shifting attention that foregrounds the environmental relationship and parallels the methods and strategies deployed in both social practice art and environmental art activism that T.J. Demos identifies in his scholarship on art activism in the Anthropocene.

In his 2022 essay “The Great Transition: The Arts and Radical System Change,” Demos argues that the current era of climate change demands a cultural shift, and the world of art and media must abandon outdated modernist ideas of art and visual spectacle to embrace a formulation of media and culture which includes activism and experiments in new ways of living.⁶² Demos considers projects which engage in both environmental activism and which present models for new ways of living, on a range of scales and in both traditional art spaces like museums, as well as encampments, blockades and autonomous zones, and expands the field of social practice art to encompass all of these projects.

Demos proposes a new set of parameters for assessing the success of social practice art which departs sharply from scholar and critic Claire Bishop’s proposed critical framework, articulated in her 2006 article, “The Social Turn: Collaboration and Its Discontents.”⁶³ Bishop is a professor of art history at the CUNY Graduate Center

⁶² T.J. Demos, “The Great Transition: The Arts and Radical System Change,” in *Accumulation: The Art, Architecture and Media of Climate Change*, ed. by Nick Axel, Daniel A. Barber, Nikolaus Hirsch, Anton Vidokle (Minneapolis, MN: e-flux Architecture, 2022): 37-52.

⁶³ Claire Bishop, “The Social Turn: Collaboration and Its Discontents,” *ArtForum International* 44, no. 6 (2006): 178-183.

and has received numerous awards for her writing. Her edited volume on social practice art, *Participation*, is widely regarded as essential text on the subject.⁶⁴ Bishop writes of the social practice field: “This mixed panorama of socially collaborative work arguably forms what avant-garde we have today: artists using social situations to produce dematerialized, antimarket, politically engaged projects that carry on the modernist call to blur art and life... For these and other supporters of socially engaged art, the creative energy of participatory practices rehumanizes—or at least de-alienates—a society rendered numb and fragmented by the repressive instrumentality of capitalism.”⁶⁵ Where Bishop asks us to take questions of aesthetics seriously in relational aesthetics and to judge the work on the basis of its aesthetic and conceptual content, Demos asks art criticism to take seriously social and cultural events typically considered activism and judge them as cultural projects.

To Demos, other art forms and the art establishment are in danger of not just becoming irrelevant, but of culpability in the cultural, social and ecological crises of the Anthropocene. He asks: “What if those practices that do garner the greatest visibility in exhibitions and the press—typically dedicated as they are to individualist autonomy, self-expression, duty-free creativity, and visual spectacle—were to be seen as covering over a widespread cultural failure at addressing the most significant world-historical event facing contemporary civilization? What if, in the climate-changed future, those most visible art forms will be precisely the ones that will be indicted for refusing or

⁶⁴ For a full bio and list of works, see Bishop’s profile page on the CUNY Graduate Center website, <https://www.gc.cuny.edu/people/claire-bishop>.

⁶⁵ Bishop, “The Social Turn,” 179.

declining to engage with our contemporary state of emergency?”⁶⁶ For both Duerr and Styles, education as practice is central to their natural dyeing, and as social practice and socially engaged art has become common in institutions in North America and Europe, the cultural moment has opened space for exactly this kind of socially engaged environmental education.

Duerr’s participation in *The Possible*, a 2014 experimental performance and socially engaged exhibition staged at the Berkeley Art Museum and Pacific Film archive, situated both her work and her teaching within a live social practice space. Alongside artists such as Fritz Haeg, Travis Meinolf, Angela Hennessey and Binta Ayofemi, Duerr created dyed works in the public space of the museum and taught her CCA class from the exhibition’s dye lab, where her students both learned and demonstrated natural dyeing, as well as collaborated with other participating artists.⁶⁷

Demos articulates a world of art-activism and explores the ways in which artists and activists engage in creative worldmaking “posed against the Anthropocene” in his 2017 book, *Art Against the Anthropocene: Visual Culture and Environment Today*.⁶⁸ Demos links the universalizing logic of the term Anthropocene to the visual

⁶⁶ Demos, “The Great Transition,” 42.

⁶⁷ *The Possible* was a hugely ambitious curatorial project that blurred the boundaries between curatorial practice and social practice, and involved a huge number of artists, performers and participants of many kinds. I was fortunate to have been Sasha Duerr’s teaching assistant while she taught in the space and was welcomed by the other dyers onsite to participate and collaborate with them throughout the project’s duration. For more about *The Possible*, including a complete list of participants, see David Wilson, “An Index of Possibilities: Participating Artists Acknowledgements & Contributors,” Participants, *The Possible*, Accessed March 29, 2022, <https://www.the-possible.org/participants.html>, please note you will need to click on the “Index of Possibilities” hyperlink in the top right corner to open the PDF.

⁶⁸ Demos, *Against the Anthropocene*, 99.

representation strategies typically found in Anthropocene literature and scholarship. He argues that the use of satellite and composite digital imagery supports the planetary view that implicates all humanity in the destruction of the environment. Demos proposes that photography and art-activism can act as alternative visual strategies to communicate the realities of the Anthropocene by flipping the perspective from the planet and humanity in the abstract to the specific realities of people and communities impacted by the actions of corporations and states globally. Demos offers the specificity of documentary photography in contrast to composite digital satellite imagery as a way to point to specific sites of industrial destruction and highlight who is actually being impacted by oil drilling and refinement, rather than the global infrastructural perspective of composite imagery. Similarly, Duerr's approach of connecting with materials *where you are* situates the natural dyer within their immediate environment, in opposition to the pursuit of system-wide overhauls to replace synthetic dyes with natural ones in the abstract realm of global industry.

Styles' approach to natural dyeing, foraging and reading the environment one lives within is another way of connecting the dyer to the specific place and moment in which they live. For Styles, this specificity and attention to place is focused on the plants and the other living things with whom they compose their biosphere. It runs logically and logistically counter to the way that most people live, especially in cities. Duerr also teaches her students that color can come from materials restricted to the dyer's immediate surroundings without relying on chemical inputs—whether mineral or plant based—that follow supply chains similar to those of synthetic dyes.

As Adrosko, Weigle, and the Krochmals have all previously noted, color differs depending upon the chemical make-up of the soil, the qualities of the water used for dyeing, and the quantity and availability of water to the growing organism. Duerr, too, writes in her 2020 book *Natural Palettes: Inspiration from Plant-Based Color*: “When working with living ingredients, when and where the plants are harvested, the alchemy of the soil, the pH of the water, how much rain and sun a plant receives, and the timing and application of the natural color-making process all play a part in the shades, depths, and range of hues created.”⁶⁹ Water, soil, air—all of these have fundamentally changed in ways large and small. The change in climate will cause some sources of dye to die out and will create ideal living conditions for others. The continued contamination of fresh waterways by pollution, erosion, salinity, damming and other interventions, intended or not, will forever change the quality of color that can be achieved in a specific place. Madder grown today in Mill Valley will not be the same as madder grown there in 1970.

⁶⁹ Sasha Duerr, *Natural Palettes: Inspiration from Plant-Based Color* (New York: Princeton Architectural Press, 2020), 19.

Conclusion

Both Duerr and Styles have taught many students that “nature” is not something that exists in an imagined elsewhere, beyond the reach of people, but that it is something growing through cracks in pavement, flowing through underground waterways, flying and crawling around city blocks, flourishing in abandoned industrial sites, and, importantly, both within and all around us. What Styles calls “the green world” is not distinct from the rest of the world, we are not excepted from it.⁷⁰ We live here together, all of us, and natural dyeing offers an entry point to a complex and implicated, enmeshed view of life. Duerr and Styles both ask their students and fellow dyers to engage with the green world through the practice of natural dyeing, in ways recognizable from the writing of dyers like Ida Grae and Jack Kramer. However, Duerr and Styles have each made connection-building the focus of their practice, emphasizing education and environmental engagement through dyeing. Rather than positioning natural dyes as a morally or environmentally superior material choice, they emphasize the connections between their materials and themselves through their practice, whether those materials are industrially mined minerals, locally growing weeds, or food waste pulled from the kitchen compost pail. Most importantly, Duerr and Styles prioritize teaching through their practice; they actively engage in dyeing demonstrations in public spaces where others can be invited not just to partake in a rewarding and challenging material practice, but to engage with the places and plants

⁷⁰ Guthrie, “Natural Born Subversive,” 70.

in their own biospheres. Through this social engagement dyeing, Duerr and Styles each engage the holistic and specific kinds of environmentalism and art activism which characterize the Anthropocene.

In *Decolonizing Nature: Contemporary Art and the Politics of Ecology*, Demos writes: “environmentally engaged art bears the potential to both rethink politics and politicize art’s relation to ecology, and its thoughtful consideration proves nature’s inextricable binds to economics, technology, culture, and law at every turn.”⁷¹ Recognizing the ways that dyes are produced in plants, insects and materials encourages and often requires the natural dyer to develop an awareness of the larger environmental conditions in which they and their materials live. Similarly, learning about the pH sensitivity of some dyes, as well as the ways that different metals modify colors, makes it easier to understand the variability of a substance like water which, depending upon its source and the path it traveled before it arrived in a dye pot, influences color.

In his 2015 book, *Learning to Die in the Anthropocene*, Roy Scranton expresses the need for a reckoning with not only our own mortality in the face of climate crisis, but the end of our civilization. Natural dyers are attempting to reinterpret, honor and imagine new ways of living by learning to dye in the Anthropocene. It is part of the same reattaching project in which we will need to engage in order to face what is coming, and what is already here. The natural world has changed and is constantly

⁷¹ T.J. Demos, *Decolonizing Nature: Contemporary Art and the Politics of Ecology* (Berlin: Sternberg Press, 2016), 8.

changing, and the effects of pollution and climate change are still unfolding. The extent and character of the changes to soil, temperature, water, air, plants, fungi, animals and myriad other components which comprise the world are still unclear, though what is clear is that they are changing. Engaging in public and socially oriented practices of natural dyeing offers a material method for locating oneself in this changing world and recognizing that those changes occur both on the scale of the global and the local. Learning to dye offers a way to both grieve the loss of one world, and imagine a new one, in which we honor and prioritize our connections and interdependence.

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