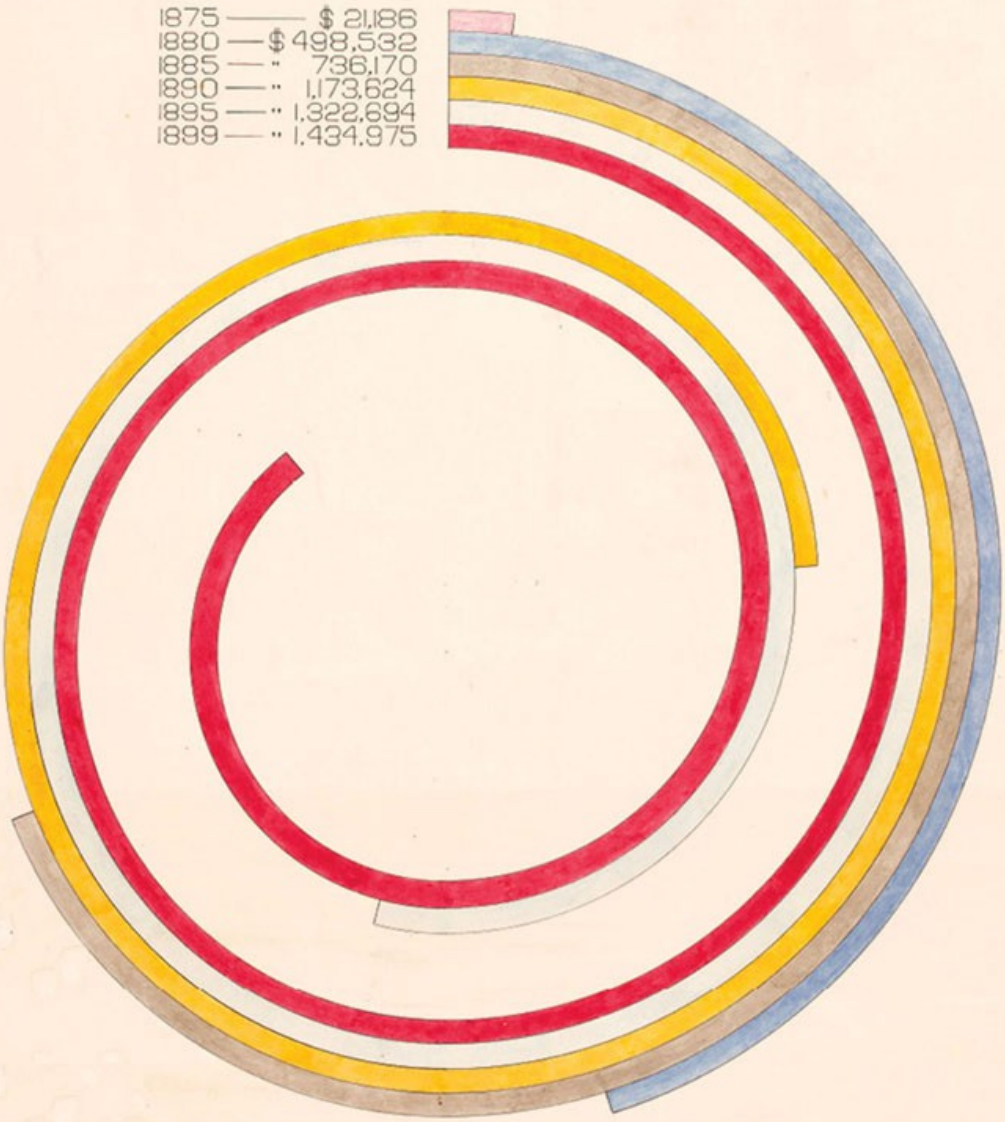
W. E. B. Du Bois's Data Portraits

Visualizing Black America

THE COLOR LINE AT THE TURN OF THE TWENTIETH CENTURY



WHITNEY BATTLE-BAPTISTE *and* BRITT RUSERT, *editors*

Introduction

Whitney Battle-Baptiste
and Britt Rusert

In his little-known speculative fiction "The Princess Steel" (ca. 1908–10), scholar, writer, and civil rights leader W. E. B. Du Bois weaves a tale about a black sociologist who stages a magnificent experiment on the top floor of a Manhattan skyscraper overlooking Broadway. At the center of this short story stands a *megascope*, a fictive technology that looks like a giant trumpet, laced with "silken cords like coiled electric wire," and equipped with handles, eyepieces, and earpieces. When hooked up to the megascope, users are able to view the "Great Near," Du Bois's term for the always present but usually invisible structures of colonialism and racial capitalism that shape the organization of society. The vision produced by the megascope—a fantastical feudal allegory of primitive accumulation centered on an epic battle between two knights for possession of an African princess whose hair is made of steel—is generated in part by data contained in a massive set of volumes lining

the wall of the laboratory, a vast set of demographic studies collected for over "200 years" by some kind of "Silent Brotherhood." Dr. Hannibal Johnson, the sociologist and protagonist of the story, uses this data to plot what he calls the "Law of Life" onto a "thin transparent film, covered with tiny rectangular lines, and pierced with tiny holes," and stretched over a large frame. He then goes on to plot what he calls "The Curve of Steel" onto a glittering, crystal globe suspended in the air and upon which the megascope's feudal vision subsequently takes shape.[1]

In a story populated by mysterious scientists, annoying lovebirds, towering skyscrapers, battling knights, glimmering treasure, and a regal princess, it's easy to miss that Du Bois's "Silent Brotherhood" likely refers to an actually existing school of black sociology in the US South at the turn of the century, headed by Du Bois himself at Atlanta University.[2] Furthermore, here at the beginning of his pulpy short fiction, Du Bois offers a narrative of what we would today call "data visualization," the rendering of information in a visual format to help communicate data while also generating new patterns and knowledge through the act of visualization itself.

The visual projection of data in Du Bois's sci-fi laboratory would be simply an interesting textual detail were it not for the fact that Du Bois himself had in 1900 contributed approximately sixty data visualizations, or infographics, to an exhibit at the Exposition Universelle in Paris dedicated to the progress made by African Americans since Emancipation. This *Exposition des Nègres d'Amérique* was organized by Thomas Junius Calloway, a lawyer, educator, Fisk University graduate, and editor of the *Colored American* newspaper in Washington, DC, who, with the endorsement and assistance of Booker T. Washington, successfully petitioned the United States government to include, as part of its showcasing of its industrial and imperial prowess as well as its

commitment to social reform, an exhibit dedicated to African American life. The American Negro Exhibit featured many contributions by students and faculty at the Tuskegee Institute, Howard University, the Hampton Institute, and other black colleges and industrial schools. The installations that comprised the American Negro Exhibit were meant to educate patrons about the forms of education and uplift occurring at black institutions and in African American communities across the US South. The exhibit featured an eclectic set of objects, images, and texts, including framed photographic portraits of prominent African American leaders and politicians; tools, harnesses, and other agricultural products from black industrial schools; a bronze statuette of Frederick Douglass; and an on-site collection of over two hundred and fifty publications authored by African Americans and compiled by Daniel Alexander Payne Murray, a black intellectual, bibliographer, and librarian at the Library of Congress.

Calloway reached out to W. E. B. Du Bois, his former classmate and friend from Fisk, in the hopes that he would be willing to contribute a social study about African American life to the exhibit. Du Bois used this invitation as an opportunity to contribute two unique sets of data visualizations to the American Negro Exhibit. Heading a team composed of students and alumni from Atlanta University, Du Bois created a collection of graphs, charts, maps, and tables that were generated from a mix of existing records and empirical data that had been collected at Atlanta University by Du Bois's sociological laboratory. Eugene F. Provenzo Jr., author of *W. E. B. Du Bois's Exhibit of American Negroes,* notes that "most of the information for the charts was drawn from sources such as the United States Census, the Atlanta University Reports, and various governmental reports that had been compiled by Du Bois for groups such as the United States Bureau of Labor."[3]

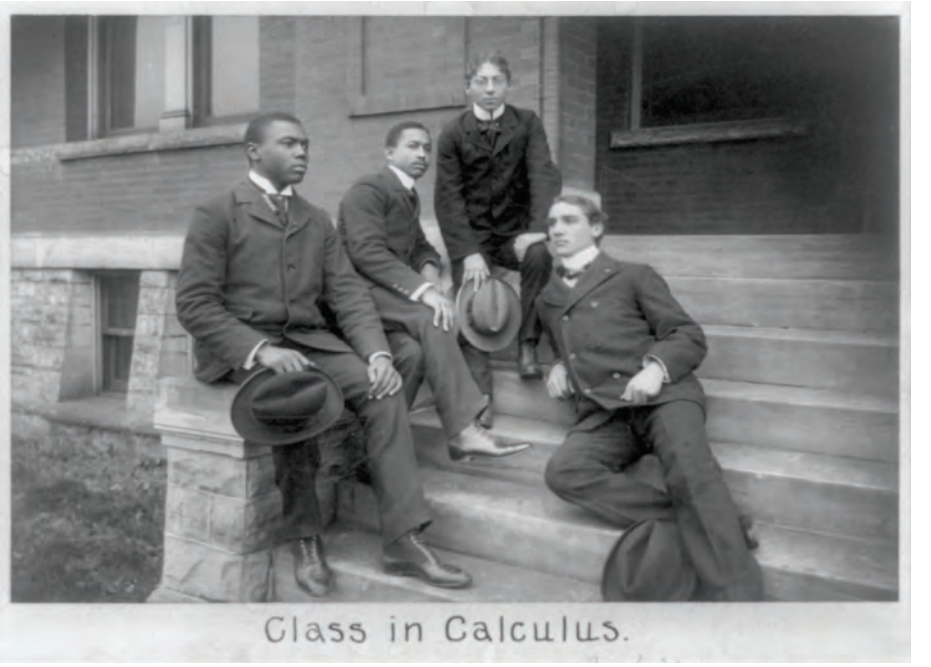
Exposition des Nègres d'Amérique,
Paris Exposition, 1900.

The first set of infographics created for the American Negro Exhibit was part of Du Bois's *The Georgia Negro: A Social Study*, the study he prepared specifically for the Exposition Universelle at the request of Calloway. Representing the largest black population in any US state, Du Bois and his team used Georgia's diverse and growing black population as a case study to demonstrate the progress made by African Americans since the Civil War.[4] In addition to holding up Atlanta University's home state as representative of black populations across the country, Du Bois and his team were interested in establishing the Black South's place within and claim to global modernity.

The second set of infographics prepared by Du Bois and his team at Atlanta University was more national and global in scope. Titled *A Series of Statistical Charts Illustrating the Condition of the Descendants of Former African Slaves Now in Residence in the United States of America*, this set included renderings of national employment and education statistics, the distribution of black populations across the nation, a comparison of literacy rates in the United States relative to other countries, and other striking visualizations. Despite the existence of two separately titled series, important points of cross-reference and connection are visible across both sets of images. For example, the map depicting routes of the African slave trade (see plate 1), which served as the lead image for the Georgia study, situates Georgia (represented by a star) at the center of the map's diasporic cartography, bringing the Georgia study into the orbit of the global scope of the second series while also maintaining its more local orientation.

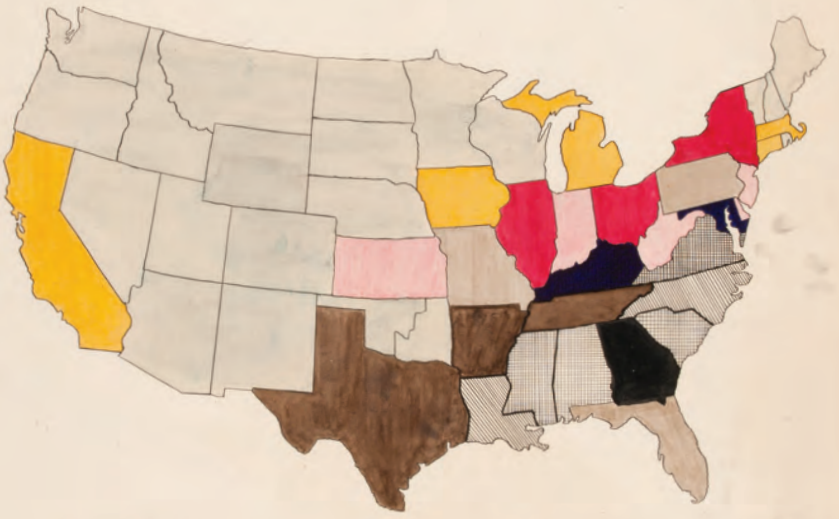
While scholars have thoroughly explored the American Negro Exhibit, especially the photo albums curated by Du Bois and also exhibited as part of the Georgia study, this is the first time that the data visualizations are collected together in book form and reproduced in full

color.[5] We are particularly thrilled to present this collection of images in 2018, on the occasion of Du Bois's 150th birthday celebration, and in conjunction with the work of the W. E. B. Du Bois Center at the University of Massachusetts Amherst, which also houses the W. E. B. Du Bois Papers. In addition to contributing a new vantage on the history of the American Negro Exhibit and African American participation in world's fairs and expositions, we hope that the infographics might connect to



Fisk University, Nashville, Tennessee, ca. 1899.

RELATIVE NEGRO POPULATION OF THE STATES OF THE UNITED STATES.



750,000 NEGROES AND OVER

600,000—750,000

500,000—600,000

300,000—500,000

200,000—300,000

100,000—200,000

50,000—100,000

25,000—50,000

10,000—25,000

UNDER—10,000

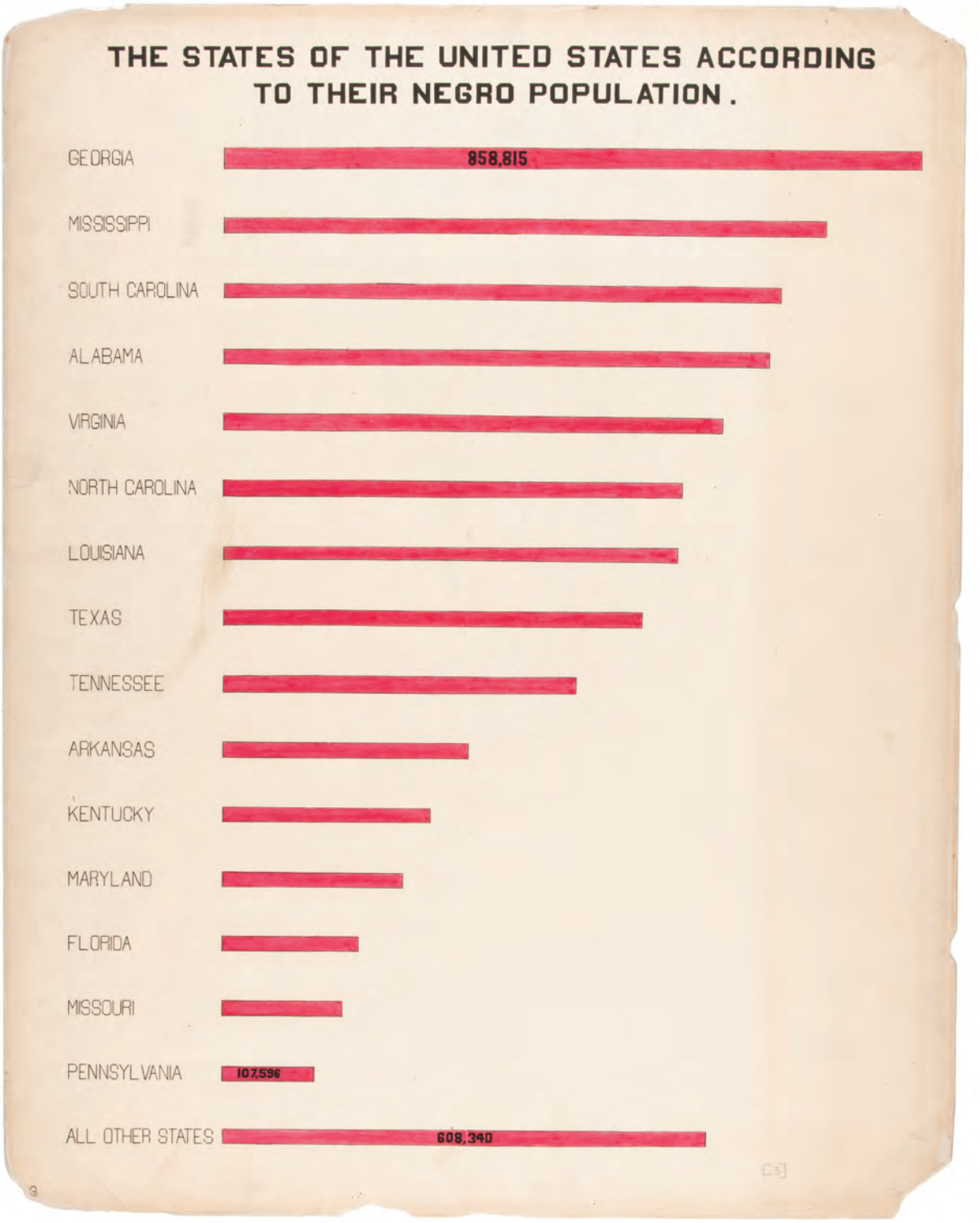


Plate 3 The first bar chart in the series is an expert example of a visual economy of means. The horizontal red bars represent the relative Negro population of the United States broken down by state. The bars are stacked in descending order by population. The only anomaly in the progression appears at the end, where a combined bar at the base captures the remaining states. The most and least populous states are labeled with numerical figures to help viewers estimate the states in between (see plate 19).

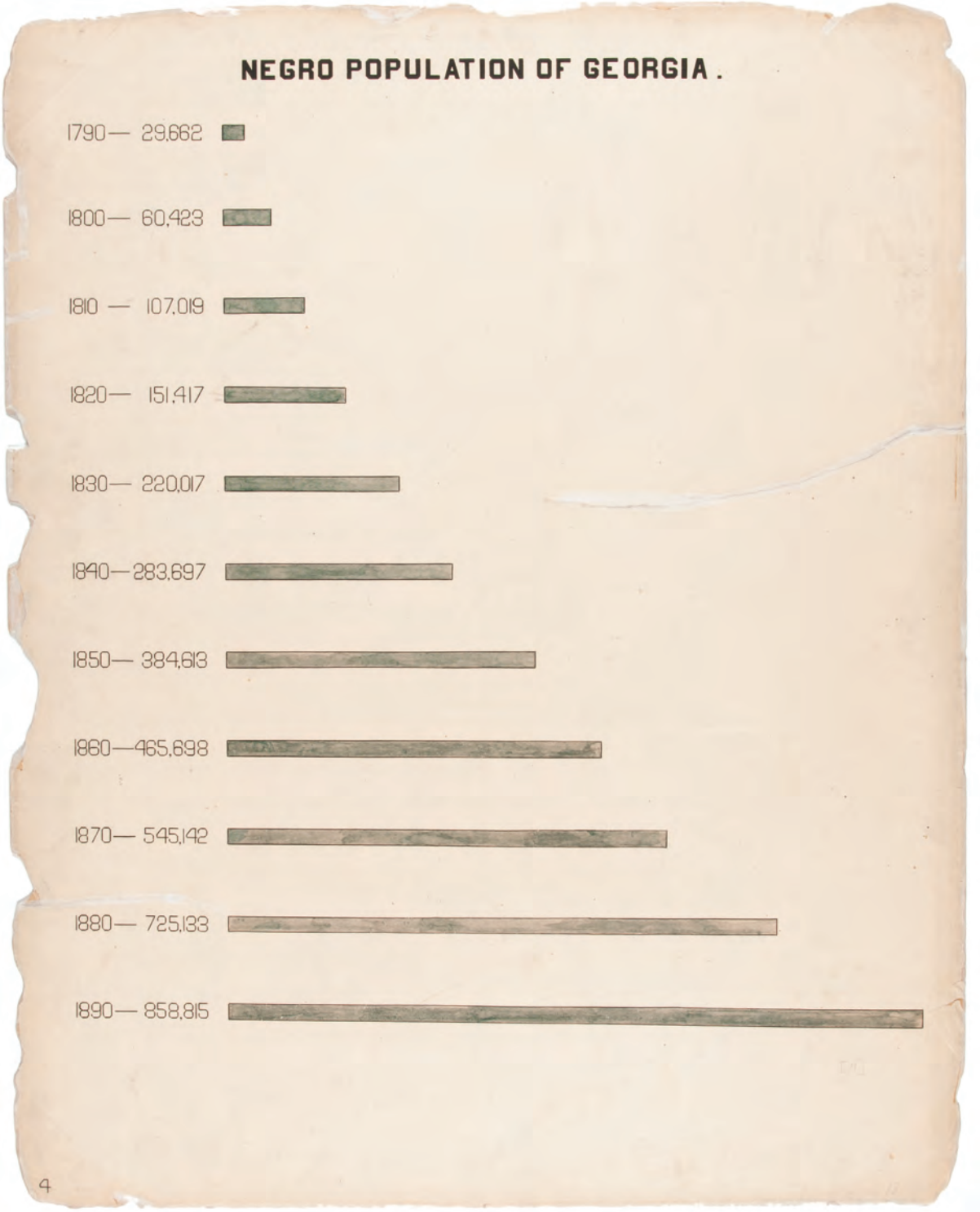


Plate 4 Stark black typography and slender rectangles washed in gray record a century of Negro population growth down the blank expanse of the page. This monochromatic bar graph is one of a handful of boards that are free of bright color. The monochromatic color is assigned to this more detailed level of data and matches the black rendering of Georgia in plate 2. The data is shown with simplicity, allowing the viewer a moment of quiet comprehension between more exuberant constructions of information and color in other charts.

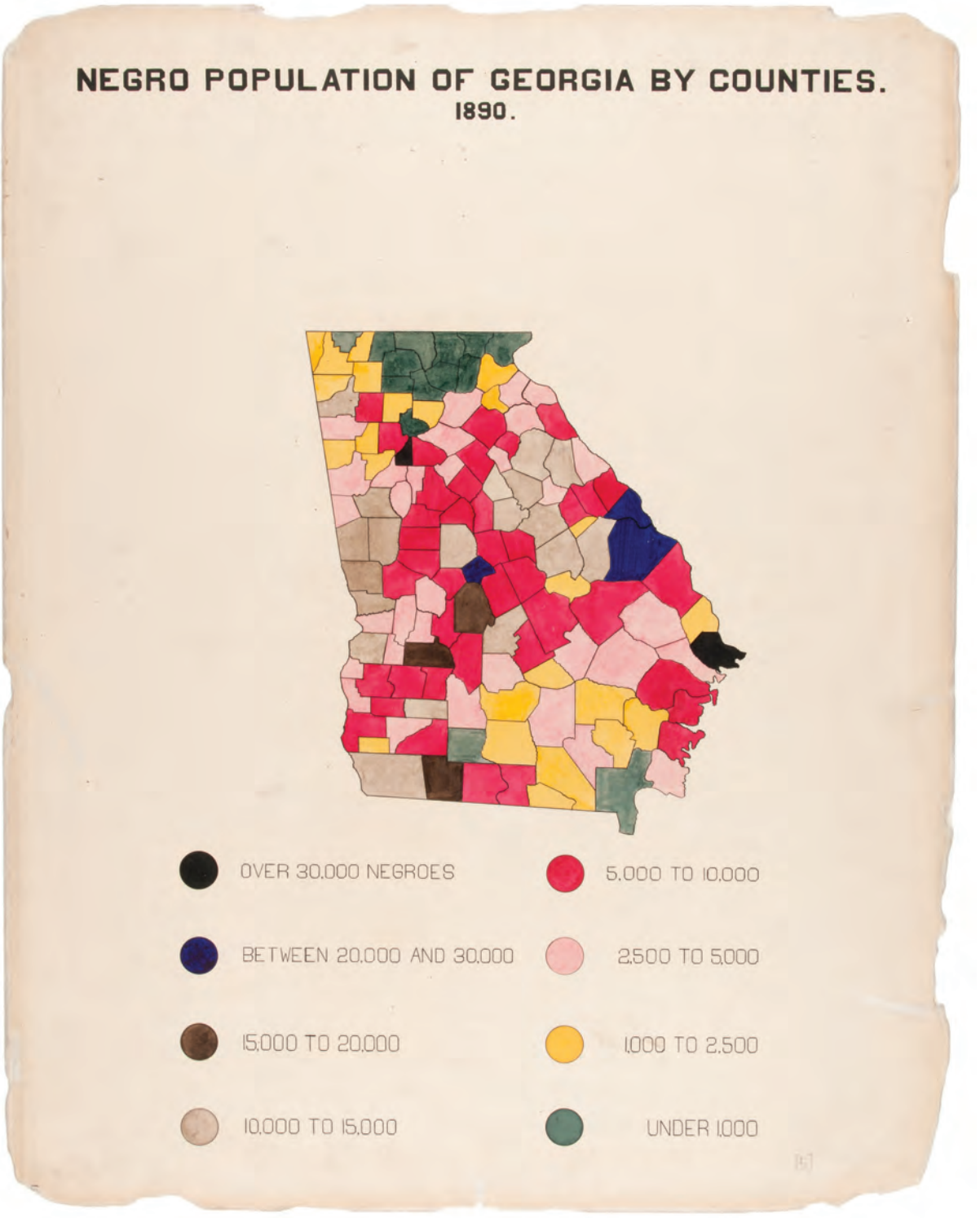


Plate 5 Many of the diagrams are sequenced strategically to build comparisons and new perspectives on the study's datasets by considering relationships over time as well as space. This population index of *Georgia by Counties, 1890* precedes the following map (plate 6), which shows the populations in 1870 and 1880. The vibrancy and opacity of the colors suggest the use of gouache, a subtype of watercolor that lies down with an opaque finish and bonds with its paper background. This material would later be critical to the flat and graphic visual language taught by the so-called Swiss schools in 1950s and 1960s Europe and spread throughout American graphic design education, especially via Armin Hoffman and his former students from the Basel School of Design.[10]

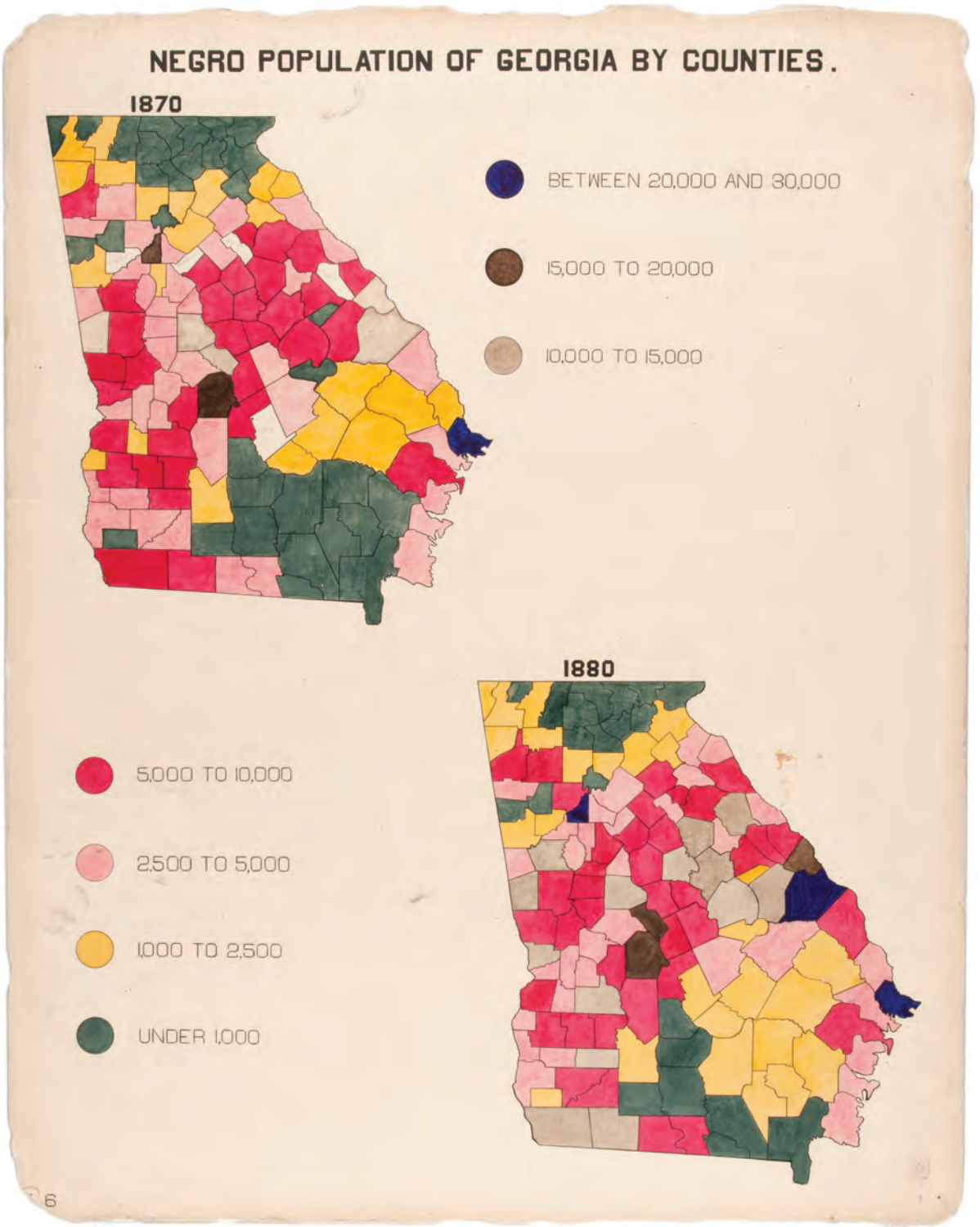


Plate 6 The pair of state maps rendered here are an early example of a type of diagram taken for granted today: the heat map. Heat maps use color to allow a user to quickly identify highly active, dense, or concentrated parts of a space. First coined and trademarked in 1993 by Cormac Kinney, an enterprising software engineer, the heat map was a tool that used concentrations of color to represent wild swings in stock and mutual fund trading activity.[11] Here, instead of marking the flow of funds, Du Bois maps the density of black Georgians across the state's counties.

CITY AND RURAL POPULATION.
1890.

Plate 12 Reading chronologically from top to bottom, this area chart mixes sharp and deckled edges. On the left, a torn black color field shows enslaved Georgians from 1790 to 1890. On the right, a geometrically sculpted red field charts the rise, decline, and rise again of the percentage of free blacks. A simply worded title tops the tensely arranged visual for maximum impact.

Plate 16 No chart in the entire set is as graphically simple as this one: four monochromatic circles float in a solitary column, each slightly larger than the previous one. There is no key, just two sets of numbers. The number below the circle represents the year that the data was measured, and the number inside the circle represents the number of black teachers in Georgia public schools that year. This is one of three rare moments in the infographics when both the shape and the typography appear in color. The overall result reinforces the designers' interest in representing an exhaustive amount of information in an efficient and elegant way.

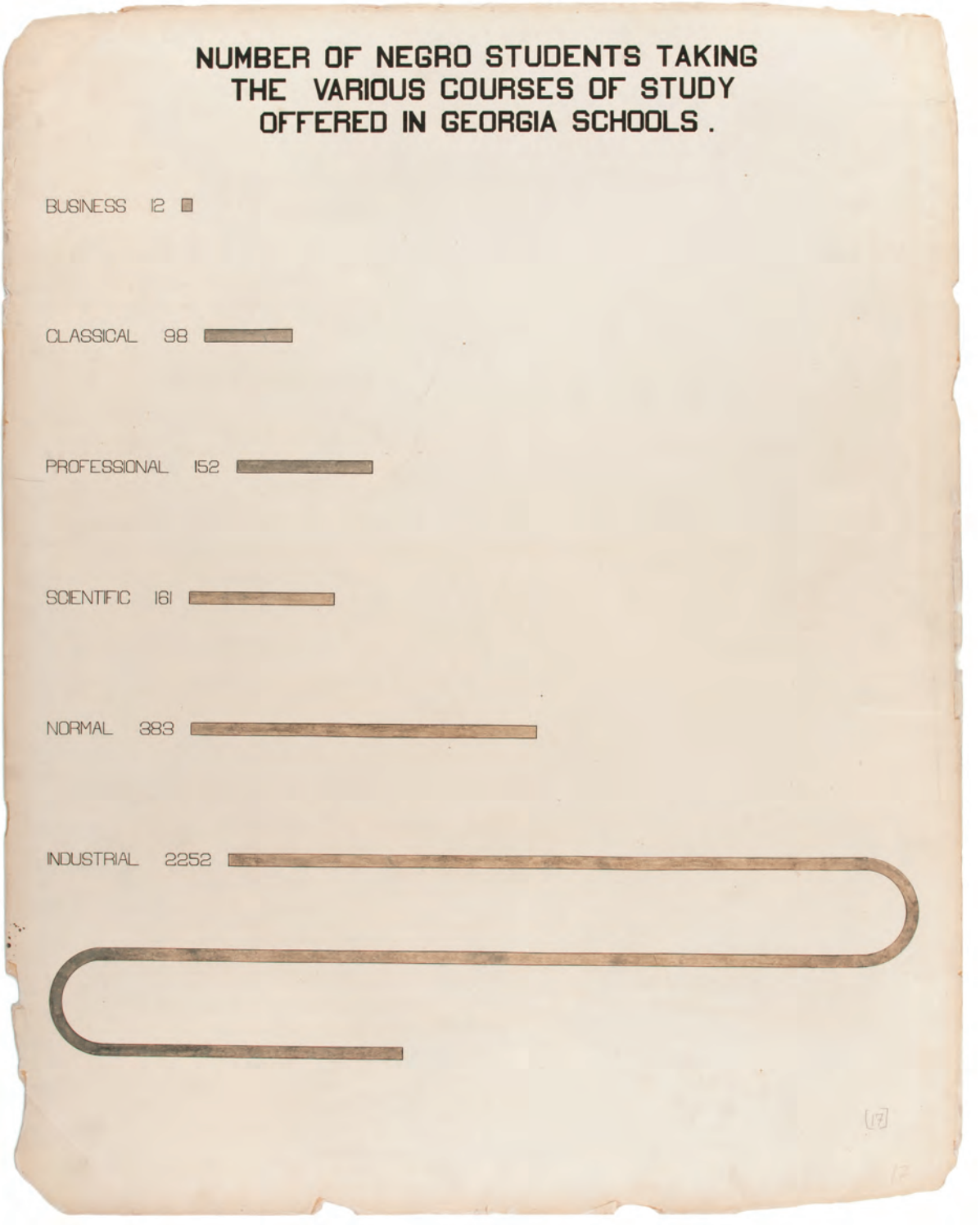
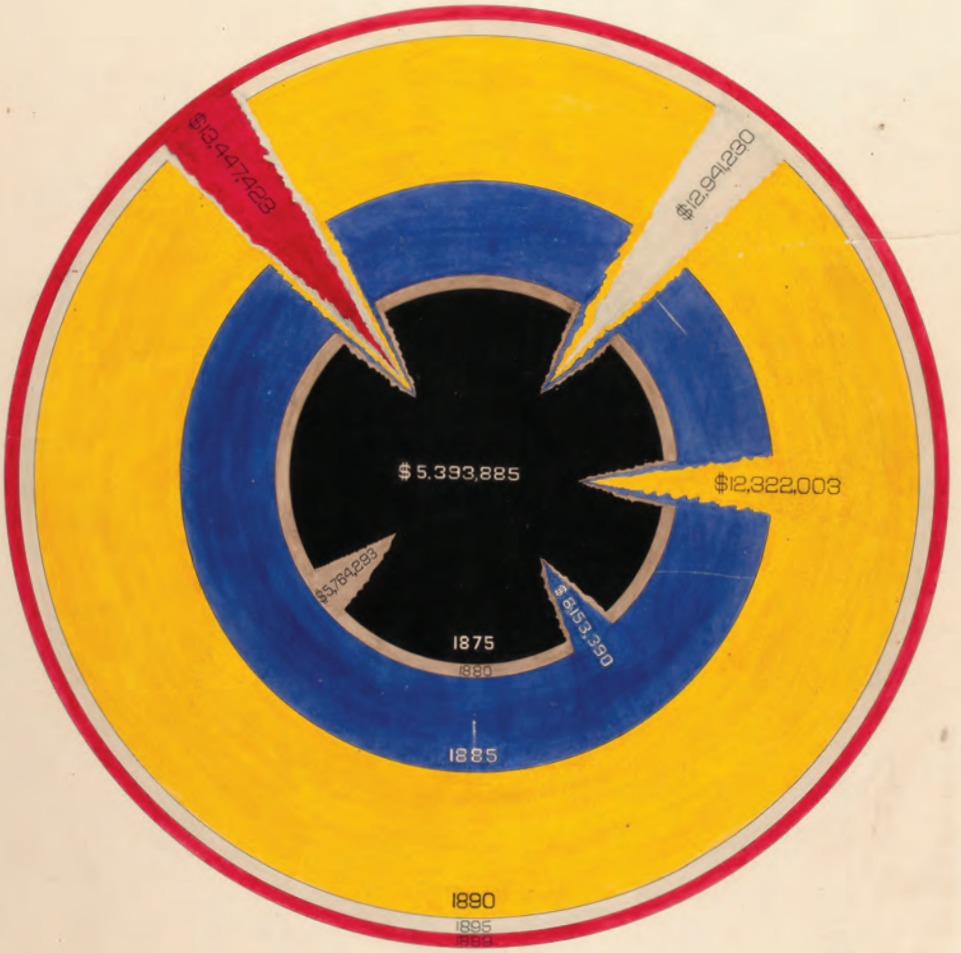


Plate 17 A double-curved outlier at the end of a series of straight bars is a more creative way to show the dramatic ratio of Negro students studying industrial arts. The snaking data is a visual focal point on a chart that shows the dominance of industrial education for black Americans in 1900.

ASSESSED VALUATION OF ALL TAXABLE PROPERTY OWNED BY GEORGIA NEGROES.



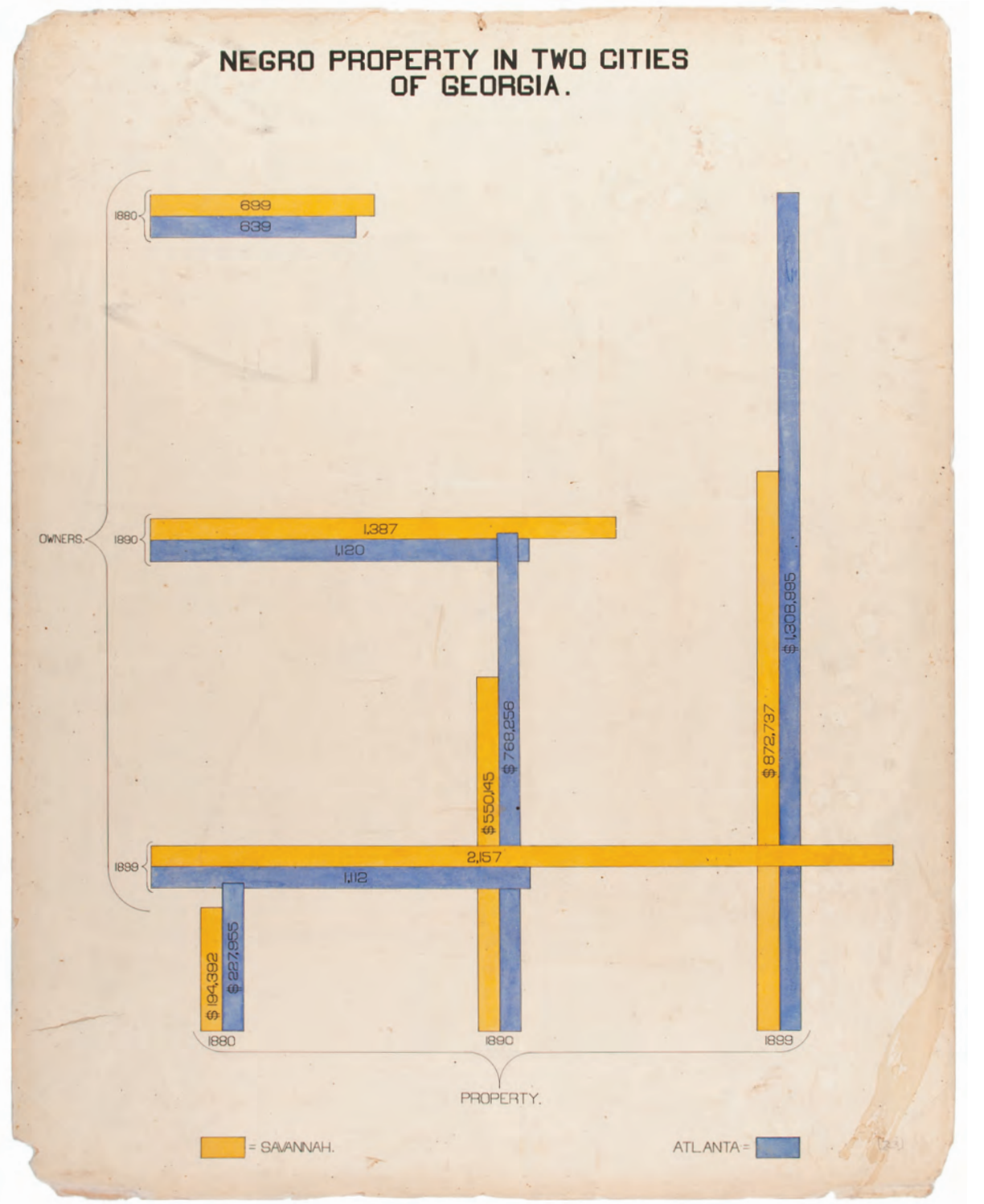


Plate 23 An overlapping matrix of baby blue and yellow bars represents the number of black property owners and land values in two Georgia cities: Atlanta and Savannah. In this carefully woven bar chart, the Du Bois team uses two different data sets to visually reinforce both. As a statistician, Du Bois would be interested in ways to display correlation and even causality in data gathered in different parts of the state in different years. Much like the spiral diagrams before it, this lattice bar chart might be considered its own chart typology: the woven bar chart.