

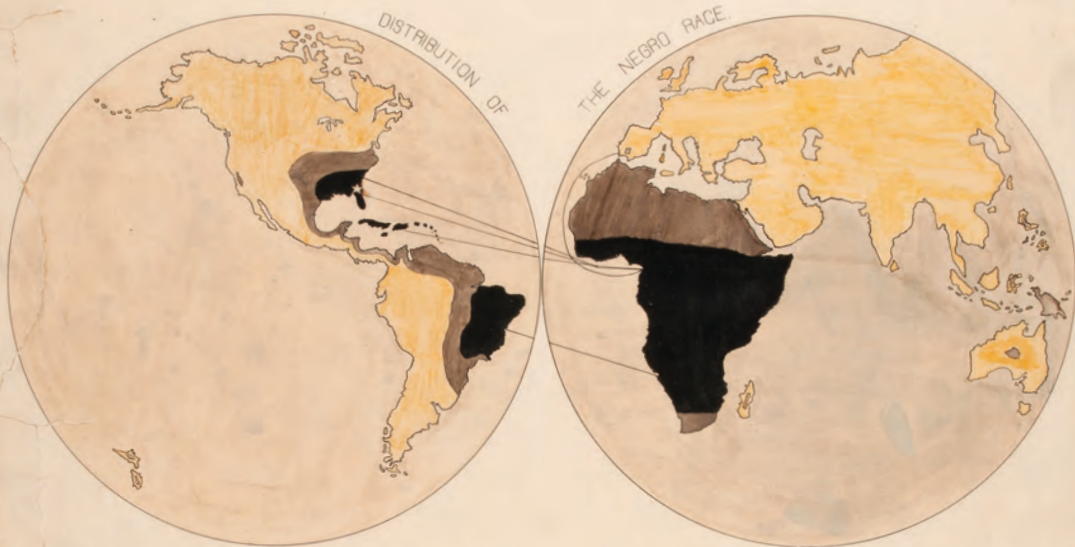
Plate 1 W. E. B. Du Bois and his students open the visualizations with a striking map that captures the sweeping nature of their study. Two circles connected by fine lines connect dark areas of Africa to equally dark swaths in the United States, the Caribbean, and South America. A solitary white star represents Georgia in a wave of black ink. Though absent in the key, the gray zones suggest the migration of slaves beyond the most trafficked regions. Here and in many of the subsequent plates, the diagram is larger in scale than the text, while the written rhetoric matches the heaviness of its subject matter. This complex combination of text and image allows Du Bois to visually represent hundreds of years and thousands of miles of oppression.

THE GEORGIA NEGRO .

A SOCIAL STUDY

BY

W.E. BURGHARDT DU BOIS.



≡ ROUTES OF THE AFRICAN SLAVE TRADE.

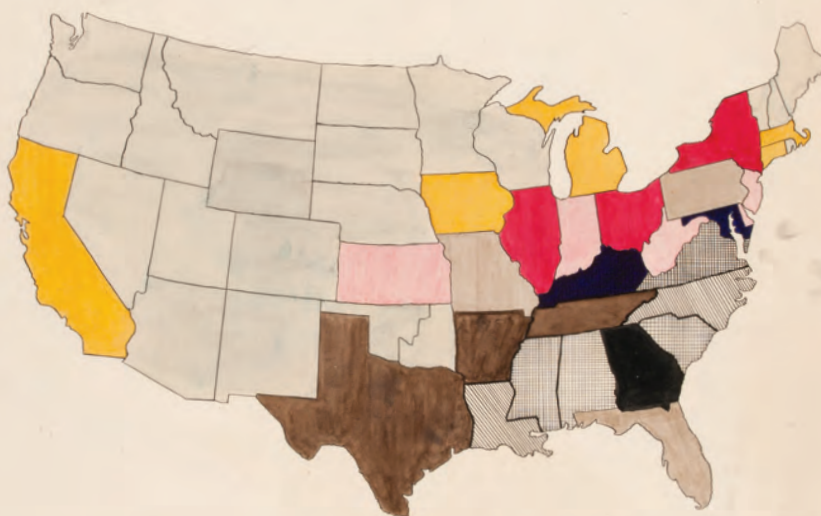
★ THE STATE OF GEORGIA.

THIS CASE IS DEVOTED TO A SERIES OF CHARTS, MAPS AND OTHER DEVICES DESIGNED TO ILLUSTRATE THE DEVELOPMENT OF THE AMERICAN NEGRO IN A SINGLE TYPICAL STATE OF THE UNITED STATES.

" THE PROBLEM OF THE 20TH CENTURY IS THE PROBLEM OF THE COLOR-LINE."

Plate 2 Du Bois and his team are masters of progressive disclosure, a technique that gradually reveals to the viewer the ideal amount of information in each data portrait.⁹ Moving from a global scale to a national one, this map of the United States contributes more detail to the previous plate's mapping of the Black Atlantic world (see plate 1). A palette of bright primary colors, complementing subtle shades, and intricate textures conveys a range of black populations at a quick glance. An even more precise breakdown of population continues at the state and county levels in the subsequent charts (plates 3–6).

RELATIVE NEGRO POPULATION OF THE STATES OF THE UNITED STATES .



THE STATES OF THE UNITED STATES ACCORDING TO THEIR NEGRO POPULATION .



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).

NEGRO POPULATION OF GEORGIA .



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.

NEGRO POPULATION OF GEORGIA BY COUNTIES. 1890.

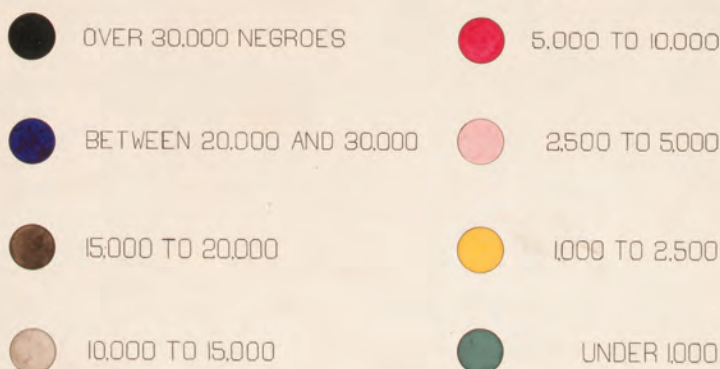
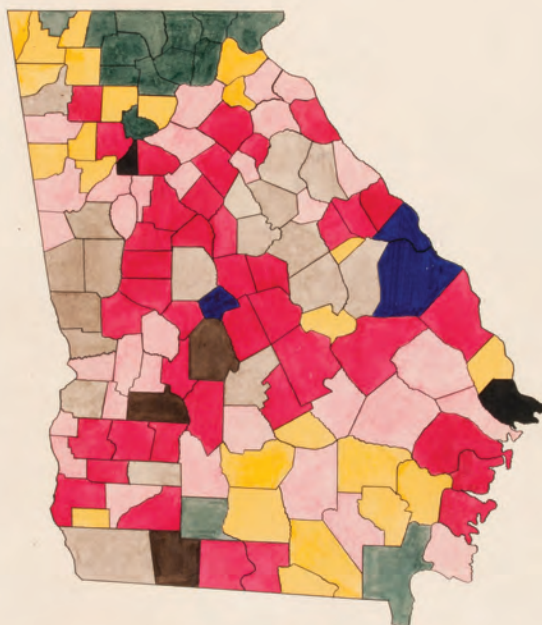
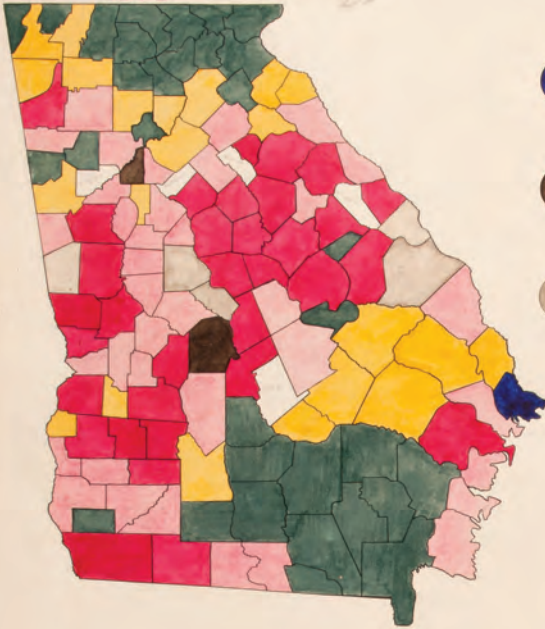


Plate 5 Many of the diagrams are sequenced strategically to build comparisons and new perspectives on the study's datasets by considering relationships over time as well as space. This population index of *Georgia by Counties, 1890* precedes the following map (plate 6), which shows the populations in 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

NEGRO POPULATION OF GEORGIA BY COUNTIES.

1870



BETWEEN 20,000 AND 30,000



15,000 TO 20,000



10,000 TO 15,000



5,000 TO 10,000



2,500 TO 5,000



1,000 TO 2,500



UNDER 1,000

1880

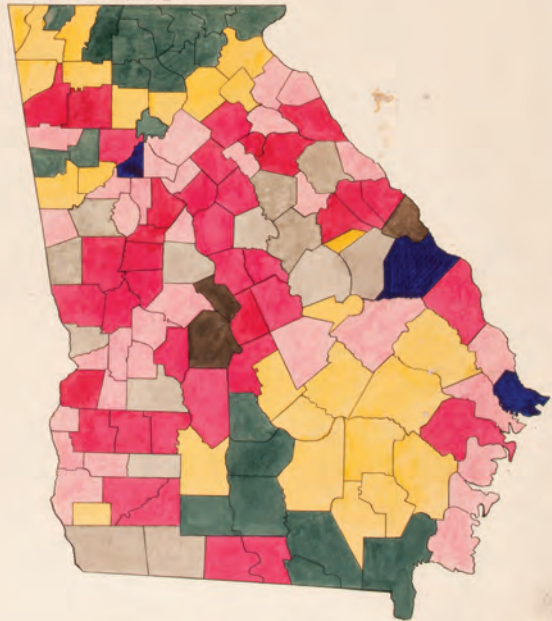


Plate 6 The pair of state maps rendered here are an early example of a type of diagram taken for granted today: the heat map. Heat maps use color to allow a user to quickly identify highly active, dense, or concentrated parts of a space. First coined and trademarked in 1993 by Cormac

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.

Plate 11 Part bar chart, part line chart, and part spiral graph, this visualization defies categorization. The text paired with each segment reads more like a narrative than a typical key. Its tricolor palette and fragmentary construction make for a memorable, and experimental, presentation of data.

CITY AND RURAL POPULATION. 1890.



SLAVES AND FREE NEGROES.

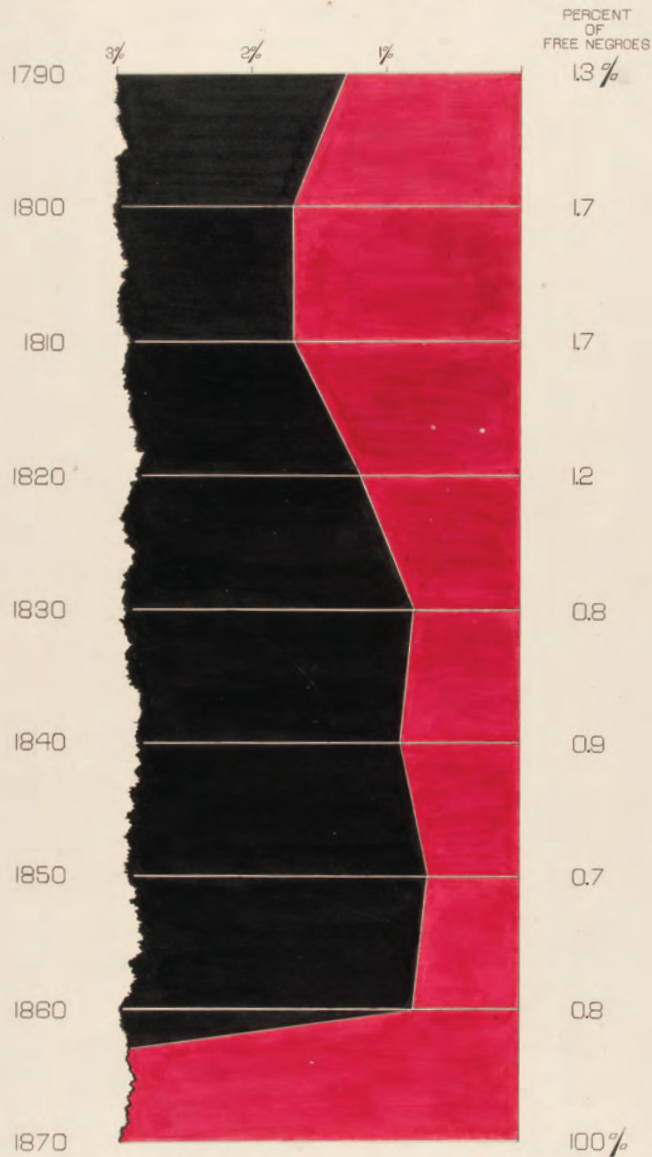


Plate 12 Reading chronologically from top to bottom, this area chart mixes sharp and deckled edges. On the left, a torn black color field shows enslaved Georgians from 1790 to 1890. On the right, a geometrically sculpted red field charts the rise, decline, and rise again of the percentage of free blacks.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

Plate 31 Representing 150 black Atlanta families, the layout of this data visualization is strikingly contemporary in its complexity and variety of media. It features a mixed media palette of inked typography, charts colored in gouache, photographic prints, photomechanical reproductions of type, and even gold-leaf painting in a seal in the upper-left corner. Organizing the family budgets into bar charts by class, pastel-colored subcategories are shown for rent, food, clothing, direct taxes, and other expenses. These are linked by fine black lines to a complex grid containing representative images, detailed breakdowns of diets, and poetic descriptions of funds for savings. The use of connecting lines, arrows, and delicate braces creates a spatial feast for the eye. Despite the overwhelming amount of information on display, it is digestible. There is even a note at the bottom of the diagram suggesting that the viewer “raise this frame” to see more information. This is a direct instructional reference to the double-sided, movable standards on “wing frames” that fairgoers could lift and turn, and to the two data sets that follow here (plates 32 and 33).¹⁹

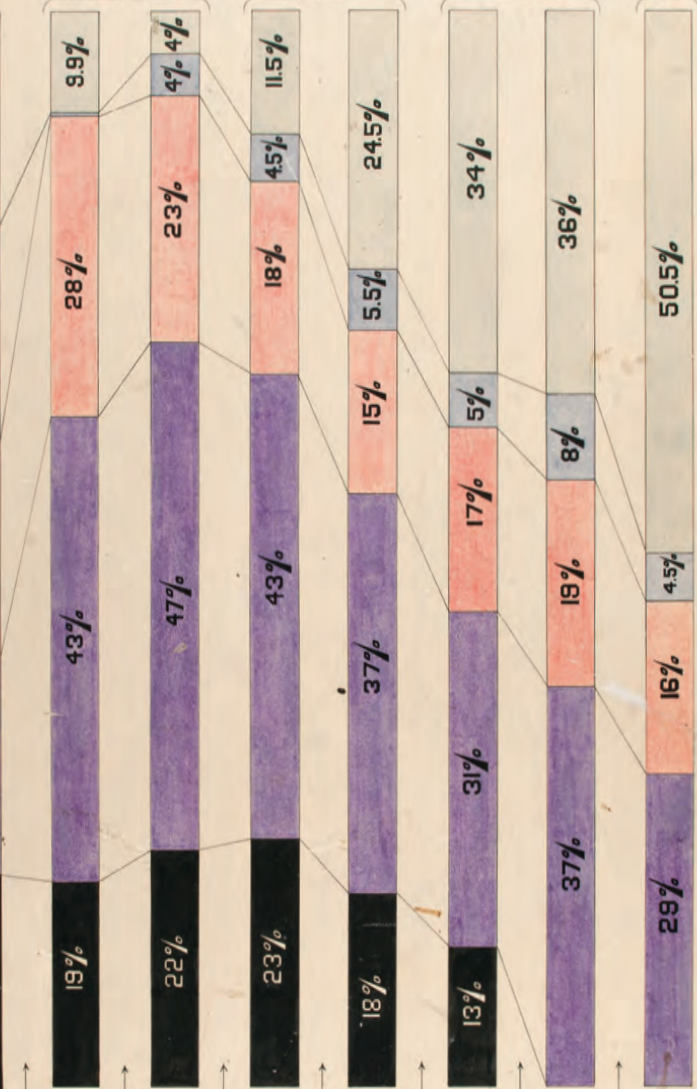
INCOME AND EXPENDITURE OF 150 NEGRO FAMILIES IN ATLANTA, GA., U.S.A.



ANNUAL EXPENDITURE FOR

RENT.	DE TARY OF NEGRO FAMILY FROM BULLETIN U.S. DEPARTMENT OF AGRICULTURE NO. 71.	FOOD.	CLOTHES.	DIRECT TAXES.	OTHER EXPENSES AND SAVINGS.
				THE STATE TAX RATE IS: 1880-\$3.50 PER \$1000 1885-\$3.50 1890-\$3.96 1895-\$4.56 1899-\$5.38 STATE AND COUNTY TAXES RAISE THIS TO \$21 PER \$1000 IN ATLANTA.	THE HIGHER LIFE. RELIGION. ART EDUCATION SICKNESS. SAVINGS. AMUSEMENTS. BOOKS AND PAPERS. TRAVEL.

CLASS.	ACTUAL AVERAGE
\$ 100-200	\$ 139.10
\$ 200-300	\$ 249.45
\$ 300-400	\$ 335.68
\$ 400-500	\$ 433.82
\$ 500-750	\$ 547
\$ 750-1000	\$ 880
1000 AND OVER	\$ 1125



FOR FURTHER STATISTICS RAISE THIS FRAME.

DISTRIBUTION OF NEGROES IN THE UNITED STATES.

DISTRIBUTION DES NÈGRES DAN LES ETATS UNIS.

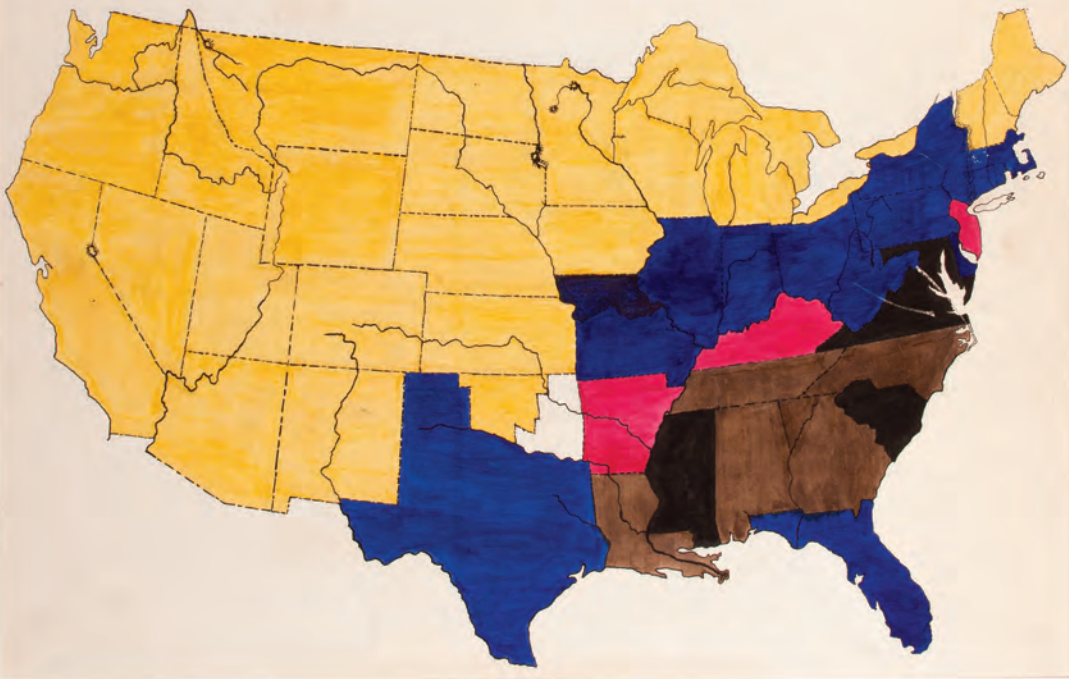
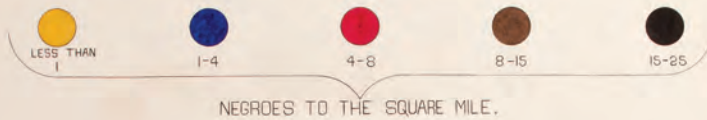


Plate 38 This map of the United States represents the overall distribution of black Americans in 1890. A key of circles filled with colors favored by Du Bois and his team appear above the nation, with yellow, blue, red, brown, and black corresponding to increasing density. It is common across

all of the charts that darker and more saturated colors are usually used for statistics with greater value, density, or importance. The technique here connects to similar heat map strategies used elsewhere.

0126

Increase of the Negro population in the United States of America.

Accroissement de la population Negre aux Etats Unis d' Amerique.

Done by Atlanta University.



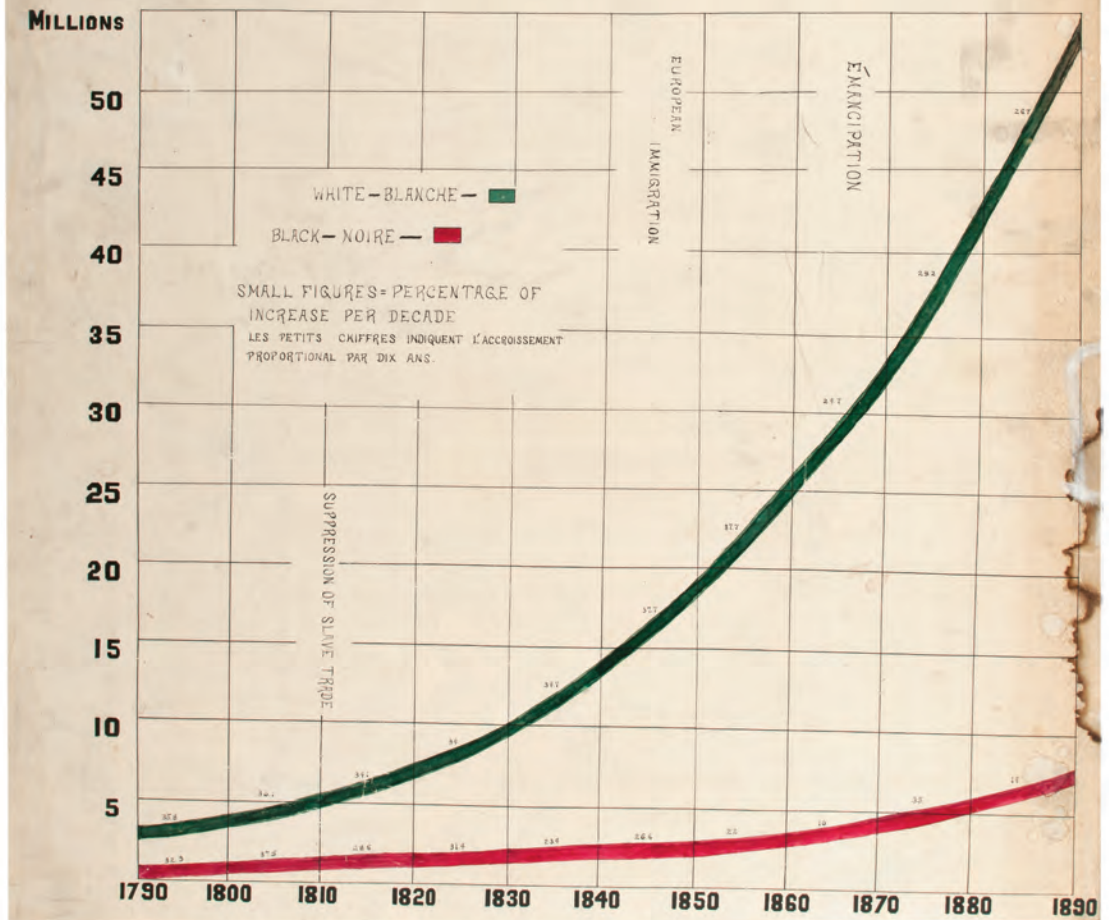
Plate 39 Population is a common subject of many of the charts generated by the Atlanta University team. The data set depicted here is unique in that it covers a span of 140 years. This chart also deploys both old-style typography and engineered templated lettering.

Plate 40 Charting data back to the late eighteenth century, this line chart compares populations of blacks and whites by total number instead of by the rate of growth, as depicted in the previous chart. Key socioeconomic events are mapped on the grid, this time with a mix of domestic and international forces. The abolition of the slave trade, immigration from Europe, and Emancipation are noted as key influences on both populations. The inclusion of "the suppression of slave trade" on the chart also resonates with the title and topic of Du Bois's 1896 dissertation, *The Suppression of the African Slave-Trade to the United States of America*.²³ Visually, this chart's lettering style and craft in regards to rendering varies considerably from the previous two line charts (plates 7 and 21). Key differences include the use of small capitals in the engineered lettering for the word *millions*, and a uniquely ornate hand-lettered style for the key.

Comparative rate of increase of the White and Negro elements of the population of the United States.

Accroissement proportionnel des elements blancs et noirs aux Etats Unis.

Done by Atlanta University.



NEGRO POPULATION OF THE UNITED STATES COMPARED WITH THE TOTAL POPULATION OF OTHER COUNTRIES .

POPULATION NÈGRE DES ETATS UNIS COMPARÉE À LA POPULATION TOTALE DES AUTRES PAYS .

DONE BY ATLANTA UNIVERSITY .



Plate 41 In this diagram, a solid black United States with a red outline is centered around strategically chosen European nations, all drawn from the perspective of the Mercator projection.²⁴ The European nations are scaled to a relative size for quick visual comparison of total population.

The typography of the headline and the country labels is more condensed than the typography in the Georgia study. This typographic variance between the two series supports the idea that different teams of makers were dispatched by Du Bois to ensure production in time for the Paris Exposition.

PROPORTION OF NEGROES IN THE TOTAL POPULATION OF THE UNITED STATES .

RAPPORT DES NÈGRES A' LA POPULATION TOTALE DES ETATS UNIS .

DONE BY ATLANTA UNIVERSITY .

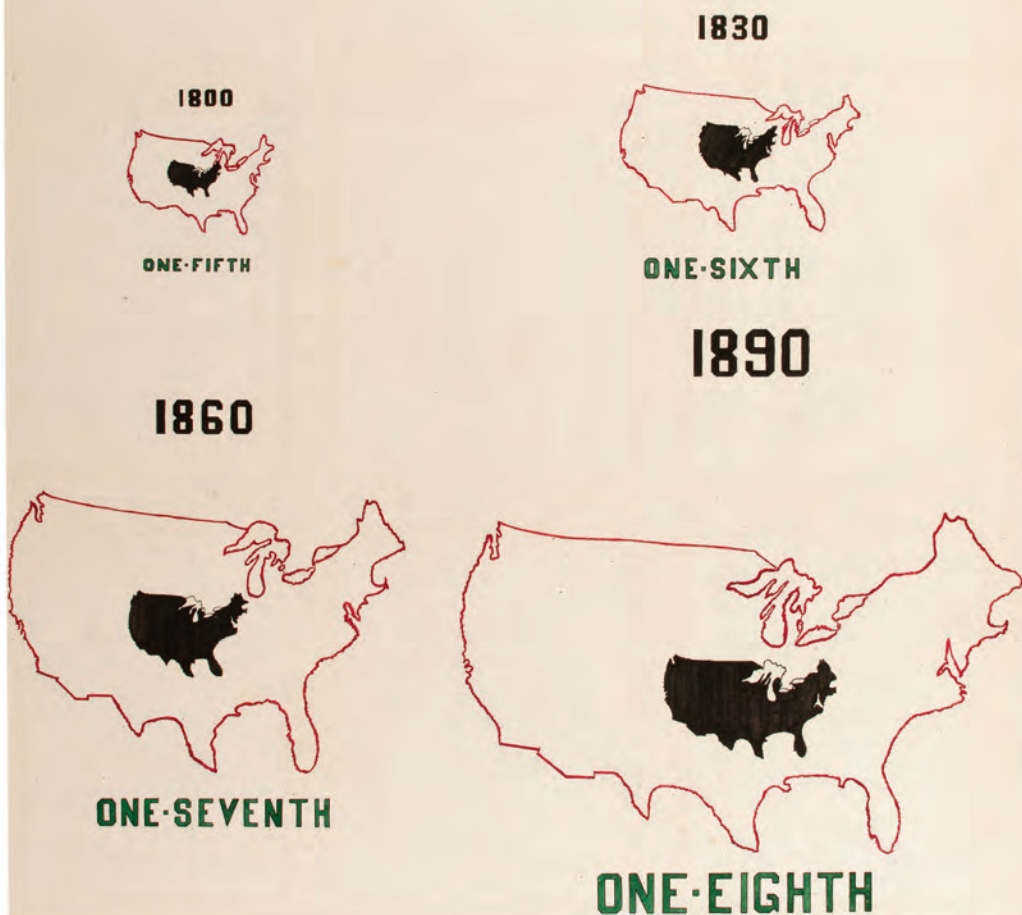


Plate 42 This companion to the previous map also uses geographic scale as a key comparative tool. The black population of the United States is shown to be growing over the nineteenth century with a scale shift in the country outlines. The type size of the year and proportional labels changes according to the size of the country. The color palette of red, green, and black is a likely allusion

to the Pan-African flag. Red symbolizes blood shed for freedom, black the hue of the skin of people of African descent, and green the lush landscape of the motherland.²⁵ Du Bois's connections with Pan-African movements in the United States and abroad are a natural source for the tricolor configuration that recurs in a number of the plates.²⁶

THE RISE OF THE NEGROES FROM SLAVERY TO FREEDOM IN ONE GENERATION.
 PROGRÈS GRADUEL DES NÈGRES DE L'ESCLAVAGE À LA LIBERTÉ EN UNE GÉNÉRATION.

DONE BY ATLANTA UNIVERSITY.



Plate 50 Both a proclamation and a diagram, this display of the rapid transformation from slave laborers to a mix of tenants and landholders is mapped across a pair of saturated bars. Again using the Pan-African colors of red, black, and green, the bars read like hanging protest banners. Fine dotted lines of ink appear like an explosion

on the page, showing the increase in free laborers from 11 percent in 1860 to 81 percent in 1890. The narrative of black self-determination is further emphasized here with a note that black home and land ownership "was accomplished entirely without state aid and in the face of proscriptive laws."

PROPORTION OF FREEMEN AND SLAVES AMONG AMERICAN NEGROES .

PROPORTION DES NÈGRES LIBRES ET DES ESCLAVES EN AMÉRIQUE .

DONE BY ATLANTA UNIVERSITY .

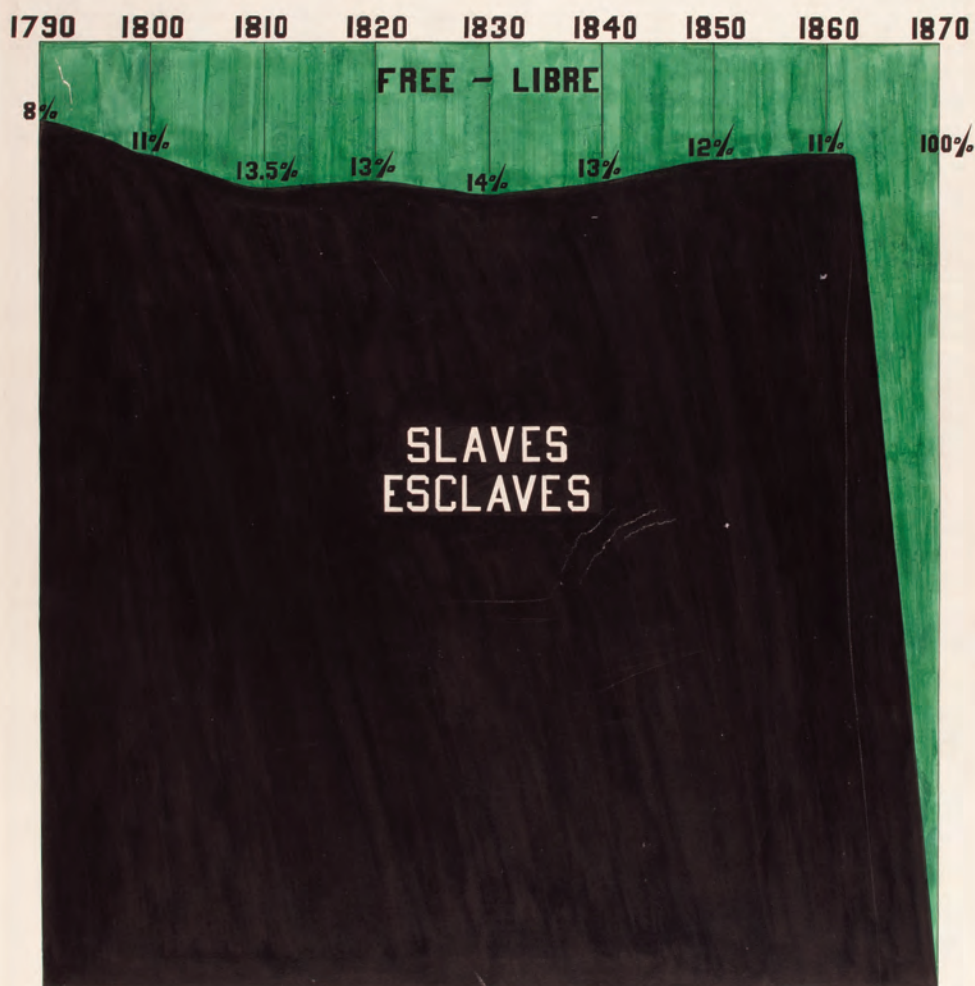


Plate 51 This area chart uses similar information as *Slaves and Free Negroes* (plate 12) but renders it on a national level and in a completely different way. The chronology reads left to right, and green and black are used instead of red. The

Atlanta group may have been motivated to make different but related visual interpretations by a desire to explore how varied forms might be read by the audience in new ways.