

EDGAR JOSEPH EDMUNDS (1851 – 1887),  
MATHEMATICS TEACHER AT THE CENTER OF NEW ORLEANS'  
POST-CIVIL WAR FIGHT OVER SCHOOL INTEGRATION

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## **Abstract**

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This dissertation is a historical study of a nineteenth-century teacher of mathematics of African descent, Edgar Joseph Edmunds (“E. J. Edmunds”). The study traces the life and career of Edmunds, which spanned a period of social upheaval in the South – from the pre-Civil War era, through Reconstruction, and into the Jim Crow era of segregation. Edmunds’ career as a teacher of mathematics was, in some sense, unremarkable. He did not produce original mathematics and never held a position in a prestigious college or university. Edmunds is significant, however, in two respects. Edmunds was among the few known nineteenth-century American mathematical personages of African descent who, in spite of the legal restrictions and social obstacles endured by people of color, managed to achieve the highest level of mathematical education available at the time. As such, Edmunds serves as a historical example of both the hardships and the fleeting opportunities in nineteenth-century African-American communities. Edmunds’ life is instructive also because it intersected with institutions and events that are significant to the history of mathematics education and to the history of education generally. Edmunds tested into and attended the *École Polytechnique* in Paris, the vanguard of mathematics education at the time and the subject of much research in the history of mathematics education. When Edmunds returned to New Orleans to teach, he became the central figure in the

city's fight over racial integration in schools. By examining Edmunds' life as a thread that connects institutions, events, and communities, we see these subjects from a different perspective and gain new insight. This study collects and analyzes documents from various government and archival sources to understand the facts and circumstances of Edmunds' unusual life, but also to view the mathematics education of various nineteenth-century communities (French and American, black and white) through the lens of a man whose educational and career path took him through all of them.

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another nineteenth-century African-American man with an important story to tell, Solomon Northup, who wrote the memoir *Twelve Years a Slave*. I could never have imagined when I entered the Ph.D. program at Teachers College Department of Mathematics that I would be following in her footsteps. My uncle, Frank, once told me that Solomon Northup was so much a part of his mother's life when he was growing up that it was like he had another sibling. After spending so much time with the artifacts and writings of E. J. Edmunds, I similarly feel as though I know him as a person, and it is a delightful coincidence that he and I grew up on the same street in New Orleans, a century apart.

*Comme un des chefs du Board des Ecoles de cette ville, ce fut par notre influence pres de ce Board que le Professeur E. J. Edmunds un créole, fut appointé Professeur de Mathématiques dans le "High School" des garçons, et qu'il soit dit ici pour la vérité de l'Histoire que jamais un de nos actes officiels plus que celui-ci, ne nous a donné plus de fracas.*

[As one of the heads of the city school board, it was by our influence on the board that Professor Edmunds, a Creole, was appointed professor of mathematics at the Boys High School, and let it be said here for the truth of history that never has one of our official acts, more than this one, given us more trouble.]

P.B.S. Pinchback ("Créole vs. Américain," 1882).

## **Introduction**

### **Need for the Study**

Much scholarship has been done on Reconstruction as a period of political struggle and legal, economic, and social change (Benedict, 1974; Foner, 1988; Franklin, 1994; Guelzo, 2018; McKittrick, 1960; Perman, 1973; Stewart, 2009; White, 2017; Wish, 1965) and, more specifically, on the struggles of African Americans during this time as they fought for self-determination (Baker et al., 2013; Cimbala, 2005; Du Bois, 2007/1935; Egerton, 1994; Hoffer, 2012; Trefousse, 1999; Valelly, 2004). The education of African Americans has been a particular focus of researchers within this body of scholarship because of its central importance to the struggle over what form black citizenship would take in the post-emancipation era (Anderson, 1988; Buchart, 2010; Mitchell, 2008).

Also within this body of scholarship about Reconstruction, some works address the unique circumstances of New Orleans as the first Southern city to fall under Union control and

therefore as the testing ground for Reconstruction policy for the rest of the South. Union military leaders did not enter the New Orleans for the purpose of reorganizing and reforming its schools, and yet by taking over and running the functions of government during Reconstruction, the task fell upon them. Donald DeVore and Joseph Logsdon, in *Crescent City Schools: 1841 – 1991* (1991), and Walter Stern in *Race & Education in New Orleans* (2018) both give sweeping historical views of New Orleans public schools and address this brief but important period when the city’s African-American citizens seized their place in local government leadership and used their platform to push for school integration. Roger Fischer in *The Segregation Struggle in Louisiana 1862-77* (1974) and Michio Yamanaka in her dissertation, *"Separation Is Not Equality": The Racial Desegregation Movement of Creoles of Color in New Orleans, 1862-1900* (2013), both focus on the black leaders of the Reconstruction-era civil rights movement to integrate public schools in New Orleans. Louis Harlan’s “Desegregation in New Orleans Public Schools During Reconstruction” (1962) addresses the same issue but was conducted with narrower purpose, which was to show evidence that there was in fact a brief period of desegregation in New Orleans after the war. While each of these studies views Reconstruction-era black New Orleans with a different focus, one theme that unites the scholarship is the contradiction inherent in Reconstruction-era New Orleans – the skill of African-American leaders and their allies in fighting for educational equality, and also the backlash of those who were threatened by equality.

The history of African-American mathematics education generally is underexplored, but particularly the period of the Civil War and its aftermath. There are studies about African-American education after the war including Cally Waite’s study of African-American students at Oberlin College (Waite, 2002). But studies of African Americans from this time who achieved

high levels of mathematical training or went into a mathematics-related field are rare. Erica Walker, in her book *Beyond Baneker: Black Mathematicians and the Paths to Excellence* (2014), cites the eighteenth-century examples of Thomas Fuller, an enslaved African who was a prodigy with mental calculations, and Benjamin Baneker, was an autodidact who became a surveyor and almanac author (Walker, 2014, Preface ¶2). Kelly Miller, the first black graduate student in mathematics (born in South Carolina in 1863) and Robert Robinson Taylor, the first African American to attend MIT (born in North Carolina in 1868), are two additional examples, but such examples are rare. Walker explains the need for historical studies about African-American mathematical personages: the elements of their lives “resonate throughout the lives of contemporary Black mathematicians” (Preface ¶3). Those shared elements include both the obstacles they faced and the fleeting opportunities that they seized (Preface ¶3).

One important but previously unexplored figure is Edgar Joseph Edmunds (1851 – 1887), a mathematics teacher of African-French descent at the center of a controversy over school integration in Reconstruction-era New Orleans. Edmunds’ life is a case study of the contradictions inherent in the Reconstruction-era push for black civil rights. Edmunds came from a middle-class family of French-speaking free people of color (the Afro-Creoles) and studied at the *École Polytechnique* in Paris, the most prestigious place in the world at the time to study mathematics and science (Smith, 1923/1958, p. 485). Edmunds returned to New Orleans to teach just as Union control of the city was waning. In a final bold move orchestrated by the city’s African-American leaders, Edmunds was appointed as a mathematics teacher in an all-white high school. The backlash was swift and aggressive and reached a crescendo two years later when Reconstruction ended and schools were re-segregated. Edmunds struggled for the rest of his

career to find a place for himself and a place for African Americans generally in the New Orleans public school system.

While the fact of Edmunds' appointment has been noted in some scholarship on the post-war education of African Americans in New Orleans, Edmunds remains a largely unexplored figure. Some works mention Edmunds in passing either as a mathematics teacher (Medley, 2012, p. 9) or as the subject of the 1875 controversy concerning his appointment (Blassingame, 1973; Breaux, 2006; Desdunes, 1973/1911; Kennedy, 2016, p. 10; Ingham & Feldman, 1994, p. 561; McAfee, 1998, p. 171; Vaughn, 1974). These sources barely scratch the surface of Edmunds' story. Missing from the current research are information about Edmunds' social background and education, information about the how people on both sides of the controversy viewed Edmunds' appointment and made their arguments in the press, and information about Edmunds' post-controversy career in segregated schools.

Edmunds' story is valuable not only for what it tells us about the struggle for educational equality during Reconstruction, but also for what it tells us about mathematics education at the time and, specifically, access to mathematics education by people of color. Edmunds is one of the few examples that we have of an African-American man who was highly educated in mathematics from an era when legal and cultural obstacles for African Americans made such an achievement a near impossibility, and his improbable path through these difficulties to achieve success in the field of mathematics gives us a window into what those obstacles really were. Edmunds' unusual background also highlights the extraordinary educational possibilities that did exist within this particular community in spite of (and perhaps because of) their lack of access to the system that educated white children. Finally, as a man who was educated and worked in both the United States and France, Edmunds is a rare example of a mathematics educator whose life

can give insight into the interaction of those two mathematical cultures at an important historical moment just as the United States was beginning to open up to European influence in mathematics.

### **Purpose of the Study with Research Questions**

The purpose of this research is to conduct a case study of E. J. Edmunds, a mathematics teacher of African-French descent, who grew up in pre-war New Orleans, attended college at the French *École Polytechnique*, taught at an all-white public boys' school, and was actively involved in the establishment of black schools after the war. To achieve its purpose, the study addresses the following research questions:

- (1) What is known about Edmunds' background, in particular:
  - a. What was the cultural and family background of Edmunds?
  - b. What was Edmunds' educational background, and how was Edmunds able to prepare himself for the rigorous entrance exam of the *École Polytechnique*?
  - c. What educational opportunities were available to free blacks in New Orleans before Reconstruction, and how typical was Edmunds' educational background?
- (2) What were the circumstances of the 1875 controversy involving Edmunds? In particular:
  - a. What events led up to Edmunds appointment, and how was the controversy resolved?
  - b. What arguments were made in the press about the Edmunds' controversy, and which groups were involved in the campaign in the press?
- (3) What are the details of Edmunds' career in mathematics education after he was removed from his controversial appointment? In particular:
  - a. What contributions did Edmunds make to black education and to mathematics education after the controversy?

- b. What do the details of Edmunds' career clarify about the relationship of American and French mathematics at the time?

## **Procedure**

The methodology for this study included starting with documents that reflect the basic facts of Edmunds' life including his education, the 1875 controversy, and his career. The second step was to look more broadly at documents that helped to clarify the context of Edmunds' life. Research on the history of mathematics education is characterized by a pull between two poles – the need to understand the particular circumstances that make an event unique while also viewing that event as typical in some way so that more general lessons or patterns can be drawn from it. To reconcile these two opposing needs, it is important to understand how broadly or narrowly the context of any particular individual experience applies (Karp, 2014). Therefore, documents were sought to determine how typical Edmunds' experience was in his background, his education, and in his career.

To address the first research question, concerning E. J. Edmunds' cultural, family, and educational background, federal and local government records were used to anchor the timeline of Edmunds' life such as Census records, passport applications, city directories, court records, probate documents, draft records, school records, and birth and death records.

To address the research question concerning educational opportunities of Afro-Creoles in nineteenth-century New Orleans, this study looked to contemporaneous accounts in newspapers and journals, to census records from the time, and also to the personal records of Edmunds' family in an effort to determine how African-American children, especially Afro-Creoles, were educated in pre-war New Orleans when they were not able to attend public schools, including how common the practice was of sending them to France to be educated. Because Edmunds

himself (as well as other African-American students) attended an integrated public school for a brief period after the war, the study also looked at various sources of evidence to determine how common that practice was.

The second research question is about the 1875 controversy. To establish the timeline of the year leading up to the controversy, the study used records of the New Orleans School Board and the Louisiana State Superintendent of Education. To understand the power dynamics among the various players and interest groups, this study also analyzed articles and opinion pieces from a variety of contemporaneous newspapers.

The final research question concerns the rest of Edmunds' career. This study looked at newspaper accounts, census records, school records, and contemporaneous scholarly publications to understand how Edmunds spent the rest of his career, including what teaching jobs he held and what contributions he made to black institutions and to the field of mathematics education. The documents also helped give insight into Edmunds as a man who straddled two mathematical cultures and how his beliefs and understandings on mathematics education were effected by that background.



## Chapter 1: Literature Review

E. J. Edmunds' story lies at the intersection of various areas of academic research.

Edmunds was born a free person of color in the pre-Civil War South. Until the last quarter of the nineteenth century, abstract mathematics as a field of study did not exist in the United States, and the best mathematical education available, in high schools and in universities, was mediocre by the contemporaneous standards of Europe. In spite of the legal, social, and cultural impediment to a man of African descent getting a high-level mathematics education in the Civil-War era American South, Edmunds managed to educate himself to the point where he could stand side by side with some of the most promising mathematical talent in France by testing into and studying at the prestigious *École Polytechnique*. The particular circumstance of Edmunds' appointment as a mathematics teacher in a white public school during a crucial period in the post-Civil War civil rights fight also places Edmunds' story at the center of the legal and political history of the fight for black civil rights and of access to education.

This chapter gives an overview of the research in the various areas that underlie the story of E. J. Edmunds' life and his controversial appointment. These areas fall broadly into two categories: (1) the political and social background of Edmunds' story and (2) the state of mathematics education in the United States at the time Edmunds was educated and worked as a teacher.

### 1.1 History of Free People of Color in New Orleans

New Orleans' free people of color existed as a distinct community both before and after the Civil War. Some of the information we have about free people of color comes from members of the community who recorded their history in the decades after the war. Rodolphe Desdunes, a

free person of color born in New Orleans in 1849, was a writer and community activist and compiled notes that he had taken over his lifetime to create individual portraits of prominent members of his community in his book, *Our People and Our History: Fifty Creole Portraits* (1973/1911). Alice Dunbar-Nelson, another writer and social activist from this community, born after the war, wrote a brief history, *People of Color in Louisiana* (2017/1916). Dunbar-Nelson's book is a chronological history of her people from the first arrival of enslaved Africans in Louisiana in the early 1700s through the Reconstruction era. Much of the modern scholarship that acknowledges Afro-Creoles as a distinct social and ethnic group addresses the oversized role they played in the post-war civil rights movement as they fought legal segregation (Du Bois, 2007/1935; Harlan, 1962; Rankin, 1974; Foner, 1988; DeVore & Logsdon, 1991; Hoffer, 2014; Scott & Hébrard, 2012).

At least 10,000 free people of color lived in New Orleans before the Civil War (DeVore & Logsdon, 1991, p. 41; Hanger 2016, p. 128). Some of these were freed slaves and their descendants, some were refugees from the Caribbean (Aslakson, 2012, p. 716; Dunbar-Nelson, 2017/1916, p. 18, Hanger, 2016 p. 39), and some were mixed-race children of white men of European ancestry with women of color and their descendants (Aslakson, 2012, pp. 717-718; Martin, 2000, p. 69). The number of free people of color in New Orleans is impossible to know for certain because their marginal status sometimes made them invisible before the law. It is likely that some free people of color kept out of the sight of census takers and other, light-skinned people of African descent were taken for white (Winch, 2014, p. 10). And because free people of color were not allowed the same basic legal privileges as whites, the records of this community and their institutions before the war are sparse.

Most of the free people of color in New Orleans before the war were Afro-Creoles. They were French-speaking, Catholic, and shared a culture with people of Latin ancestry whose ancestors lived in Louisiana when it was a French, then a Spanish, then a French colony. Because New Orleans' colonial history, and because of its nature as a vibrant international port, there was a culture of relative racial openness and of racial mixing that did not exist in the rest of the South, or even in the rest of Louisiana (Harlan, 1962, pp. 673-674; Sumpter, 2008, p. 19; Dunbar-Nelson, 2017/2016, p. 20; Pierson, 1938, p. 622). Afro-Creoles inhabited a well-defined stratum in this social order, which Dunbar-Nelson called an "aristocracy of freedom," (Dunbar-Nelson, 2017/1916, p. 12). But while Afro-Creoles were not enslaved, they were also not truly free. Slavery and freedom are not binary states, and New Orleans' free blacks lived in the "ill-defined borderlands between slavery and freedom" (Winch, 2017, p. 10), with their degree of freedom sometimes depending on their "proximity or separation from the white race" (Dunbar-Nelson, 2017/1916, p. 21). Within the social class of Afro-Creoles, there were substrata based on one's wealth and fraction of African ancestry, including the aristocratic "octoroons" and "quadroons" (those with one-eighth and one-fourth African ancestry) who occupied the third tier at the opera house, a symbol of their place in society—below the white aristocrats in the first tier, but a tier above the lower-class members of the white race and other, darker-complexioned free people of color (Dunbar-Nelson, 2017/1916, p. 27; Pierson, 1938, p. 628). Rodolphe Desdunes had no illusions about the elevated status that the Afro-Creoles may have had; he says of the indignities and suffering borne by his own people, "Because of his state of dependence, the Creole of color could not command the respect of his fellow men. . . . His so-called rights, revocable and tenuous, were subject to withdrawal at the pleasure of the governing class" (Desdunes, 1973/1911, p. 4).

Afro-Creoles tended to be literate and economically self-sufficient. In spite of legal and social obstacles, the community “kept on amassing wealth and educating their children” (Dunbar-Nelson, 2017/1916, p. 29). W. E. B. Du Bois wrote that in 1850, “[F]our-fifths of the free Negroes living in New Orleans could read and write, and they had over a thousand children in schools. Among them were carpenters, tailors, shoemakers and printers, besides teachers, planters and professional men . . .” (Du Bois, 2007/1935, Ch. VI). Afro-Creoles tended to hold jobs in skilled labor and many accumulated substantial wealth (Hanger, 1996, p. 49; Sumpter, 2008, p. 22). Before the War, people of color were not permitted in New Orleans public schools, and so educated their children in other ways. DeVore and Logsdon offer a few possibilities in their book, *Crescent City Schools* (1991): a “tiny” group of children with “very light skin color” may have attended public school, some children from prominent families were educated in the northern United States or in Europe, some attended Catholic schools in small, separate classes, and some were educated in schools run out of private homes and organized by the Afro-Creole community (pp. 41-42). Scholars have noted that the Afro-Creole community’s most prominent citizens – poets, musicians, and newspaper editors – were teachers in the community schools (Rankin, 1974, 433; Christian, 1942, Ch. 20). However they did it, the literacy level of the Afro-Creole community was probably higher than that of whites in the state overall (DeVore & Logsdon, 1991, p. 41).

When considering New Orleans’ pre-war, Afro-Creoles, it is tempting to focus on their relative freedom and many economic, artistic, and literary successes (Desdunes, 1973/1911) and to forget how difficult their day-to-day existence could be. Pre-war legal documents concerning the Afro-Creoles contained the designation “f.p.o.c.,” “f.m.o.c.,” or “f.w.o.c.” (free person/man/woman of color) next to their names, like an asterisk qualifying their free status

(e.g., *Edmunds, William, f.m.o.c., estate of* [probate documents], 1832). Another reflection of the Afro-Creoles' marginal status was the social institution called "*plaçage*" in which a woman of color engaged in a long-term, extra-legal relationship with a white man, often having children with him. Various scholars have described these *plaçage* relationships (Aslakson, 2012, pp. 717-719; Dunbar-Nelson, 2017/1916; Martineau, 1837; Sumpter, 2008; Winch, 2014). Scholars disagree about how common the relationships were (Martin, 2000, p. 57; Clark, 2013). However common they were, Edmunds' maternal grandparents had a *plaçage* relationship, and their relationship helps to explain some of the contradictions of privilege and oppression in his life. The man in a *plaçage* relationship did not have the same legal obligations toward his family that a legal marriage would have created (Martineau, 1837, Ch. 5, Sec. 1, ¶ 18; Sumpter, 2008, ¶ 8; Winch, 2014, p. 71). The children from these marriages might be treated like white aristocratic children—schooled in France or given land—but there was no guarantee (Martineau, 1837, Ch. 5, Sec. 1, ¶18), and by virtue of their status, at a minimum they were cut off from the man's extended family (Martin, 2000, p. 69).

## **1.2 Race and New Orleans Public Schools during Reconstruction**

Race has been a central issue in New Orleans public schools almost from the time of their founding because the public schools were ground zero for the larger civil rights fight that was taking place as Afro-Creoles, and African Americans generally, began to push for legal and social equality. The most comprehensive and thorough study of the history of New Orleans public schools was conducted by Donald DeVore and Joseph Logsdon in their book *Crescent City Schools* (1991). Other scholarship addressing various aspects of the fight for access to education in Reconstruction-era New Orleans includes W. E. B. Du Bois' *Black Reconstruction in America* (1935), James Anderson's *The Education of Blacks in the South, 1865-1935* (1988),

John Blassingame's *Black New Orleans, 1860-1880* (1973), Mary Niall Mitchell's *Raising Freedom's Child* (2008), and William P. Vaughn's *Schools for All: The Blacks and Public Education in the South, 1865-1877* (1974).

When Union warships captured New Orleans in April 1862—early in the war—the first experiments of Union Reconstruction policy would begin, with New Orleans and its schools at the center. General Benjamin Butler, who ran New Orleans' military government for the first several months of occupation, consolidated the city's school districts and created a Bureau of Education, continuing the city's policy of excluding black children from city public schools (DeVore & Logsdon, 1991, p. 47). The Union military established schools for black children on Union-controlled territory, both in and outside of New Orleans, and in 1864 the commanding general, Nathaniel Banks, formalized the existing system of schools by setting up a separate Board of Education for black Louisianans (DeVore & Logsdon, 1991, pp. 55-57; Blassingame, 1973, Chap. 5). Once the Freedman's Bureau was organized in 1865, it took control of the black schools (Blassingame, 1973, Chap. 5). These schools were initially completely separate from the New Orleans public school system and most of them later closed after being placed in the hands of politicians who opposed them and then starved of funding (DeVore & Logsdon, 1991, p. 66).

Even before the war was over, President Lincoln urged General Banks to move quickly to establish a new government in Louisiana so that the state could be readmitted to the Union. Banks moved forward by organizing a convention in 1864 to revise Louisiana's constitution. No African-American representatives were included in the process of revising the constitution, and the new constitution, while formally abolishing slavery, did not go very far in expanding civil rights. As part of a compromise, the new 1864 Louisiana Constitution allowed for the creation of a black school system but did not guarantee it, and left funding decisions up to the state

legislature. The 1864 legislature refused to consider funding black schools and instead passed a new law forbidding the entry of blacks into white schools (DeVore & Logsdon, 1991, p. 59).

On April 9, 1865, Robert E. Lee surrendered to Ulysses S. Grant, ending the Civil War. Five days after Lee's surrender, President Lincoln was shot, and his vice-president, Andrew Johnson—a Southern Democrat—became president, changing the direction of Reconstruction. Under Johnson's hands-off, states-rights Reconstruction policy, Confederates and their supporters regained control of local government offices, including John T. Monroe who left a Civil War prison in 1866 to become mayor of New Orleans (DeVore & Logsdon, 1991, p. 62). One of Monroe's first acts as mayor, in July 1866, was to send in the police and a gang of deputized officers to prevent a second constitutional convention from convening to reform the 1864 Louisiana Constitution. In the "orgy of violence" that resulted, several white Union delegates were killed as well as almost fifty African-American men who were outside, demonstrating in support of the convention (DeVore & Logsdon, 1991, p. 62). The "New Orleans Riot," as it would be known, was one of the events that shifted public opinion in the North. Du Bois called the slaughter of African-American spectators "a characteristic gesture of the time and place"; it was the "moral aftermath" to the violence that was unusual (Du Bois 2007/1935, Ch. XI). The New Orleans Riot made people reconsider the ability of the South to govern itself and laid the groundwork for the Republican victory in the Congressional elections of 1866 and the subsequent period, called "Radical Reconstruction."

The Republican-led Congress set to work right away to regain control over the process of Reconstruction, and by July of 1867, the Republican Congress passed the first three Reconstruction Acts of 1867 over President Johnson's vetoes. Under these Acts, Louisiana's pro-Confederate government would again be dismantled, and a new government would be put in

place by federal military commanders (DeVore & Logsdon, 1991, p. 65). General Sheridan was the first military leader of Louisiana during Radical Reconstruction. He immediately removed the Confederate mayor John T. Monroe and the city council from office and replaced them with his own appointees, including for the first time several African-American city council members (DeVore & Logsdon, 1991, p. 65). Before Monroe left office, he moved quickly to incorporate the few Freedman's Bureau schools that were left over from the war into the public school system and to provide some funding for these schools, fearing that if he did not move quickly, African-American students would begin to attend the all-white public schools (DeVore & Logsdon, 1991, pp. 66-67; Vaughn, 1974, p. 85). This was the first time a black child was permitted by law to enter a New Orleans public school. When these first black schools opened in October 1867, they were poorly funded and existed only for primary grades (DeVore & Logsdon, 1991, pp. 66-67). The schools were later cited as a barrier to educational equality rather than a step forward: State school superintendent Thomas W. Conway wrote in 1870 that the schools perpetuated "a spirit of caste" (Vaughn, 1974, p. 83).

One of the requirements established by Congress in the Reconstruction Acts of 1867 for Southern states to be fully re-admitted to the Union was that they adopt a new state constitution, to be approved by Congress. In 1867 and 1868, a new constitutional convention was held, this time dominated by Radical Republicans and newly enfranchised African Americans (Du Bois 2007/1935, Ch. XI). What came out of the convention was nothing short of revolutionary—at least on its face. The 1868 Louisiana Constitution "made the Negroes equal to the whites" (Du Bois 2007/1935, Ch. XI) in every legal respect including the right to vote. The new constitution could not have been clearer about the intention to end school segregation. Article 135 provided:



All children of this state between the ages of six (6) and twenty-one (21) shall be admitted to the public schools or other institutions of learning sustained or established by the state, in common, without distinction of race, color, or previous condition. There shall be no separate schools or institutions of learning established exclusively for any race by the state of Louisiana.

(Louisiana Constitution of 1868, Title VII, Article 135). With new legislation in place, African-American parents moved quickly to enroll their children in public schools, but the school board pushed back, issuing orders to principals not to permit “children of color” to enter the schools (DeVore & Logsdon, 1991, p. 68; Vaughn, 1974, pp. 84-85). When the Louisiana governor, Henry Clay Warmoth, and the school board refused to enforce the new legislation desegregating schools, the response from the Radical Republican state legislature in 1870 was to disband local school boards and restructure the state’s school system to bypass the city council, putting people in power who would carry out the law (DeVore & Logsdon, 1991, pp. 68-70; Vaughn, 1974, p. 82). Under the new system, the state board – not the city council – would appoint local school superintendents and school board members, and every local board member was required to accept the concept of educational equality under oath (Vaughn, 1974, p. 82). After a court fight, in January 1871, the new authorities began to desegregate New Orleans public schools.

For decades scholars pronounced school integration a complete failure. In 1962 Louis Harlan, in “Desegregation in New Orleans Public Schools During Reconstruction,” contradicted the scholars before him and laid out the evidence for the first time that there was in fact desegregation in New Orleans for a brief period in the 1870s. Harlan claimed that scholars before him overlooked the evidence that schools were in fact integrated for a period during Reconstruction because, he says, the tendency was to focus instead on the sensational headlines about white children leaving the schools. What these scholars failed to see, Harlan argues, is that

eventually those white children came back to the schools (pp. 663-664). Scholars after Harlan have disagreed about the extent of integration and the reasons for Louisiana's relative success in achieving it, but all concede that there were examples of successful, integrated schools in New Orleans that operated over a period of several years in the 1870s.

Vaughn concludes that about a third of city schools were integrated and that "New Orleans learned to tolerate mixed schools if not to accept them" (Vaughn, 1974, pp. 87-89). DeVore and Logsdon explain that the extent of the integration that occurred in those years was difficult to gauge because racial designations were dropped from school records. They conclude based on the limited available evidence that there was an initial "shock" and exodus of whites from the public-school system in 1870-1871, but that many whites eventually returned because the private schools were expensive and poor in quality (DeVore & Logsdon, 1991, p. 70). Most of the schools that were successfully integrated were in the French-speaking Creole and German immigrant neighborhoods, where the neighborhoods were already racially integrated (DeVore & Logsdon, 1991, p. 70). Blassingame agrees that there was modest integration and argues that extensive integration was prevented by "[t]he reticence of many black parents and the overly cautious policy of school board officials" and cites what he says are the few instances where schools were integrated peacefully (Blassingame, 1973, Chap. 5).

Vaughn argues that Louisiana's relative success was due almost singularly to the unyielding determination of Thomas W. Conway, the young, religious, Irish-born state superintendent of education who had made black equality his life's work (Vaughn, 1974, pp. 78-79). But most scholars focus on the black community itself in explaining the success of integration. Mary Niall Mitchell argues that school integration at this time could only have happened in cities with large African-American populations and where there were African

Americans in the state legislatures after the War; she concludes that Charleston, South Carolina and New Orleans, Louisiana were the only candidates (Mitchell, 2008, pp. 205-206). In fact, in South Carolina, the legislature passed such legislation, but it was never enforced. New Orleans, she argues, had the benefit of a diverse population of African Americans, mixed-race people, and immigrants living in integrated neighborhoods (Mitchell, 2008, p. 206). DeVore and Logsdon focus on the culture and status of New Orleans' people of color: "No other city in the South could have mustered the determination and spirit to evolve such an experiment with integrated schools" (1991, p. 67). They argue that most of the integration happened not because of the tolerance of whites but because of the "assertiveness of the black creole families" (p. 70) who "had much broader world experience" than the "cautious white Republicans," had "absorbed the revolutionary ideology of republican France rather than the racist thinking of Anglo-America," and had already defied the racist thinking of Anglo-America with their own achievements (p. 67). Blassingame and Harlan similarly emphasize New Orleans' unique culture in explaining the political activism of New Orleans' African Americans and their ability to achieve school integration (Blassingame, 1973, Preface ¶2-3; Harlan, 1962, pp. 673-674).

School integration ultimately failed in New Orleans, not because of any inherent problem with the experiment itself, but because the bitterness and resistance to a new social order were too great. Du Bois' assessment was that "[p]ractically, so-called Reconstruction in Louisiana was a continuation of the Civil War" with its vigilante violence and political power grabs (Du Bois 2007/1935, Ch. XI). Du Bois concludes that in Louisiana, the black voting population was large enough, and black leaders were effective enough, that in the years 1868 to 1874 they were able to take "perceptible steps toward public education" but that because of these forces beyond their control, the progress was stopped (Du Bois 2007/1935, Ch. XI). DeVore and Logsdon similarly

argue, “It was not educational failure that eventually ended the daring experiment in New Orleans, which had all of the elements of a model school system” (DeVore & Logsdon, 1991, p. 76). The teachers and administrators were willing to educate children in integrated schools (DeVore & Logsdon, 1991, p. 81). There was also a “rather sizeable minority” of white parents who did not oppose sending their children to school with black children (Blassingame, 1973, Chap. 5). DeVore and Logsdon explain that corruption and violence shifted the mood of the public, and “the turning point came when the federal government seemed to signal its unwillingness to enforce the Reconstruction Amendments in the South” (DeVore & Logsdon, 1991, p. 76). Harlan draws a similar conclusion about why school integration failed in New Orleans. He claims that desegregation was successful and even spread but that it eventually failed “only because Reconstruction itself failed.” (Harlan, 1962, p. 664).

Integrated schools in New Orleans had some success until the fall of 1874 when opposition grew bolder and even violent. DeVore and Logsdon attribute the new confidence of the white supremacists and the White League, a paramilitary terrorist group, in part to events outside of Louisiana as the power of the national Republican party began to wane (DeVore & Logsdon, 1991, 76). Democrats made gains in the 1874 national election, and that same fall, in an effort to compromise and ensure the passage of what would be the Civil Rights Act of 1875, Republicans agreed to remove a school integration clause from the bill before it passed. In Louisiana, the power of the White League was at its peak in September 1874 when an armed gang of 8,000 men invaded New Orleans to overthrow the Republican governor, William Kellogg (White, 2017, p. 280). The governor was restored by federal troops, but the violence continued.

The same fall as the White League's attempted coup, there was a new, organized resistance to black students entering traditionally white schools. Blassingame's assessment is that opposition to integrated schools came from everywhere, but that the most serious threat came from the city's newspapers, which were largely Democrat-leaning and which supported segregation. The papers, especially the *Bulletin*, urged boycotts and "made every effort to keep the opposition at a fever pitch" (Blassingame, 1973, Chap. 5). In the fall of 1874, the first black students attempted to enroll in "the prestigious and still lily-white Upper Girls High School" (DeVore & Logsdon, 1991, p. 76), and a coordinated group of white girls from the school walked out in protest. Many of the city's newspapers celebrated the girls' action, and groups of high school boys showed their own support by going from school to school, forcibly removing students whom they believed to be of African-descent. Riots resulted and the schools closed early for Christmas break (DeVore & Logsdon, 1991, p. 76; Blassingame, 1973, Chap. 5 ¶24; Harlan, p. 671-672; Vaughn, 1974, pp. 94-97). Even the *Republican*, a newspaper sympathetic to the black cause, responded by saying that it was unwise for blacks to fight for their legal rights at this moment with so much opposition and suggested re-opening the schools in January as segregated schools (Vaughn, 1974, p. 96).

The remarkable progress toward educational equality in New Orleans came to an end around 1877. That was the year that federal troops were removed from Louisiana and Democrats returned to power. On April 4, 1877, a new school board took office, and within months, the policy of integration was reversed, ushering in the Jim Crow era (DeVore & Logsdon, 1991, pp. 82-89; Vaughn, 1974, pp. 99-100).

### 1.3 Overview of Nineteenth-Century American Mathematics Education

David Eugene Smith's *History of Mathematics, Vol. 1* (1958), gives an overview of nineteenth-century mathematics around the world and by doing so gives a picture of the state of mathematics education at the university level. Smith's work is telling for what it does not contain; in this massive work of 596 pages, only three are dedicated to American mathematics because for so long there was none to speak of. The lack of research mathematics in the United States in the nineteenth century should not be surprising because the model of the American research university was only just developing in the nineteenth century. In his book, *A History of American Higher Education* (2011), John R. Thelin describes the gradual transformation of American colleges into research universities over the last half of the nineteenth century. The land grant acts of 1862 and 1890 gave the impetus to American colleges to expand and hire new faculty. Along with new faculty, came a new interest in university-funded research, especially in the sciences, although even as late as 1890, the idea of encouraging original research was "only starting to percolate as a serious, enduring national policy" (Thelin, 2011, p. 106). American mathematics was no different than other disciplines in its late development as a field of research. The first real effort to encourage mathematics research in the United States happened in 1876 when Johns Hopkins brought on British mathematician James Joseph Sylvester and set him up with facilities and funding to conduct research (Smith, 1958, pp. 531-532). In his work, *A History of Mathematics in America before 1900* (1934), Smith calls the period starting with Sylvester's appointment a period of "awakening" (1934, p. 65) for American mathematics.

Karen Parshall and David Rowe lay out the details of this change in their book, *The Emergence of the American Mathematical Research Community 1876-1900* (1991). The authors explain that in the eighteenth century, while the European continent was making unprecedented

advances in mathematical research, British mathematics fell far behind. Scottish mathematician John Playfair reflected on the inferiority of British mathematics in 1805 and attributed it to three causes: (1) that the British adhered to a Newton's "synthetic, geometrical point of view" rather than the analytical and algebraic methods developed on the Continent, (2) that the British system of higher education stuck to an old system of memorization and recitation which did not foster creativity, and (3) that the Royal Society of London did not promote and encourage mathematics (Parshall & Rowe, 1991, pp. 4-6). The United States' educational system shared a language and cultural history with Great Britain, and because Great Britain lagged behind France and Germany for many years, so did the United States (Parshall & Rowe, 1991, p. 4). Even when "Great Britain itself began to shift, mathematically speaking, toward the more progressive Continent" in the beginning of the nineteenth century, the United States initially did not (Parshall & Rowe, 1991, p. 4). In the last half of the nineteenth century, things finally did begin to change in the United States as it began to "draw inspiration directly from the active areas of European mathematics and to make original contributions to them" (Parshall & Rowe, 1991, p. 2). Parshall and Rowe agree with Smith that a landmark in this change was the establishment in 1876 of Johns Hopkins University and its hiring of James Joseph Sylvester. Parshall and Rowe argue that while Sylvester was not comparable to those who would succeed him in terms of his mathematical contributions (Parshall & Rowe, 1991, p. 146), his tenure was important in that he founded America's first school of research mathematics and established the *American Journal of Mathematics*, developments which were completely foreign to the United States' view of mathematics at the time (pp. 49, 53).

The research of Smith and of Parshall and Rowe focuses almost entirely on the mathematics in colleges and universities, but other researchers give us a picture of the

educational experiences of Americans generally. Nerida Ellerton and Ken Clements in their book, *Rewriting the History of School Mathematics in North America 1607-1861* (2012), describe how mathematics was communicated and circulated primarily through handwritten cyphering books in North America during the eighteenth and early nineteenth centuries more than through printed arithmetic texts. One implication of this study is that it demonstrates the early American tradition of learning mathematics through the rote re-copying of rules and examples from one cypher book to another rather than through the pedagogical methods that would become common later including lectures, the working of problems, and written examinations.

By the late nineteenth-century, pedagogical methods in mathematics were beginning to change. Florian Cajori's influential work, *The Teaching and History of Mathematics in the United States* (1890), was a far-reaching study commissioned by the federal Bureau of Education that touched on all aspects of nineteenth-century mathematics education and is valuable as a contemporaneous account. As the name implies, Cajori's work traces the history of American mathematics education from colonial times (when it was almost non-existent) until the late 1800s where Cajori, like Smith, saw progress, albeit incomplete. Cajori explains that before the Revolutionary War, any available arithmetic or mathematics books were from England (1890, p. 45). In the first decades after the War, arithmetic books (and a few on higher mathematics) were published in America, but even then, many of them were reprints of English works (p. 45). Cajori summarizes the contents of these arithmetic books as "little more than Pandora's boxes of ill-informed rules to be committed to memory" (p. 49). Reasoning, he says, was "exiled from the realm of arithmetic" (p. 49). While there were some good teachers (mostly students themselves), the more typical example was the "itinerant school-master," who moved from town to town



taking work as he could find it (p. 52). These teachers tended to have almost no knowledge of numbers (p. 52) and would rely on a scarce and miscellaneous collection of books on hand (p. 51). The main “qualification” of these teachers, Cajori says, was “the inability to earn anything in any other way” (p. 52). Cajori summarized the difficulties that impeded progress: (1) Americans were not interested in abstract scientific thought, (2) the character of mathematical instruction was “wretched,” and (3) there was a general belief that mathematics was for “the favored few,” that ordinary minds could not understand it, and thus that there was no point in trying very hard (pp. 99-100).

From this low starting point and in spite of the difficulties, Cajori admits, progress was made in the teaching of mathematics by the end of the nineteenth century. The quality of American textbooks improved as English influence gave way to French with its improved instructional methods (1890, p. 99.) There was also an improvement of pedagogy in elementary schools; rather than starting with memorized rules, at least some progressive teachers would start with the concrete and known and would move gradually by steps to abstraction through reasoning (pp. 107-108). Cajori also noted that the system of tutorships in colleges disappeared in the 1800s, whereby recent graduates, rather than the professors with experience and knowledge in the subject, would teach university students (p. 101). Yet even by 1890, college professors of mathematics still did not have the formal education that math professors do today. Most had the equivalent of an undergraduate degree, perhaps with some post-graduate study, and many professors were still responsible for teaching other subjects as well, suggesting that mathematics was not their focus (pp. 345-349).

Cajori’s overall assessment was that progress in American mathematics education by 1890 had been marked by a “rupture” with the past but that the resolution of this conflict had

only begun (1890, p. 293). Cajori complains that in 1890 there was still too much time spent on rote arithmetic in American schools, rather than introducing algebra and geometry in the early grades or building skill at reasoning, and that even with this time spent, a typical American student still did not calculate as well as a German student (p. 295). Cajori also presents the extensive findings of his survey which was sent out to 168 colleges, 45 normal schools, and 181 high schools around the country. The survey solicited information and opinions from teachers and administrators, and it was unusual and valuable in that many of the individual responses were quoted by Cajori in his summary. Many of those responses reflect the major conflicts and incomplete progress of the time. High school teachers, for example, were asked what reforms should be made in mathematics education at their level. Teachers had many different opinions with no clear trend. Some teachers embraced the new thinking, describing “arithmetic as a deductive science,” asking for “more attention to analysis,” and complaining about teachers’ “lack of elasticity in accepting [new] methods” (pp. 358-359). But other teachers even seemed to wish for earlier times by complaining that the textbook was too “dependent on logical reasoning,” and by asking for “vastly more drill,” and “less work that is wholly theoretical” (pp. 357-358). We feel the frustration of another teacher who answered, “hire competent teachers only.” When asked what reforms should be made, another teacher probably summed it up best when she answered simply “many” (pp. 357-359).

Jeremy Kilpatrick gives a more recent overview of the history of American mathematics education in “Mathematics Education in the United States and Canada,” a chapter in Karp and Schubring’s *Handbook on the History of Mathematics* (2014). Kilpatrick’s piece spans more than three hundred years of American history, and what he says about the changes in the nineteenth century gives new detail to Cajori’s and Smith’s assessments. Kilpatrick agrees that American

mathematics changed over the course of the century from being primarily rule-based, where “students memorized rules and practiced them,” (2014, p. 326) to an approach that required more understanding on the part of the students and the teachers. Kilpatrick explains that two methods of teaching arithmetic became more prominent as the century wore on—the inductive method and the analytic method. The methods were different in how the material was presented to the students and in how general rules were derived, but in both cases the methods represented a rupture with what had come before because they were concerned with process more than with the computational result (2014, p. 326).

Another overview of nineteenth-century changes in mathematics pedagogy is given by James Bidwell and Robert Clason’s *Readings in the History of Mathematics Education* (1970), in which the two editors compile representative excerpts of textbooks, speeches, and other documents that illustrate those changes. The changes in pedagogy specifically were documented in Part One of their book, entitled, “1828 – 1889: Beginnings of the Art of Teaching Mathematics.” One milestone in this change was an 1831 arithmetic textbook by William Slocumb, which illustrated both the old “rule method” of teaching arithmetic that had dominated before the nineteenth century and the first movement toward concern about student understanding; Slocumb told his readers they must “know the reason why” a rule produces an answer (p. 25). Another excerpt is from a radical 1830 address to the American Institute of Instruction given by Warren Colburn who urged the adoption of a “new system” of pedagogy where students, by reasoning through simple examples and then generalizing, make their own rules (p. 26). Other authors took a different approach by building up a logical system of arithmetic through propositions, demonstrated one at a time. In his 1870 textbook *University Arithmetic* (meant mostly for students in normal schools, institutions that existed at this time to

train teachers), Charles Davies treated arithmetic as a logical system with a “series of dependent and connected propositions,” (p. 64) all starting with the proposition, “A UNIT is a single thing, or one” (p. 68). While there were differing approaches, the trend in the mid-nineteenth century was at least to give attention for the first time to the issue of how to teach mathematics. Scholars also debated why mathematics should be taught. Bidwell and Clason identify one of the important changes in the nineteenth century as the expanding of the “mental discipline” rationale for teaching mathematics, which was a departure from the previous emphasis on learning arithmetic as a purely practical endeavor. This rationale would wax and then wane again in the nineteenth century as America began to value practical applications of mathematics more than its value for pure reasoning. Then, towards the end of the nineteenth century, the beginnings of a new revolution emerged in which the field of psychology would impact mathematics teaching, causing an “extensive reevaluation of what mathematics should be taught and why” (p. 2). Overall, Bidwell and Clason’s book gives a picture of a contradictory mixture of practices and rationales concerning mathematics education in the nineteenth century as the teaching profession worked through its growing pains.

#### **1.4 The Scholarship on E. J. Edmunds**

Edmunds was both a key figure in the country’s first civil rights movement and a rare example of a nineteenth-century African-American man who became highly educated in mathematics in spite of the social and legal barriers. Although the story of Edmunds is important, he remains a largely unexplored figure. Some prominent scholars have addressed the Edmunds controversy briefly as an event in the narrative of school integration. School integration was implemented formally in New Orleans in January 1871 and proceeded with some success until the fall of 1874, when white-supremacist leaders began to organize against the local Republican

government and against school integration. The city suffered waves of violence that fall including an attempted coup and a coordinated effort to remove black students physically, one by one, from city public schools. After the violent fall of 1874 over school integration, the school board was determined not to back down and went one step further than they had before by appointing E. J. Edmunds as a mathematics teacher in the city's best public high school, Boys Central High School. The move sparked outrage, walkouts, and protests, and the end of New Orleans' experiment with integrated schools soon followed. DeVore and Logsdon called his appointment "the last furor" before integration ultimately failed. Blassingame also discussed Edmunds' appointment and the protests in response (1973, pp. 117-118). Blassingame emphasized the role of P. B. S. Pinchback, an important black politician who had moved to Union-occupied New Orleans from Ohio during the Civil War, and member of the school board who "engineered" the appointment and defended Edmunds. Vaughn also included Edmunds' appointment as part of his narrative and additionally told of the aftermath in which protesters gathered and drafted a resolution demanding that the school board resign and that enforcement of the integration laws halt (Vaughn, 1974, p. 97).

The other major work that includes information about Edmunds was Rodolphe Desdunes' *Our People and Our History* (1973/1911). As mentioned previously in the section on black Creoles, Desdunes was a community activist who wrote a book of biographical sketches of people in his community. He was also a contemporary of Edmunds, born two years before Edmunds, and spoke about Edmunds in very personal terms. Because some of the details, such as the date of his appointment, are incorrect, it seems likely that Desdunes was recalling the story from his contemporaneous knowledge of it. Desdunes was also the only scholar to include information about Edmunds' life after the controversy:

We must eulogize the name of Professor E. J. Edmunds. . . . On his return from school in France, state authorities quickly profited from his talents. About the year 1872, the Public School Office invited him to occupy the chair of mathematics at the New Orleans High School and he accepted at once. As always, the newspapers attacked him. . . . In order to end the annoyance, the master challenged all of his detractors to meet him at the blackboard. After that, they left him alone. Professor Edmunds lost his mind as a result of a grievous illness. Like Mr. Nelson Fouché, he was a scholar in mathematics and he was also an expert in astronomy. We regret such a capable man died so young.

(Desdunes, 1973/1911, pp. 73-74).

A 2006 dissertation by Peter Breaux about school superintendent William Brown is the one work that discussed the controversy in detail (2006). Breaux focused on actions of the school board and the reaction to Edmunds' appointment in one particular conservative New Orleans newspaper, the *Daily Picayune* (today the *Times-Picayune*) (2006, pp. 162-168). Breaux's sources for the paragraphs on Edmunds were the 1875 Annual Report of the school board and the September issues of the *Daily Picayune* (2006, p. 162-168). Even Breaux's work, while it includes more details than the other accounts of Edmunds' appointment, focuses on Brown rather than Edmunds and therefore leaves out any information about Edmunds' background, education, family, and career. The present study also includes a fuller analysis of the media campaigns to sway public opinion on all sides.

## Chapter 2: Methodology

This author learned of the 1875 Edmunds controversy when she encountered a newspaper headline about Edmunds while conducting historical research about a different topic. The headline was published on the first page of the *New Orleans Bulletin* on September 14, 1875 and announced, “E. J. Edmunds (colored) Placed in the School as Professor of Mathematics. The Seniors Leave the School.” An exploration of the literature about New Orleans public schools and the history of African-American education showed that the basic facts of the 1875 controversy over Edmunds’ appointment were well known to scholars. However, no scholar had researched or verified the basic details of Edmunds’ life, including whether he attended the *École Polytechnique* as he and his supporters had claimed.

This study was launched first by using online documents available on government databases and genealogical websites to uncover the details of Edmunds’ life. It was discovered that Edmunds had African-American ancestors who had been free for generations and therefore that, unlike most Southerners of African-American heritage, his life and his family connections could be traced back well before the Civil War. It was also learned from an online database belonging to the *École Polytechnique* that Edmunds had in fact attended that school, verifying a key aspect of the story, as it was told by the city’s African-American leaders at the time. Once the timeline of Edmunds’ life was established, the author made trips to New Orleans to visit the archives of Edmunds’ maternal grandfather, Prosper Foy, at Tulane University and the archives of the New Orleans Board of Education at New Orleans University to get access to documents that were not available online. The *École Polytechnique* also had extensive documentation of Edmunds’ time there in the school archives, and this author accessed the documents via email with the help of Olivier Azzola, and archivist for the *École Polytechnique*.

The methodology of this study involves using primary sources and contemporaneous secondary sources to (1) establish the details of Edmunds' life and to (2) place them in the broader historical context both to corroborate those details and to establish how typical or atypical Edmunds' various experiences were.

The study uses documents from a variety of sources. While very often in historical studies, particularly when dealing with very old documents, authentication and attribution is an issue that needs to be addressed, in the present study, most of the documents were either published and widely circulated at the time they were written or they are official records of an established institution, and in such cases authentication is not a major issue (Karp and Furinghetti, 2016, p. 5). The one notable exception are the personal documents from the archives of Prosper Foy at Tulane University. The personal letters and notes are not always dated or signed, and where there is any ambiguity about the source or meaning of one of Foy's documents, that ambiguity is noted in this study.

In general, when trying to establish the details of Edmunds' life and background, this study took into account whatever documents were available and made an effort to place and understand that document within a wider historical context. There were times when the information reflected on a document was straightforward and not subject to multiple interpretations. For example, a census record entry listing the Edmunds' family in 1860 is good evidence, at a minimum, that the family lived at the designated address at that time. Otherwise, the record would not have been made. On the other hand, the census record also lists whether the children were in school and what the family's race was, and these recorded "facts" are less straightforward. A record of whether a child was in school could be inaccurate, and the issue of perceived race and racial identity is obviously complex. Issues of how evidence was interpreted,



used, and verified in this study – and what inferences were made – are discussed in the context of individual documents within the body of the study.

### **Federal governmental records**

This category of documents includes, for example, census records, federal slave schedules, passport documents, ship records, and Freedman's Bureau records. With some exceptions, the documents were assumed to be reliable. Birth dates were not always consistent, and as explained previously, there is reason to be skeptical of some of the recorded census information. In general this study relied on the documents to establish basic facts and cross-verified them where possible.

### **Local governmental records**

This category of documents includes birth certificates, court records, and property records. As with the federal records, the documents were generally assumed to be reliable to establish the truth of the facts they state. There were exceptions, which are discussed in the body of the study. For example, Edmunds' sister, Olivia, had two different birth certificates, and it was inferred from the circumstances that the certificate was refiled to erase any designation of race. In general this study relied on these documents also to establish basic facts and to cross-verify other documents.

### **Newspapers, journals, and other contemporaneous periodicals**

This category of documents includes local newspapers, *Harper's Weekly* (a national magazine), journals of education, and journals of mathematics. There are examples where the newspaper reports are used to establish their contents as fact – especially where the facts are not subject to interpretation and have no reason for bias, such as a graduation announcement. In instances where newspapers are cited for a position of opinion, as they were for example, in the

discussion about various newspapers' opinions about racial segregation, the documents are used simply as evidence that the writer holds that opinion – not as evidence of its truth. Other contemporaneous newspaper and magazine articles, such as a *Harper's Magazine* article about schooling of black children, help to establish the wider cultural context of Edmunds' life story.

### **Tulane University archives**

This study uses the archives of Prosper Foy at Tulane University. The documents in the Foy collection include personal letters, receipts, lists of books from Foy's library, original works by Foy, and translations by Foy. These documents were used to establish dates and facts, but also, for example, as evidence of Foy's relationship with his children, evidence of Foy's broad intellectual interests, and evidence of the availability of the books that Foy cataloged. The documents also help to establish the broader historical atmosphere of Edmunds' life.

### **University of New Orleans archives**

The University of New Orleans holds the official documents of the New Orleans School Board. These documents were used to establish the details of the Edmunds' appointments as well as other school board actions. Documents of the State Superintendent of Education were available in online archives and help to establish and verify the same kinds of details.

### **Archives of the *École Polytechnique***

These documents include admissions records, school records, photographs, and alumni records. The documents were assumed to be trustworthy and were used to establish details about Edmunds' time in France and about his mathematics education generally.

## **Textbooks and curricula**

This category of documents includes, for example, the textbooks approved for use in New Orleans public schools in the 1870s and the curriculum of the admissions exam of the *École Polytechnique*. As Karp and Furinghetti argue, one must be careful with inferences and not to assume that advanced material in a textbook was actually taught in the classroom (Karp and Furinghetti, 2016, p. 6). This study is mindful of such pitfalls, but in the case of the Robinson textbooks for use in New Orleans, for example, it was reasonable to use the textbooks as a *ceiling* – that is, the curriculum taught would not have exceeded the level of the approved textbooks. Curriculum documents of the *École Polytechnique* were also used. These documents helped establish Edmunds’ level of education at the time he tested into the *École Polytechnique*. These pamphlets were published by the school and were meant to reflect the mathematics content and entrance requirements of the school. To pass the exam, Edmunds would have studied the published curriculum.

### **Chapter 3: E. J. Edmunds' Family and Early Life**

This chapter examines the background of E. J. Edmunds as a free man of color growing up in pre-war New Orleans. This chapter aims to give a context that will help answer questions about Edmunds' access to education. Edmunds was, ironically, in the strange position of being both subjugated and privileged. Because of Edmunds' ethnic background, he was born with a legal designation that marked him as a second-class citizen and restricted his ability, among other things, to enter school, to marry, and to get a job. At the same time, there was a confluence of factors working in Edmunds' favor. Edmunds came from a well-educated family of means, which was in a position to recognize his talent and to provide a pathway for him to enter one of the world's best schools of mathematics. Edmunds' cultural background also explains his family's cultural ties to France and how a New Orleans-born man could have ended up studying mathematics at the *École Polytechnique* – a rarity for Americans of any ethnic background. Additionally, even though Edmunds was born before the Civil War during a dark time in African-American history, he came of age during the short window in New Orleans' history when the Confederacy was defeated and there was a feeling of optimism, strength, and unity among the city's African-American population about claiming their status as equals to the city's white population. Understanding this social context in which Edmunds grew up is central to understanding his remarkable achievements. Understanding the uniqueness of the circumstances that led to Edmunds' success also clarifies that it was practically impossible for African Americans generally in the nineteenth-century South to overcome the obstacles placed before them.

### 3.1 The Edmunds' Neighborhood

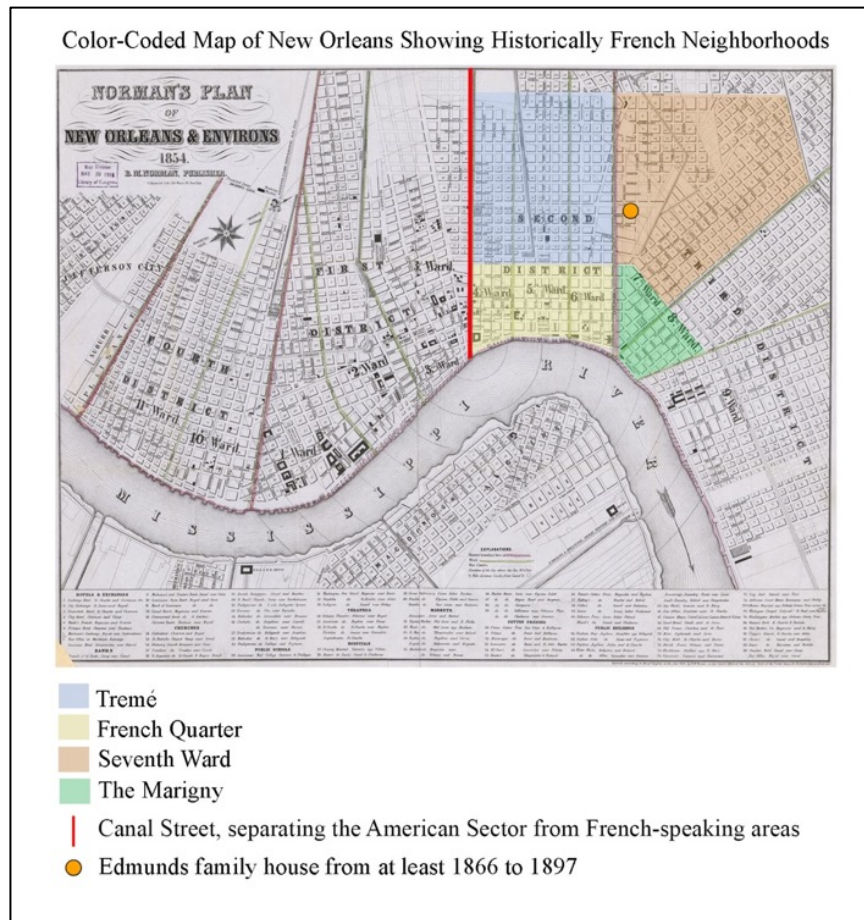
Edmunds was born into a middle class family in an economically and ethnically diverse neighborhood in French-speaking New Orleans. He was born on January 26, 1851, to Edgard Ambroise Edmunds and Rose Euphémie Foy Edmunds (*Edmunds, Edgar Joseph* [birth record], 1851/1868). The first glimpse of Edmunds' childhood comes from the 1860 United States Census, just before the Civil War broke out. In 1860, nine-year-old E. J. Edmunds was living with his parents, his seven-year-old brother, Arnold, his two-year-old sister, Olivia, and a boarder (U. S. Census Bureau, 1860b, pp. 141-142). The Edmunds family lived in the French-speaking, mixed-race area of down-river New Orleans, which included the neighborhoods of the *Vieux Carre* ("French Quarter"), *Faubourg Tremé* ("Tremé"), *Faubourg Marigny* ("The Marigny"), and the Seventh Ward. The French-speaking areas were distinct from the American sector, which was populated with more recent arrivals from other parts of the United States after the 1803 Louisiana Purchase. The American sector was upriver from the French Quarter and separated from it by Canal Street, whose wide median running down the middle of the street even today is referred to as "the neutral ground" – an artifact of the tensions that existed between the two populations in the city in the nineteenth century.<sup>1</sup>

The 1860 Census does not record the Edmunds' exact address, but it locates the family in the Sixth Ward, a narrow strip, just four blocks wide, which started at the Mississippi River and extended back through part of the French Quarter and Tremé (*New Orleans Wards in 1880*

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<sup>1</sup> For an early reference to, and description of, the "neutral ground" running down the center of Canal Street, see "The Neutral Ground—Canal Street" (1839), *The Daily Picayune* (New Orleans, LA), p. 2.

[map], 1880). Six years later, the New Orleans city directory showed the Edmunds family living a few blocks away in the Seventh Ward, on the corner of Claiborne Avenue and Columbus Street (Gardner, 1866, p. 169), and this is the house where Edmunds' parents would live for the next thirty-three years until his father passed away.



**Figure 1: Color-Coded Map of New Orleans' French-Speaking Neighborhoods. Modified from Norman's Plan of New Orleans and Environs (1854).**

According to the 1860 Census, free people of color made up about seven percent of New Orleans' free population, and mixed-race people made up most (about seventy-seven percent) of the free black population (Kennedy, 1860, p. 194). These were the French-speaking Afro-Creoles. By 1860 the French-speaking areas would have been filled also with poor and working-class immigrants from the Caribbean and Europe. The census pages that contained the Edmunds

household reflect this trend. The census-taker, Mr. B. Kennedy, recorded that he visited sixty-eight households on July 5, 1861, the day he visited the Edmunds family. Of the 284 individuals whom Kennedy recorded from the Edmunds' neighborhood that day, approximately twenty-three percent were immigrants, all white and mostly from France, but also from Ireland and Germany. That day Mr. Kennedy also recorded at least one immigrant from each of the following countries: Cuba, Italy, Martinique, Mexico, Spain, and Switzerland (U. S. Census Bureau, 1860b, pp. 139-145). While the race of the Edmunds family is not indicated, about fifteen percent of Edmunds' neighbors whose census data were recorded that day were marked as "mulatto," or "black." It is likely that many of the Louisiana-born people whose races were not indicated, such as the Edmunds, had black ancestry but were light in skin color and were not regarded as "mulatto" by the census taker. This is significant because if this undercounting of black people was widespread, as scholars have hypothesized (*e.g.*, Winch, 2014, p. 10), then the official compilation of the 1860 Census grossly understates both the number of free people of color in New Orleans as well as the number of mixed-race people within the black population.

Some of Edmunds' neighbors were unskilled laborers, such as a whitewasher and a washerwoman, but much more common were the skilled laborers such as a carpenter, a clerk, a druggist, a policeman, a shoe dealer, a baker, an engraver, a seamstress, and a blacksmith. Many of the neighbors owned their own houses and had comfortable personal estates. The details that emerge about the Edmunds' community – which show a middle-class community of skilled workers – fits with the description of the free black community common in scholarly research (*e.g.*, Dunbar-Nelson, 2017/1916, p. 29; Sumpter, 2008, p. 22).

The Edmunds family fit into this middle-class neighborhood of merchants and skilled workers. The value of the elder Edmunds' property was listed as \$400 in the 1860 Census, which

was low but consistent with some others in the neighborhood (U. S. Census Bureau, 1860b, p. 141). By comparison, there was one wealthy merchant from Maryland on the same street whose property was worth \$45,000 (U. S. Census Bureau, 1860b, p. 141), but also an “oyster saloon” worker whose property was valued at \$500, and a carpenter whose property was valued at \$60 (U. S. Census Bureau, 1860b, p. 142). One black neighbor, Malvina Martin, was one hundred years old, lived with two boarders, and owned \$2100 in real estate and \$750 in personal property (U. S. Census Bureau, 1860b, p. 143). The 1860 Census does not tell the elder Edmunds’ profession, but the city directory from 1861 indicates that he was working as a clerk for a firm at 79 Magazine Street (Gardner, 1861, p. 156), which would have been in a commercial area, near Canal Street and about a twenty-minute or half-hour walk from the Edmunds’ home.

The house where E. J. Edmunds and his siblings lived after the war was on the corner of Claiborne Avenue and Columbus Street in the Seventh Ward (Gardner, 1866, p. 169; Gardner, 1869, p. 149; *Succession of Edgar Edmunds* [probate documents], 1897, p. 8). The house, the property, and the furnishings are described in detail in the probate records of E. J. Edmunds’ father, Edgar Edmunds. The house sat on a lot that was large for the area; it was made up of one and a half of the original lots on the street, approximately forty-seven feet wide along Claiborne Avenue and stretching back one hundred feet (*Succession of Edgar Edmunds* [probate documents], 1897, pp. 9-10). The house was two stories high, which was unusual in that neighborhood of creole cottages and shotgun houses.<sup>2</sup> The bottom floor had two parlor rooms that were large enough to have multiple seating areas and were decorated with vases, mirrors, and engravings (*Succession of Edgar Edmunds* [probate documents], 1897, p. 8). One of the

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<sup>2</sup> “Shotgun houses” are a narrow style of townhouse in New Orleans. The houses have no hallway, and instead the rooms open into each other. The smallest houses would have a living room in front, a kitchen in back, and a bedroom between that opened into both.



parlors also had a set of bookshelves full of books (*Succession of Edgar Edmunds* [probate documents], 1897, p. 8). There was a spacious hallway, which was large enough to have its own furnishings—a sofa and five chairs (*Succession of Edgar Edmunds* [probate documents], 1897, p. 8). The large hallway probably ran down the center of the house with the parlor rooms on either side. The lower floor also had a kitchen, and a dining room that sat eight people (*Succession of Edgar Edmunds* [probate documents], 1897, p. 8). The second floor of the house contained four bedrooms. The master bedroom was furnished with a “Victoria bed,” an armoire, a washstand, a toilet-stand, a small table, four chairs, and a mirror (*Succession of Edgar Edmunds* [probate documents], 1897, p. 9).

### 3.2 E. J. Edmunds’ Family Background

Edmunds was born into a family of African descent whose members were property-owning, well-educated, and had been free for generations. In spite of their relatively privileged social status, Edmunds’ family members, like Edmunds himself, were designated as “free people of color” and therefore subject to legal restrictions, social limitations, and indignities. Edmunds

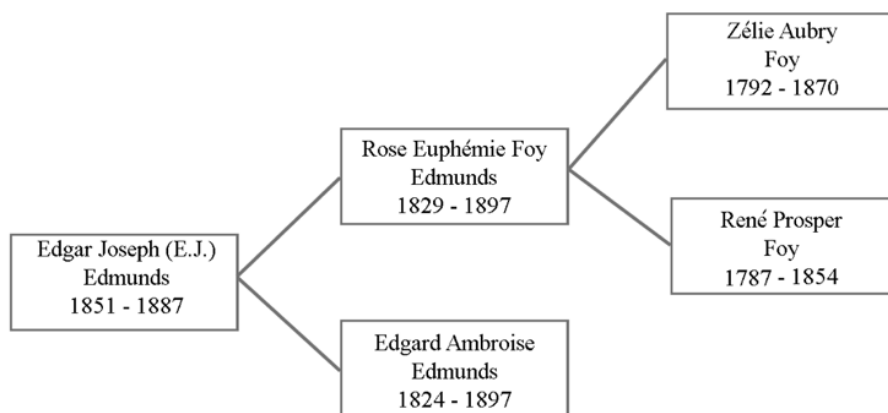


Figure 2: Family tree of E. J. Edmunds

also had a wealthy, white French grandfather who supported and was involved in the lives of his black family members. These contradictions help to explain both the unique opportunities that were open to Edmunds, including the availability to him of a French education, as well as the backlash he faced when he took advantage of those opportunities.

**E. J. Edmunds' father—Edgard Ambroise Edmunds (~1824 - 1897).** Edmunds' father, Edgard Ambroise Edmunds (also called "Edgar Edmunds," especially in English-language documents), was a hard-working, successful man of color who worked his way up to the position of a director in a dry-goods importing company (Soards, 1897, p. 291) and accumulated enough wealth to raise a large family in a nice house and leave them a comfortable estate when he passed away (*Succession of Edgar Edmunds* [probate documents], 1897). Court documents show that there was an extended, established Edmunds family living in New Orleans as early as 1832, and that they were free persons of color (*e.g., Edmunds, William, f.m.o.c., estate of* [probate documents], 1832). It is not clear what the connection is, if any, between Edgar Edmunds and this Edmunds family, but given that the total recorded free population in New Orleans was only 33,187 at this time (*Abstract of the returns of the fifth census*, 1832, p. 32), it is possible that this was Edgar Edmunds' extended family and if so would show that Edmunds come from a line of free people of color on both sides of his family.

The passport of Edgar Edmunds gives information about his appearance and confirms that he was a person of color. As was typical at the time, Edgar Edmunds' passport had no photograph, but it included a physical description of him, which was based on an affidavit he had submitted in the passport application:

32 years of age  
Stature: 5 feet 11 inches  
Forehead: High and uncovered  
Nose: Aquiline  
Eyes: Dark Brown  
Mouth: Ordinary  
Chin: Ordinary  
Complexion: Dark  
Face: Oval  
Hair: Dark Brown – Bald

(*Edmunds, Edgar* [passport application], 1856). The April 1856 cover letter for the passport application shows that Edgar Edmunds was traveling for business; the passport application includes a sworn statement from R. H. Yale, one of the owners of the dry goods firm Edgar Edmunds is known to have worked for, and the completed application was to be sent to the address of Cyrus Yale, Jr. in New York where Edgar would retrieve it before proceeding to Europe (*Edmunds, Edgar* [passport application], 1856). There are five stamps dated from 1856 to 1857, and while they are hard to read, they show that Edgar traveled to France multiple times by way of ship from England (*Edmunds, Edgar* [passport], 1856).

The New Orleans directories show Edgar Edmunds holding various jobs, including as a clerk at Frank & Haas, then a salesman at Peet Yale & Bowling, and later as a salesman and director of a company called Jos. Bowling (Edwards, 1871, p. 205; Soards, 1875, p. 266; Soards, 1897, p. 291). Some of these apparent job changes were actually firm name changes as partners of the dry goods importer came and left. An 1888 book about New Orleans and its institutions contains a page describing this firm, called Yale & Bowling in 1888 (Morrison, 1888, p. 96). Morrison describes Yale & Bowling as a wholesale dry goods manufacturer and importer (1888, p. 96). The company imported goods from Europe, Mexico, and Central America including furnishings, clothes, and novelties (p. 96). The Morrison book describes all of the New Orleans businesses and institutions in glowing terms, almost like a travel guide, so it makes sense to be

somewhat skeptical about the description of Yale & Bowling; nevertheless, it is possible to say at a minimum that the firm was well known, that it had been around for a long time, and did a large volume of business (p. 96). The company would have been a good company to work for. Edgar worked at Yale & Bowling until he died (Soards, 1897, p. 291), and by that time he had a large estate including the large house on Claiborne Avenue, twelve thousand dollars in stocks, and more than fifteen thousand dollars in cash<sup>3</sup> (*Succession of Edgar Edmunds* [probate documents], 1897, pp. 11-13). Edgar Edmunds' younger son, Arnold, grew up to work in various positions for the same firm, including as a bookkeeper (Soards, 1890, p. 331; Soards, 1895, p. 309; Soards, 1897, p. 291).

**E. J. Edmunds' mother—Rose Euphémie Foy (1829 – 1897) — and her family.**

Edmunds' mother, Rose Euphémie Foy (also called “Rosa” Foy) (*Edmunds, Edgar Joseph* [birth record], 1851/1868), came from a prominent French and Louisianan family. Rose Foy was a bi-racial, educated, French-speaking woman, whose parents, Zélie Aubry and René Prosper Foy, never married but entered into a long-term liaison—a *plaçage* relationship (see Dunbar-Nelson, 2017/1916; Martin, 2000; Sumpter, 2008; Winch, 2014)—in which her father supported her mother but lived separately.

**E. J. Edmunds' grandfather, Prosper Foy (1787 - 1854).** Rose Foy's father, René Prosper Foy (“Prosper Foy”), was a white immigrant from Orléans, France (*Foy, René Prosper* [baptismal record] (1787). He arrived in New Orleans from France as early as 1806 when he was only nineteen years old: A receipt among Prosper Foy's papers shows that on July 7, 1806, he paid for five dinners and four bottles of *Chateau Lafite* at the Marie Hotel in New Orleans (*Monsieur Prosper Foy* [restaurant receipt], 1806). This may reflect his hotel stay upon his first

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<sup>3</sup> At a conservative estimate of 2% annual rate of inflation, Edmunds' cash and stocks would be worth more than \$300,000 in 2019 dollars.

arrival in New Orleans. It is not known exactly when and how Prosper Foy met Edmunds' grandmother, Zélie Aubry, but they must have been young; by the time Prosper was twenty-three and Zélie was eighteen, they already had their first child together.<sup>4</sup>

In 1814 Prosper Foy purchased a piece of property from Bernard Marigny, after whom the New Orleans neighborhood of Marigny was named (Toledano, 2003, pp. 20). This was part of a trend in the area at the time in which the large estates were being partitioned into lots that would make up the new suburbs of Tremé and the Marigny (Toledano, 2003, pp. 20-21). These neighborhoods would later become the heart of the Afro-Creole community, and even as early as 1814, some of the property owners in the area were free persons of color (Toledano, 2003, pp. 17-21). Prosper Foy later purchased a neighboring property with a plantation house (Toledano, 2003, pp. 20). The property was a narrow strip along St. Bernard Street with its front on St. Claude Street ("By Dutillet & Sagory," 1818). Prosper Foy's plantation was described in his advertisement to sell the property in 1818 in both French- and English-language newspapers ("A vendre," 1818; "By Dutillet & Sagory," 1818). He described his property as a "superb Tile and Brick-kiln estate, well-established, situated in St. Claude street, suburbs Tremé and Marigny, near the college,<sup>5</sup> with all of its dependencies, which are considerable and yield great profits" ("By Dutillet & Sagory," 1818). Prosper Foy was selling the plantation with its enslaved workers: "18 Slaves, 14 of whom are negro men, all accustomed to plantation work" ("By Dutillet & Sagory," 1818).

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<sup>4</sup> The first daughter, Marguerite Felicite, was born on December 22, 1810 (*Foy, Margarita Felicitas* [baptismal record], 1811). The second daughter was born in approximately 1813 (*Foy, Pauline Elizabeth* [death record], 1833).

<sup>5</sup> The "college" was a reference to the College of Orleans, which was part of an early, failed attempt by the first American territorial governor of Louisiana, William Claiborne, at establishing a public school system in New Orleans. It was meant to be a college and the crowning jewel of a new system, but for decades it operated as a secondary school with few students (DeVore & Logsdon, 1991, pp. 7-9).

It is not clear where Prosper Foy lived after he sold his St. Claude Street plantation, but a newspaper story shows that he spent at least some time in New Orleans and had a run-in with the law in this period. A newspaper story in the *Courrier de la Louisiane* says that Prosper Foy was arrested and charged personally by the mayor of the city for being an accomplice to a forgery (“Prosper Foy, charged,” 1822). The newspaper account does not give much information except to say that the mayor had been searching for Prosper Foy for days: The mayor “never ceased to be on the track of Prosper Foy, and after several expeditions which he headed in person, he last night succeeded in arresting him in a house on Bayou Road” where he had been hiding (“Prosper Foy, charged,” 1882). The “house on Bayou Road” may have been Zélie Aubry’s house.<sup>6</sup>

Prosper Foy later purchased a plantation in St. James Parish just outside of the city (U. S. Census Bureau, 1840, p. 265; U. S. Census Bureau, 1850a, p. 206). The St. James Parish plantation lay along the “right bank” of the Mississippi River (which meant on the right side if one were traveling downriver) between Baton Rouge and New Orleans in an area full of sugar plantations. While Zélie Aubry and their children remained in New Orleans, Prosper Foy lived a largely separate life at this plantation. Letters from New Orleans would arrive from his family from time to time delivering news—folded and sealed in red wax and addressed simply to “*Monsieur Prosper Foy, Sur Son Habitation a la P. S. Jacques*” [Mister Prosper Foy at his home in St. James Parish] (e.g., Foy, F. [letter], 1840a). At this time Prosper Foy also had a relationship and a child with another woman in New Orleans. His papers include letters from this woman, Julia Moore (Moore [letter], 1840a; Moore [letter], 1840b). A letter from Prosper Foy’s

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<sup>6</sup>A study entitled “Free Negro Owners of Slaves in the United States” lists Zélie Aubry (here called “Zelia Obry”) as one New Orleans’ slave-owning free people of color. It locates her residence as “Between Bayou Road and L’Amour Street” in Tremé (Woodson, 1924, p. 9).

son, Florville, indicates that Prosper had at least one child with Julia Moore and that Zélie knew about the situation and was upset by it (Foy, F. [letter], 1840).

The 1840 census gives a glimpse into Prosper Foy's life in the country; it shows that at that time Prosper Foy was living alone at the St. James plantation with a white overseer and several agricultural and domestic enslaved workers and their families (U. S. Census Bureau, 1840, p. 265). When Prosper Foy died in 1854, he still owned the St. James plantation and held ten people enslaved. The inventory of Prosper Foy's estate on his death gives more detail about these people, including their names, ages, and their cultural background—Creole (*i.e.*, French-speaking), American (*i.e.*, English-speaking and perhaps from other parts of the American South), or African (*i.e.*, born in Africa). Most of Prosper Foy's enslaved workers were over sixty years old in 1854, including eighty-year-old Pierre, so it is likely that whatever farming may have been done on the plantation was winding down as Prosper grew older (*Foy, Prosper* [inventory of estate], 1854).

Prosper Foy was a man of many talents and intellectual interests. His commission as a lieutenant in the American army was one of the documents listed in his inventory of estate when he died (*Foy, Prosper* [inventory of estate], 1854). Apparently, he made a good impression on General Andrew Jackson because Jackson personally awarded him a "Nelson Dagger" in 1815 after the Battle of New Orleans, which today is in the collection of the Louisiana State Museum (Glenk, 1934, p. 155). Prosper Foy was also trained and as a marble cutter, sculptor, and engraver, and when he passed away his plantation was filled with marble statues and furniture (*Foy, Prosper* [inventory of estate], 1854).

Prosper Foy had an enormous collection of books, documented in handwritten lists that were left behind among his papers. Some of the books were purchased individually, but many of

the books seem to have been purchased in lots from estate sales, so while it is not clear how many of the books Prosper Foy actually read, it is clear that he enjoyed having a large library. The books covered a wide range of subjects in different languages. Table 1 shows examples from a single list of fifty-three volumes that Prosper Foy acquired on February 12, 1830 from a Mr. Boyd (Foy, R. P. [list of books], 1830). Many of the books are history books written in French, but the collection also includes some works about law and politics, science, grammar, and fiction and includes works in other languages.

Among Prosper Foy's papers were also receipts for books he had acquired at auction, lists of books he had purchased in bulk at estate sales, and records of single books that he had acquired over the years, all covering a period of more than twenty years from at least 1829 to 1851 (e.g., Foy, R. P. [list of books], 1832; Foy, R. P. [list of books], approx. 1833b; Foy, R. P. [list of books], 1833d; Foy, R. P. [list of books], 1834; Foy, R. P. [list of books], 1845; *Mr. P. Foy to JB Cruzat, auct.* [receipt for books], 1851, *T. N. Vignie, Auctioneer* [receipt for books], 1851). The library also included sixty-three atlases (Foy, R. P. [list of atlases], n.d. [d]) and at least two mathematics texts—the *Traité Élémentaire de Arithmétique* [Elementary Treatise of Arithmetic] (Foy, R. P. [list of books], 1834), and Adrien-Marie Legendre's textbook of Geometry and Trigonometry (Foy, R. P. [list of books], n.d. [a]), both purchased as part of large acquisitions.<sup>7</sup>

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<sup>7</sup> The list that contains the Legendre text has the date 1884, decades after Prosper Foy's death, and the date seems to be a mistake. All of the lists, including the one with the Legendre text, are written in the same handwriting and tend to be written with notes in first person – as in “I acquired . . .,” or “I purchased . . .” describing where the books were purchased. The Tulane archives, where this document sits, indicates that the document is undated, probably because of this discrepancy.



**Table 1: Sample List of Books in the Library of Prosper Foy, 1830**

<i>Liste des ouvrages achetés chez Boyd le samedi soir 20 février 1830</i> [List of books bought at Boyd's on Saturday evening, Feb. 20, 1830]	
<i>Histoire de Charlemagne</i>	[History of Charlemagne]
<i>Histoire des Désastres de Saint-Domingue</i>	[History of the Disasters of Haiti]
<i>Traité de Minéralogie</i>	[Treatise of Minerology]
<i>Oraisons Funèbres de Flechier, Massillon</i>	[Funeral Orations of Flechier, Massillon]
<i>Grammaire latine et française</i>	[Latin and French Grammar]
<i>Traité d'Orthographe Française</i>	[Treatise of French Spelling]
<i>Les Amours de Horace</i>	[The Loves of Horace]
<i>La Venus Physique</i>	[The Physical Venus]
<i>Le Traité de Paix de 1814</i>	[The Peace Treaty of 1814]

Prosper Foy also did writings of his own. His papers included handwritten poems, at least some of which were original, including a love poem written in 1849 titled “*Chanson*” [Song] to an unnamed woman whom he referred to as “*petit fleur de moi*” [my little flower] and a poem called “*Chanson Patriotique*” [Patriotic Song], celebrating Napoleon’s victories (Foy, R. P. [poem], 1849; Foy, R. P. [poem], n.d. [c]). Additionally, Prosper Foy wrote a number of documents about political and historical issues including an undated essay written in English and addressed to “Mr. President” in support of capital punishment and a book-length treatise titled “*Révolution des Colonies Espagnoles de l’Amérique: Cahier 7*” [Revolution of the Spanish Colonies of America: Volume 7] (Foy, R. P. [essay], n.d. [b]; Foy, R. P. [unpublished book], n.d. [f]). Finally, Prosper Foy wrote translations and staging notes for three operas, including Mozart’s *Marriage of Figaro* (e.g., Foy, R. P. [opera staging notes], n.d. [e]).

**Zélie Aubry (1792 – 1870), and her children with Prosper Foy.** Zélie Aubry (E. J. Edmunds' maternal grandmother), was born in approximately 1792 and was a French-speaking free woman of color—"mulatto" according to later census records (U. S. Census Bureau, 1870). Prosper Foy and Zélie Aubry lived in separate households for much of their relationship, and probably all of it. It is known that in the 1830 Census, when the couple had young children, Zélie was recorded as being the head of her household at her house in Tremé (Woodson, 1924, p. 9), and even after Prosper purchased the St. James plantation, Zélie Aubry continued to live in New Orleans with their children together and with enslaved domestic workers.

One of the early documents reflecting Prosper Foy's ties to his family with Zélie are court documents from 1828, the year before Rose Foy was born. These documents show that Zélie was seeking the court's permission to sell a woman named Philotine, who "belonged" to her teenage daughters with Prosper Foy—Marguerite Felicité and Eliza Pauline. The court documents stated that Philotine's fate was at issue "by virtue of an act of donation of [the] nigro [sic] woman Slave, called Philotine, made by Prosper Foy in favor of Marguerite Felicité and Eliza Pauline, minor adults" (*Aubry, Zélie, minors of* [court documents], 1828). Zélie was also recorded as having a single domestic slave living with her in 1830 (Woodson, 1924, p. 9). It is unclear who this woman was because census records do not give the names of people held as slaves. The 1850 slave schedule also shows that Prosper "owned" a single, sixteen-year-old black female in New Orleans (U.S. Census Bureau Slave Schedule, 1850). Because Prosper did not maintain a residence in New Orleans at this time, it seems likely that this enslaved woman, also, lived with Zélie. Together these documents establish that the family held enslaved workers, which was not unusual for people of means in the Afro-Creole community before the war (see Woodson, 1924, pp. 9-15 (listing hundreds of slave-owning free blacks in New Orleans from the

1830 Census)). More broadly, these documents show Prosper Foy's financial connection to his family.

The court file from the 1828 case also includes a court paper written in English and signed by Zélie, showing that she was likely literate and bilingual. Additionally, the court required a “family meeting” over the matter of Philotine to decide whether it was in the daughters' best interest to sell her. The meeting would include three men, all of whom were “free persons of color and friends of your Petitioner [Zélie Aubry] and me, [Zélie's lawyer]” (*Aubry, Zélie, minors of* [court documents], 1828), showing Zélie's connection to the Afro-Creole community. Zélie and Prosper had also had a son together at this point, nine-year-old Florville Foy, who is not mentioned in the 1828 court documents (documented, for example, in *Foy, Florville* [marriage license], 1885).

Two documents among Prosper Foy's personal papers reflect additional information about his children with Zélie and his ties to them. One is a handwritten list of his children who died young—Zelia, Joseph, Hippolyte, and Emile—all born between 1816 and 1831, and all of whom died as infants or toddlers (Foy, R. P. [list of children], approx. 1833c). Another is a poem he wrote in tribute to his second daughter with Zélie, Eliza Pauline, who died when she was about twenty years old. The poem refers to Eliza Pauline as his “*filie adorée, modèle de vérité, d'amour, de dévotion, sans en chercher la gloire*” [adored daughter, model of truth, love, devotion, without seeking glory] (Foy, R. P. [epitaph], approx. 1833). Eliza Pauline likely spent time at Prosper's plantation because one of her writing notebooks was among his papers (Foy, P. E. [writing notebook], n.d.).

A heart-wrenching letter written on September 9, 1840 from Florville Foy, to his father, Prosper Foy, gives more direct information about the children's ties to their father and the

distance he sometimes kept from them. Florville Foy, approximately twenty years old at the time, begins by apologizing to his father for a social *faux pas* he made in a previous letter and adds that his negligence was caused by the pain he was feeling at the recent death of Zélie's child (Foy, F., 1840a), apparently Prosper Foy's most recent child with her. Florville goes on at length about how much the child was loved and how inconsolable Zélie was because of the loss, and he adds that the situation is made more difficult by the fact that his mother regularly sees Julia (Prosper's other love interest) with her child (Foy, F., 1840a). Florville signs the letter, finally, "*Je suis avec le plus grande respect et la plus grande soumission votre devoue fils Florville Foy.*" [I am with the greatest respect and the greatest submission your devoted son Florville Foy.] (Foy, F., 1840a). The letter shows the distant respect toward his father that was probably typical of the era, but also with an attempt to connect with his father on an emotional level. The letter is also beautifully written in French and shows that Prosper must have provided in some way for his children's education. That is also suggested by a receipt among Prosper Foy's papers dated May 11, 1834 reflecting a payment of \$2.50 that was owed by "M. Zélie" for "*1 mois de classe de florville*" [one month of class for Florville] (*M. Zélie a Légassie* [receipt], 1834). The 1850 Census shows that ten years after he wrote the letter to his father, Florville was working in his father's profession, as a "marble cutter," in New Orleans. He was married and lived in a \$5000 house that he owned (U. S. Census Bureau, 1850b). Florville is indicated to be "mulatto" in this census and was living in a mixed-race neighborhood. His wife's race was not indicated, meaning that she was likely either white or a light-skinned woman of African descent.

Prosper maintained a close relationship with his son, Florville, throughout his life. Prosper Foy was a marble cutter and sculptor and sent Florville to France to learn the same trade and helped get him started in the business, which included designing the large decorative marble

tombs in Louisiana’s cemeteries (Gehman, 2000, p. 221). Even today, several of the tombs in St. Louis Cemetery No. 1, just outside of the French Quarter, bear Florville Foy’s engraved signature, “FLORVILLE” on the bottom. The tombs have engraved inscriptions, but also sometimes intricate designs carved by Florville in marble.

One letter from Florville to his father shows that he looked to his father for guidance and support. Florville wrote to Prosper about an engraving he was doing for a customer and asked his father to check it according to the rules of orthography, and especially paying attention to rules of capitalization (Prosper, F. [letter from Florville Foy to Prosper Foy], 1841). Florville Foy surpassed his father and had a highly successful career, designing tombs, statues, and memorials all over the South from the “beehive of activity” in his large workshop on Rampart Street in New Orleans (“Florville Foy, the oldest marble cutter . . .,” 1903). Prosper Foy lived with Florville at least part of the time in the apartment above his workshop (“Florville Foy, the oldest marble cutter . . .,” 1903). When Prosper Foy died, he must have left the bulk of his estate to his son because while Florville Foy had a comfortable \$5000 in property in the 1850 Census, he became much wealthier after Prosper Foy’s death. An undated record of property ownership collected by the Freedmen’s Bureau after the war shows that Florville owned three connected properties on Rampart Street (which included his workshop) as well as twelve other properties, plus carriages, horses, and \$1500 cash – for a combined net worth of \$39,550<sup>8</sup> (Records of the Education Division of the Bureau of Refugees, Freedmen, and Abandoned Lands, 1865-1872). Prosper Foy’s relationship with his black son—in which he supported him financially, sent him to France for his education, and left him his estate when he died—was not atypical among father-son relationships produced by *plaçage* (Gehman, 2000, pp. 212-213).

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<sup>8</sup> At a conservative estimate of 2% annual inflation, Foy’s net worth would be approximately \$440,000 in 2019 dollars.

**Rose Foy's (1829 – 1897) relationship with her father, Prosper Foy.** Zélie Aubry and Prosper Foy also later had a daughter, Rose Foy, who was born around 1830. Rose was the couple's youngest child who survived infancy, and she was E. J. Edmunds' mother.<sup>9</sup> There are documents reflecting Rose Foy's relationship with her father. She is mentioned in letters by Florville to their father, and it is known from these letters that Rose spent at least some time at the St. James Parish plantation with her father. Florville wrote to Prosper Foy on September 19, 1840, for example, when Rose was approximately eleven years old, that he had received the letter from his "*bonne petite soeur*" [good little sister] and that she was enjoying the country—implying that she was staying with Prosper there (Foy, F., 1840b). In another letter from Florville to his father, he asked Prosper to send "*la petit domestique de Rosa*" [Rose's little domestic (slave)] to New Orleans to comfort Zélie after the loss of her baby, suggesting also that Rose, and perhaps Zélie too, had been to the country and spent time with one particular slave (Foy, F., 1840a). Another letter from Florville to Prosper dated Jul 5, 1841, signs off by saying that "*maman et Rosa*" [Mama and Rose] wish you many good things, implying that this time Rose was in New Orleans with him and their mother (Foy, F., 1841).

A letter from Rose Foy to her father on November 21, 1844 shows her personal ties to her father and makes it clear how much she cared for him. The letter is not as subtle and mature as the letters from Florville; she was only fifteen at the time she wrote it. Rose writes, "*Mon cher Papa, D'ou vient votre retard qui m'inquiète tante – il arrivé quelque malheur ou êtes-vous malade?*" [My dear Papa, What has caused your delay, which worries me so – has some

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<sup>9</sup> It is known from E. J. Edmunds' birth record that his mother was named Rose Euphémie Foy Edmunds (*Edmunds, Edgar Joseph* [birth record], 1851/1868). At least three documents connect Rose Foy Edmunds to Prosper Foy's family: Two obituaries of her older brother, Florville Foy, and the will of her older sister, Marguerite Foy, each mention the Edmunds side of the family ("Florville Foy dead," 1903; "Florville Foy, the oldest marble cutter. . .," 1903; *Foy, Elina MF* [will], 1892).

misfortune happened to you or are you sick?]) (Foy, R., 1844). The letter continues, asking why Prosper has not let his family let them know where he is and begging for some news. Rose signs the letter, “*Votre très-obéissante fille, Rosa Foy*” [Your very obedient daughter, Rose Foy] (Foy, R., 1844).

The 1850 Census shows that six years later, when Rose was nineteen years old, she was married to twenty-six-year-old Edgar Edmunds, E. J. Edmunds’ father, who was then working as a clerk (U. S. Census Bureau, 1850c, p. 150). The couple lived in French-speaking Tremé between two “mulatto” households. The Edmunds couple had two boarders living with them, a young married couple. Rose Foy’s first child, E. J. Edmunds, would be born the next year. Rose lived close to her mother and siblings, and likely remained close to them as E. J. Edmunds was growing up. Rose’s mother, Zélie, lived on Villere Street near Kerlerec (Edwards, 1870, p. 230) until her death in 1870, when E. J. Edmunds was nineteen. This was only a few blocks from the Edmunds’ house. Rose’s older sister, Marguerite, lived on Rampart Street near Esplanade, about six blocks from the Edmunds’ house (Edwards, 1870, p. 230; Foy, *Elina M F* [will], 1892). Rose’s brother, Florville, lived on Rampart Street near Conti, about a mile away (Records of the Education Division of the Bureau of Refugees, Freedmen, and Abandoned Lands, 1865-1872).

**Another word about the Foys and slavery.** The evidence of Prosper Foy’s relationship with his bi-racial children indicates how complicated the issue of race was in Edmunds’ background and how complicated racial relations were in general in New Orleans before the war. It is known, as discussed above, that Rose Foy’s family – both her father and her mother – held slaves when she was growing up. While Rose did not hold slaves as an adult, her brother, Florville Foy, did, and his relationship with one of those slaves, Jules, was long and paradoxical. Florville’s obituary says that Jules, Florville Foy’s former slave whom he purchased when Jules

was a child,<sup>10</sup> lived with him until 1903 when Florville died (“Florville Foy, the oldest marble cutter . . .,” 1903). When Jules got married in 1897, Florville was listed as Jules’ father on the marriage license, and Rose Foy was listed as his mother (*Foy, Jules* [marriage license], 1897). Allowing Jules to list the Foy siblings as his parents would have given Jules a connection that he did not otherwise have to an established, respected New Orleans family. By the time Florville died, he had become locally famous, respected, and wealthy (“Florville Foy’s sale,” 1903; “Florville Foy dead,” 1903), and he left part of his estate to Jules (“Florville Foy, the oldest marble cutter . . .,” 1903; “Real estate transfers,” 1903). Florville’s closeness to Jules is perhaps best reflected in the 1900 Census. Florville was seventy years old at this point, nearing the end of his life. He was living alone with Jules, Jules’ wife (who was also black), and their five children, all under seven years old, on Rampart Street where Florville’s apartment and workshop were located (U. S. Census Bureau, 1900, p. 16). The seven members of Jules’ family had taken the name “Foy” as a surname, and they were all listed as family members of Florville Foy. This time Jules was listed as Florville’s “brother” (U. S. Census Bureau, 1900, p. 16). In 1910, after Florville’s death, Jules was working as a marble cutter, the Foy family profession, and lived with his wife and seven children, two of whom were named after Florville’s sisters – Pauline and Rosa Foy (U. S. Census Bureau, 1910, p. 23).

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<sup>10</sup> It is possible that Florville fathered Jules with a slave woman and then purchased him to secure his future, which would explain why Jules was treated as family.



## **Chapter 4: The Pre-College Education of E. J. Edmunds**

This chapter explores how E. J. Edmunds, as a person of color who was not permitted to attend public schools as a child, was educated and ultimately how he was able to prepare himself, in spite of the obstacles, to enter the most prestigious school of mathematics and science in the world at the time. The chapter examines the few pieces of direct evidence that are available concerning Edmunds' education but also seeks to place those pieces in a larger context based on a web of circumstantial evidence of how children, and how free black children in particular, were educated in New Orleans before and during the war. Understanding how Edmunds' education fits in the larger picture of the education of the Afro-Creole community helps to make sense of Edmunds' improbable admission to the *École Polytechnique* and, in turn, expands current knowledge about the education of black people in this historically important time and place.

### **4.1 School Attendance in New Orleans Before the War**

E. J. Edmunds, like many children living in New Orleans at the time, probably did not attend school as a child. The 1860 Census provides various pieces of information about the individuals listed in it, including their age and whether they attended school in the past year. The census taker who visited the Edmunds household on July 5, 1860 recorded that nine-year-old E. J. Edmunds did not attend school that year (U. S. Census Bureau, 1860b). The census taker visited seventy-three school-aged children (ages five to seventeen) altogether that day in his visits to houses in the neighborhood, and of those children, only twelve (or about sixteen percent of the children) were recorded as having attended school. Census data are notoriously inaccurate, and it is possible that some children were in school even though it was not recorded. However,

the census record shows that even within a family with multiple children, sometimes only one was recorded as having attended school. Either way, it certainly appears that it was not the norm for children in this neighborhood to attend school in 1860, and there is additional evidence that school attendance generally was low at this time.

By 1860, New Orleans did have a system of public schools, but it was still developing, and at this point it was open only to white children. A 1860 report cited in DeVore and Lodgson's *Crescent City Schools* (1991) shows that the daily average school attendance across the four public school districts of the city was 10,662 in 1859 (p. 38) when the city's free population of children would have been at least 40,000.<sup>11</sup> Similarly, the State Superintendent's 1861 report to the state legislature recorded that in New Orleans' Second District, which was the school district for the French-speaking part of the city, 3,073 students attended twelve public schools that year and 6,496 children were "not attending" (*Annual report of the State Superintendent*, 1861).<sup>12</sup>

In addition to the public schools, there were privately funded schools in New Orleans before the war, but the schools were small and must have educated only a small percentage of the city's children. The 1861 city directory includes a few parochial schools and charity schools, a few private schools, and numerous small schools that appear to be run by single individuals or small teaching teams (e.g., "Mrs. C. Roaldes' female school," "Miss Quemper's school," "John Bercelot's school," "Mrs. M. E. Williams' school," "Mrs. Milliet's school," etc.) (Gardner,

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<sup>11</sup> According to the 1860 Census, the free population of New Orleans in 1860 was 160,007 (Kennedy, 1860, p. 262). 47,464 of those were children from five to nineteen years old (Kennedy, 1860, p. 190).

<sup>12</sup> A discussion in one of the city's school board meetings from 1875 explains the reluctance of the city's parents to send their children to school, especially the poorest. The board attributed absences to the city's heavy rains and outbreaks of smallpox. Additionally, many parents could not afford to purchase the necessary books and kept their children home to spare their embarrassment. Even among those who did attend school, approximately half did not have books, which was not surprisingly "a great obstacle to the attainment of a successful result in their work" (*Orleans Parish School Board Minutes*, 1875 to 1877, p. 16).

1861). In one case, a single address on St. Claude Street contains two different “schools,” the “Miss Victoria Cruzat school” and the “Miss Eulalie Cruzat school,” suggesting that indeed these were individuals, perhaps sisters, working with students individually or in small groups. In other cases, a school shares an address with other residences or businesses, which again suggests that the schools were small. The “Arnaud, C. M., school,” for example, was located at 285 Bayou Road, the same address given for “Mahoney Cornelius, cotton marker” (Gardner, 1861, pp. 38, 299). The “J. M. H. Lafont school” was located at 53 Rampart Street, the same address listed as the residence of “Fournier Leonard” and “Holcer Virginia Mrs.” (Gardner, 1861, pp. 177, 228, 264).

In addition to the public, private, and parochial school options that were available (at least to white children) in pre-war New Orleans, some children—especially those from wealthy families—had their own private tutors. These private tutors would typically live with the family and teach the children all subjects. Table 2 shows the information that appeared in various wanted ads in 1860 and 1861, reflecting this practice. It is evident from these ads also that among wealthy people in New Orleans at this time, there was a high value placed on languages—English, foreign languages, and classical languages—and also in the arts.

**Table 2: A Sampling of Advertisements of and for Private Family Tutors in New Orleans Newspapers, 1860-1861**

Advertisement	Source
Advertisement by a tutor seeking a position: “Wanted—A superior English Mathematical and Classical Teacher, of long experience, wishes to teach a family or school in the city or country. He teaches all the English branches, Grammar, Arithmetic, Book-keeping, Globes, Composition, Elocution, Latin, Greek, &c.”	(“Wanted—A superior English Mathematical and Classical Teacher,” 1861)
Advertisement by a tutor seeking a position:	(“Wanted—A Young Gentleman,” 1860)

<p>“Wanted—A young gentleman, a graduate, who has been several years in Southern families as a Teacher, desires a situation either in a family or an institution, the former preferred. He is qualified to give instruction in all the customary English branches, Latin and Greek.”</p>	
<p>Advertisement by a family seeking a tutor:  “Teacher wanted—A middle-aged lady, to teach in a family in the country. She must be perfectly competent to impart all the branches of a thorough English education as well as music, painting, &amp;c.”</p>	<p>(“Teacher Wanted,” 1860)</p>
<p>Advertisement by a family seeking a tutor:  “Wanted Immediately—To teach in a private family, in the country, a Lady competent to complete the education of her pupils, skilled in music, painting and drawing, and preferred if she speaks the French language.”</p>	<p>(“Wanted Immediately,” 1860)</p>
<p>Advertisement by a tutor seeking a position:  “Wanted—To Planters—An accomplished Musician and English Scholar wishes to teach in a family or conduct in a school in the country. She will teach Drawing and Painting, if required.”</p>	<p>(“Wanted—To Planters,” 1861)</p>

Over all, the data and contextual evidence suggest that education was a luxury in pre-war New Orleans. People with the money to afford tuition, boarding, and private tutoring had their own options for educating their children, and while there were public schools, most children still did not attend them. This picture is consistent with the assessment of DeVore and Logsdon who explain why public education was slow to get started in New Orleans. New Orleans, having spent its early history outside of the Anglo-American culture, did not have the same democratic tradition of town schools on which a system of public education could be built, and “[w]ithout such historical foundation,” there was “opposition from local citizens who were deeply attached to the city’s feudal and elitist colonial traditions” (DeVore & Logsdon, 1991, p. 3). By the 1840s,

a system of public schools was finally launched, based on the model of Horace Mann in Massachusetts and “impose[d]” from the North on “an essentially foreign society” (DeVore & Logsdon, 1991, p. 3). While the city’s educational leaders were ultimately successful in establishing a system of universal education (at least for white students), it was a slow and uphill battle (DeVore & Logsdon, 1991, pp. 5-39).

#### **4.2 Schooling and Free People of Color Before the War**

As a person of color, E. J. Edmunds was not permitted to attend New Orleans public schools before the war. There was only one large, well-established school for black children in the city then, the *Société Catholique pour l’Instruction des Orphelins dans l’Indigence* [Catholic Society for the Instruction of Indigent Orphans], also called the “Couvent School,” which had opened in 1848 (Gardner, 1861, p. 236; DeVore and Logsdon, 1991, p. 42-43). In spite of its name, the school did permit children of color to attend as day students for a small fee. The students were mostly children of modest means, and while the administrators and teachers were dedicated and highly capable (Desdunes, 1973/1911, p. 21-24; Willey, 1866, p. 248), the academic level was probably that of a primary and grammar school, and certainly not a high school: an article from *Harper’s Magazine* from 1866 praised the school as having some pupils who “have mastered the principal rules in arithmetic, and progressed as far as square and cube roots” (Willey, 1866, p. 248).

The New Orleans city directory of 1861, the last directory printed before the war, lists no schools for black children, with the single exception of the Couvent school, referred to there as the “Institution for the Education of Colored Orphan Children” (Gardner, 1861, p. 236). Yet, it is

known that such schools existed.<sup>13</sup> Marcus Christian, a writer and poet who documented much of the nineteenth-century history of Louisiana's Afro-Creoles and newly freed people in an unpublished 1942 manuscript, gives pages of detail about the small, privately run schools that educated New Orleans' free blacks before the War (Christian, 1942). An article written by Nathan Willey in 1866 for *Harper's Magazine* called "Education of the Colored People of Louisiana," helps to explain why these schools were not listed in the 1861 directory. Willey wrote that Louisiana law forbade the education of black people and yet the practice was quietly tolerated. The community therefore organized private schools that were small enough to escape notice: "They are usually held in private houses, without any external appearance which would indicate that the building was used for educational purposes. In former times the greatest care was often taken to conceal this fact . . ." (Willey, 1866, p. 247). Willey claimed that in 1866 there were fifteen to twenty such schools in the city and remarked, "[T]he city government does no more condescend to notice them than it does the colored boot-blacks around Saint Charles Hotel" (Willey, 1866, p. 247). The city's neglect was a gift to the Afro-Creole community: "The consequence of this state of society has been, that in this city private schools for colored people have long existed and prospered" (Willey, 1866, p. 246). Given Willey's assessment that the schools were run in a way so as not to attract attention, it is not surprising that they were not listed in the city directory.

Marcus Christian gives details about the tutors who ran these small-scale schools. The tutors were almost universally male and were distinguished in other careers as poets, writers, musicians, and journalists, reflecting the high status of the teaching profession in the Afro-Creole

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<sup>13</sup> The Catholic Church also had a long history of educating free and enslaved blacks in New Orleans (Stern, 2018). While Catholic schools were an essential part of the free black community going back generations and may have laid the cultural groundwork for the private community schools (Christian, 1942), they would not have taught at the same academic level as the best private schools.

community. The tutors tended to have French surnames (such as Trévigne, Boguille, Thierry, Séjour, Lanusse, Garreux, Lepouzé) indicating their Creole heritage (Christian, 1942, Ch. 20, p. 11- 13). Another account comes from the memoir of Rodolphe Desdunes, who was born in pre-war New Orleans and gives portraits of his peers – all educated and accomplished members of the Afro-Creole community. Desdunes says very little about how these men were educated as children, but one clue he offers is in a paragraph about the poet Nelson Desbrosses: “Eminently respectable and popular among his confreres, like most of them he too received his education in private schools from conscientious teachers” (Desdunes, 1973/1911, p. 52). Desdunes speaks at length about one particular teacher, Paul Trévigne (b. 1825), who was also a poet and a newspaper editor. Desdunes says that Trévigne practiced the teaching profession “for forty years in the Third District of New Orleans” (Desdunes, 1973/1911, p. 66). Desdunes also mentions three “professors of renown” who were “figures of the past” – François Escoffié, Séverin Lataure, and Léoni Monthieu – likely also private tutors since Desdunes does not mention a school in connection with these men (Desdunes, 1973/1911, p. 80).

As was typical, E. J. Edmunds himself came from a family of free people of color who had been well educated going back for generations. The members of Edmunds family were literate in English and French. Zélie Aubry was educated enough to hire a lawyer and bring a court case to manage her financial affairs; Florville Foy had sufficient education to run his business and manage his many properties; Edgar Edmunds had the educational background to travel widely and conduct business for his firm, and also to manage his personal financial affairs including a stock portfolio. The Edmunds and Foy families were typical among Afro-Creoles in that they were well educated and yet somehow were educated outside of the system that educated white children. An 1834 receipt among Prosper Foy’s papers offers evidence of Florville’s

schooling; it reflects a payment for “*1 mois de classe de florville*” [one month of class for Florville] (*M. Zélie a Légassie* [receipt for classes], 1834).

### **4.3 Evidence of E. J. Edmunds’ Early Schooling in Pre-War New Orleans**

While there is no direct evidence of how Edmunds was educated as a child, there is a considerable amount of circumstantial evidence. It is clear that his situation – receiving a high level of education outside of a formal school – was not unusual for a free child of color growing up in New Orleans at the time. The Afro-Creole community was intellectually vibrant and well-connected, and they managed to educate their children outside of the system that existed for white children, probably through an informal system of small schools run out of homes and private tutors. Because Edmunds was not enrolled in school at nine years old, he was likely educated informally through tutors, as other accomplished members of his community had been. And given his family background and his later accomplishments, he must have been very highly educated.

Edmunds would have been educated primarily in French, since that was his first language. As explained in Chapter 2, according to Karen Parshall and David Rowe in their book, *The Emergence of the American Mathematical Research Community 1876 - 1900*, the United States’ progress in mathematics and in mathematics education was slow because of our cultural dependence on Great Britain, which itself “had fallen out of step in science and mathematics” (Parshall & Rowe, 1991, p. 4). In the nineteenth century, France was the most advanced and most innovative country in the world in mathematics and had a superior system of education. For most of the century Britain and the United States were trying to catch up, in part by using English translations of French textbooks (Parshall & Rowe, 1991, pp. 13-14). Edmunds’ grandfather had French mathematics texts in his library (Foy, R. P. [list of books], n.d. [a]), and



it seems likely that Edmunds, too, would have learned from French texts. Ironically, it may have been his exclusion from the city's white schools that gave Edmunds his best opportunity to study mathematics at such a high level.

#### **4.4 The Edmunds Siblings Enroll in Public School as Integration Quietly Begins**

In 1861, when Edmunds was ten years old, the Civil War began. It is difficult to trace the Edmunds family history during the war because there would be no census for ten more years, and the New Orleans city directory was not printed during the war. The next information about Edmunds' family comes from a set of newspaper stories from the period 1867 to 1872, which indicate that the Edmunds siblings attended New Orleans public schools in this period. In New Orleans at this time, it was typical for newspaper journalists to visit public schools at the end of the school year and to report on the end-of-year ceremonies, the appearance of the schools, and the progress of the students, and there are several mentions of the Edmunds children in these stories. On June 20, 1867, New Orleans' *Daily Picayune* reported on the Fillmore School, which was attended that year by fourteen-year-old Arnold Edmunds, E. J. Edmunds' younger brother ("Public school examination," 1867).

The Fillmore School was an all-boys, grammar school, roughly equivalent to today's middle schools or junior high schools. The school was nominally a school for white children only. The school was located on Bagatelle Street (now Pauger Street) between St. Claude and Marais Streets ("Notice / Close of the annual session . . .", 1871), in the neighboring Marigny, about ten minutes' walk from the Edmunds' house. The school was described as "one of the best schools in the city," and Arnold was ranked second in the school based on a system that scored his "scholarship" and his "conduct" ("Public school examination," 1867). Arnold would stay at the Fillmore School at least another year, when he was identified as the top student at the school

(“Public school examinations,” 1868). At some point, probably fall 1868, Arnold started at Central High School, considered the best school in the city, and the same school where his brother, E. J. Edmunds, would later be appointed to teach in 1875. Arnold received academic honors (“Public school exhibitions,” 1871b) and praise for his oratory skills, including an “extremely commendable” rendition of a speech from Aaron Burr’s trial (“Commencement exercises,” 1871). Arnold would graduate in 1872 (“The Central High School,” 1872) and later work with his father as a clerk and then a bookkeeper at the dry goods wholesaler (Soards, 1890, p. 331; Soards, 1895, p. 309).

It is notable that there is a record of Arnold Edmunds at the Fillmore School as early as the 1866-1867 school year. The new Louisiana Constitution of 1868 with its Article 135 school integration clause was not yet ratified when Arnold Edmunds enrolled at Fillmore, and formal desegregation would not begin until the middle of the 1870-1871 school year—more than three years after his enrollment. In fact, in the aftermath of the war, there was strong opposition to any kind of public-funded education for black people in Louisiana, even in separate schools (*see, e.g.,* “The freedmen of Louisiana,” 1866; “The education of the freedmen,” 1866), and Arnold Edmunds enrolled at the all-white Fillmore School even before the first segregated public schools for black students were established. The New Orleans city directory explains how the city averted the threat of school integration in 1867—in barely coded language—and shows the mood of the city at the time on racial integration:

Our public school system came near receiving a serious, if not mortal blow last September; but fortunately, the counsels of the wise prevailed, and separate schools for the education of colored children were organized, a fund being set apart for this purpose.

(Gardner, 1868, p. 10). It is not clear how Arnold Edmunds was able to attend public school as early as September 1867. It is possible that he was one of the small number of light-skinned

black students who were able to attend public schools by passing as white. That possibility seems unlikely, though. New Orleans neighborhoods and communities were small enough that people knew each other, their families, and their backgrounds. Also, while Arnold was mixed-race, he was visibly of African descent – he was marked as “mulatto,” for example, in the 1870 census (U.S. Census Bureau 1870). It seems likely that the administrators and teachers at the Fillmore School knew that Arnold was of African descent.

Arnold’s enrollment in the Fillmore School may have been part of a quiet effort to integrate schools, student by student – initiated by parents and permitted by educators, even though the legislation that would help their efforts was not yet in place. A newspaper article from later, after formal integration began, is consistent with that theory because teachers at that time claimed that black students had already been attending the schools for some time. The journalist stated, “[f]rom conversations we have had with several public school teachers, it appears that the mixing of the public schools has silently and gradually been going on . . .” (“Mixed schools,” 1871). If this is so, the movement to integrate the schools began years earlier than the 1870 – 1871 date reported by other scholars (Blassingame, 1973, Chap. 5;<sup>14</sup> DeVore & Logsdon, 1991, pp. 69-70; Harlan, 1962, p. 675; Mitchell, 2008, p. 216; Stern, 2018, Chap. 5; Vaughn, 1974, p. 89), and the Edmunds were part of the movement.

Edmunds’ younger sister, Olivia, also attended a public school very early, before formal integration began. It is known that she was attending the historically white Bayou Road Girls School in 1868, in the same spring that the 1868 constitution was drafted, because Olivia Edmunds was one of twenty-eight students who were “outed” by classmates as students of color

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<sup>14</sup> Blassingame says that school integration began with its official inauguration in the fall of 1869. This date appears to be a mistake, but either way, Blassingame is in line with other scholars in saying that integration began with official action and not, as the present study shows, with quiet, student-by-student enrollment.

in May 1868, causing the city school superintendent, William O. Rogers, to initiate an investigation (Mitchell, 2008, pp. 215-216). The principal, Stephanie Bigot, claimed that she had no knowledge that the students were black, and the school board eventually cleared her of wrongdoing (“Board of school directors,” 1868). The circumstantial evidence shows that Bigot, at a minimum, had reason to know that she was admitting students of color, and likely even that the Afro-Creole community sent their girls to the Bayou Road School because they knew she was an ally and supported integrated schools.

Stephanie Bigot was not young or naïve; she had been working in the New Orleans public school system almost since its beginning and was an esteemed principal of a well-run school. In an article about the school’s end-of-year exercises, the *New Orleans Crescent* described her as an “eminently qualified lady” who had worked at many of the city’s principal schools (“Public school examinations,” 1868). The article commented that she had been teaching for so long that she had even taught some of the mothers of her present pupils. If the students who reported the girls knew that such a large percentage of the pupils were of African descent (about fourteen percent of the school), then Stephanie Bigot, too, must have been aware.

In the course of the investigation, the school board recorded that some of the twenty-eight girls at issue were very light in complexion, but others were darker, and that Bigot allowed them the girls to enter the school without further questioning because they were enrolled by white persons “professing to be their parents” who represented them as white (“Local intelligence,” 1868; “Board of school directors,” 1868). The board also determined that some of the students on the list had been at the school for as long as five years (“Local intelligence,” 1868; “Board of school directors,” 1868). Since Bigot could easily have asked for birth certificates of the students who enrolled, it seems she had no desire to enforce the school board’s segregation policy. Bigot

also had the support of local, second-district school officials in enrolling girls of color. When the issue of black students at the Bayou Road School was initially called to the attention of the school board, the board sent a local delegation from the second district to investigate. The delegation came back to report to the committee that there was no problem, causing the school board to accuse the delegation of “wink[ing] at the fact that colored students had been received in schools in that section of the city” (“Board of school directors,” 1868). It appears from the circumstances of the Bayou Road case that the black community had initiated a quiet, subversive movement to mix the schools even as the school board fought back, and that their efforts were facilitated by school officials and members of the community.

In response to the school board’s investigation, the twenty-eight Bayou Road students “charged with being black” were required to produce proof of their all-white lineage (“Board of school directors,” 1868). Some students produced satisfactory documents, as did Olivia Edmunds; others could not or did not and were ordered to leave the school (“Board of school directors,” 1868). An interesting twist to this story is that Olivia’s family filed a new birth certificate for her on May 26, 1868, removing the racial designations that were on the earlier document.<sup>15</sup> The new certificate was filed during the school board’s investigation and must have been for purposes of providing “proof” that she was white. Of course, this racial scrubbing of the birth certificate could not have been done without the knowledge and help of a state clerk. The clerk who signed Olivia’s new birth certificate was himself, according to some real estate records, designated as a free person of color before the War.<sup>16</sup> The board must have accepted

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<sup>15</sup> The records of the Louisiana Secretary of State have two birth certificates for Olivia Edmunds. The first, when Olivia was five years old, listed her father, Edgar Edmunds as a “free man of color” and her mother, Rose Euphémie Foy as a “free woman of color” *Edmunds, Olivia* [birth record], 1859/1864. The new certificate, filed on May 26, 1868, listed Olivia’s parents without the racial designations. *Edmunds, Olivia* [birth record], 1859/1868.

<sup>16</sup> The “duly commissioned and sworn recorder of births and deaths” who signed Olivia Edmunds’ 1868 birth certificate was Severin Latorre, who was indicated as a “f.m.c.” in several real-estate transfer records from before

Olivia's birth certificate as proof of her white heritage because it is known that Olivia stayed and graduated from the school.

Two years later, in the 1869-1870 school year, Olivia was recorded again as a student at the Bayou Road Girls School, doing a recitation entitled "Washington's Name" at the end-of-year exercises ("Our public schools," 1870). Olivia was not the only child of color that year because that same year a journalist from the *Daily Picayune* made note of the strangeness of seeing black children at the school:

We must confess that we were greatly astonished in finding these colored children occupying seats alongside of white children. We are, however, informed that they have been attending this school for some time, without meeting opposition from any quarters.

("Our public schools," 1870). It is apparent from the quote that multiple children who were visibly of African descent were at the school and that the school was attempting to protect its black students from nosey reporters. Stephanie Bigot was still the principal of the school that year ("Our public schools," 1870), and the fact that she was still enrolling black students two years after being made to answer to the city school board for this charge confirms that it was done purposefully.

E. J. Edmunds, like his younger brother, attended the Fillmore School. Two newspaper stories named E. J. Edmunds in June 1871 as one of twelve Fillmore boys who were "most distinguished at examination" at the Fillmore School ("Public school exhibitions," 1871a; "Our public schools," 1871). Edmunds likely attended the school for at least two years because there is a mention of a student named "Master Edmunds" participating in the end-of-year exercises the prior school year, in June 1870 ("The school examination," 1870). Also, Edmunds, like his sister,

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the War, including one for the purchase of a house on Burgundy Street in the French Quarter on October 2, 1832 (Chain of title for 1227-1231 Burgundy, 1832).

had a new birth certificate filed in May 1868 with the racial designations removed, when Edmunds was already seventeen years old, (*Edmunds, Edgar Joseph* [birth record], 1851/1868). This was likely done for the same reason Edmunds' parents re-filed Olivia's birth certificate – so he could attend “white” public schools. While it is unclear how early he entered Fillmore, like his siblings, E. J. Edmunds seems to have entered a “white” public school before integration formally began.

Recall that the Fillmore School was a grammar school, not a high school. In nineteenth-century New Orleans, there were three different levels of school—primary, grammar, and high schools. Grammar schools were roughly equivalent to middle schools or junior high schools today because they were the gateways to high school. In 1870 the average age of the students graduating from the city's grammar schools was fourteen years (*Annual report of the State Superintendent*, 1872). The fact that Edmunds took his final examinations at the Fillmore School at the age of twenty is evidence that he did not attend a formal school of any kind before entering Fillmore. Presumably if he could have done so, he would instead have entered Central High School as his brother did rather than starting at Fillmore. Edmunds traveled to Paris in June 1871—the same month as his graduation from grammar school—to take (and pass) the entrance examination for the *École Polytechnique*. He must have been highly educated before he entered the Fillmore School, and it is hard to imagine what he expected to get out of attending the school. Perhaps he simply wanted to take advantage of the opportunity to attend a public school since that opportunity was not available to him as a child. Perhaps he intended to enter high school in New Orleans, and graduating from Fillmore was the only way to do that.

#### 4.5 School Integration Formally Begins as Edmunds Leaves for Paris

E. J. Edmunds' last year at the Fillmore School (the school year 1870-1871) was a highly significant year in the campaign for school integration. Article 135 of the Louisiana Constitution, forbidding racial segregation in schools, had been in place for two years at this point, and the State Superintendent of Education, Thomas Conway, was trying to move forward with integration. An array of political tactics and court battles had prevented him from taking control of the schools and integrating them, but December 1870, the court cases were finally resolved in Conway's favor, paving the way for bold action (Harlan, 1962, p. 665; "Infamy consummated," 1870; "The courts," 1870).

In January 1871, the first black students were admitted openly into New Orleans public schools. An article from the *Daily Picayune* published on January 12, 1871 explains the excitement and the anxiety over school integration. The newspaper writes:

There was considerable excitement among the public yesterday in consequence of some rumors that the question of admitting negro children into our public schools . . . Upon inquiries which we instituted at several of the public schools, the rumors proved to be true in so far as colored pupils had been admitted into two white schools as far as we could ascertain. . . . Grave fears are, however, entertained, now that the outrageous work has been inaugurated.

("Mixed schools," 1871). The same article reports that some schools were still turning black children away and that the state superintendent, determined to enforce the law, gave individual children written orders supporting their admission that he had personally signed to present to the schools when they arrived to enroll.

The two newspaper articles that mention Edmunds' graduation from Fillmore give some indication of the legal and political fighting behind the scenes as the schools were integrated that year. According to a contemporaneous *Daily Picayune* article, the Bienville School lost "nearly half" of the white students when black students were introduced, and the Claiborne School lost



one-fourth of its students (“Our public schools,” 1871). What the paper does not say explicitly is that while white students may have left, many stayed, and these schools operated for a brief time as integrated schools. Even the *Daily Picayune*, a pro-segregation paper, admits that integration was successful at the Robertson School; while “the colored mixture ha[d] been forced in[to]” the Robertson School (next door to the Bienville School), there was no “ill effect” from the introduction of black students, the school was “flourishing,” and its rolls were expanding compared to a year earlier (“Our public schools,” 1871). In spite of the law, and in spite of the school superintendent’s support for integration, some schools continued to operate as “colored” schools. The *Daily Picayune* describes the “colored” schools of the district and gives the impression that students were eager to get an education but were working under difficult conditions. The Customhouse School for black boys and girls, for example, had students that were “nearly grown men,” no doubt eager to take advantage of this opportunity that had been denied to them before (“Our public schools,” 1871).

The Fillmore School, partially integrated in 1871 with its “sprinkling of colored children” (“Our public schools,” 1871), was considered a good school by the standards of the time. The Fillmore School had a male principal and nine female teachers, teaching approximately 376 students altogether (“Public school exhibitions,” 1871a; “Our public schools,” 1871). In 1867 a visiting journalist reported that the students at the school studied “grammar, writing, arithmetic, history, geography, [and] the drawing of maps” (“Public school examination,” 1867). Since it was not a high school, of course, there was no mention of algebra, geometry, or any other higher courses in mathematics. The journalist who visited the school in 1868 remarked on the students’ “beyond ordinary” proficiency in grammar, he praised the “skillful penmanship” of one boy of

“only fifteen years old” who had drawn a map, and he noted the penmanship and elocution of other students (“Public school examinations,” 1868).

#### 4.6 Mathematics Education in New Orleans’ Public Schools in 1871

While Edmunds was at the Fillmore School, he would have studied arithmetic, and in December 1870, his final school year at Fillmore, he would have taken an examination to determine whether he would be promoted to high school (*Annual report of the State Superintendent, 1872*, pp. 339-341). The examination included arithmetic, English grammar, geography, U. S. history, and orthography. The arithmetic portion of the exam Edmunds would have taken in December 1870 is shown below (*Annual report of the State Superintendent, 1872*, p. 339). The exam involved straightforward, but difficult, arithmetic problems, such as subtracting a half inch from three-fifths of a mile and finding the square root of a six-digit number. (It is not clear how much time students had to take the exam.)

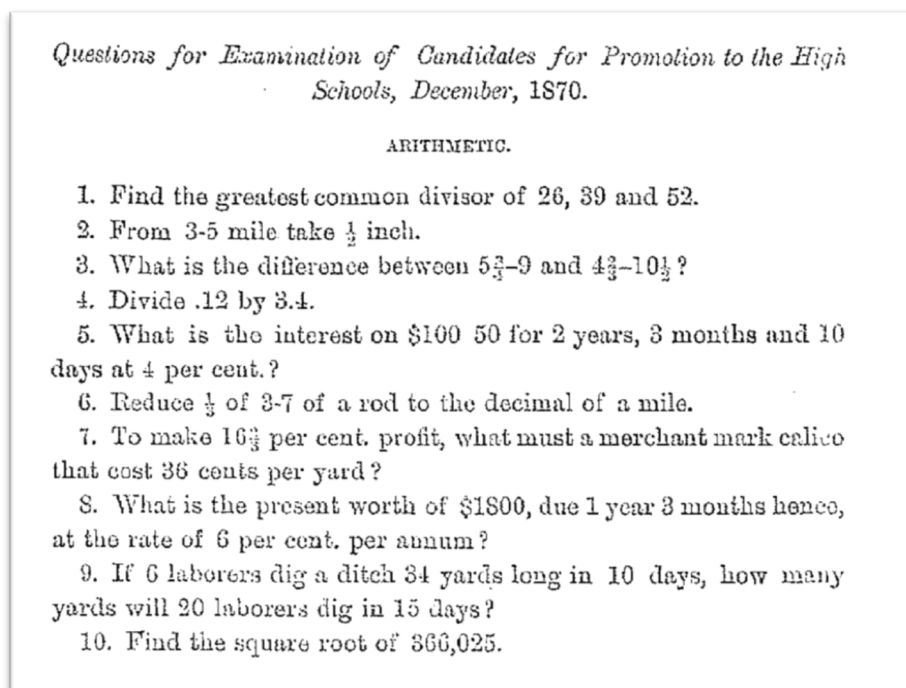


Figure 3: Entrance Examination for New Orleans High Schools, 1870

While Edmunds never attended high school in New Orleans, it is also useful to think about the level of mathematics education that was available to those who did have the opportunity to attend the city's public high schools. As a preliminary matter, it must be remembered that in the 1870's in New Orleans, few students entered, much less graduated, from high school. As the superintendent of education explained in his report, "the scholastic training of the great majority of youth who attend public schools begins and terminates" in the "primary and grammar departments" of its district schools (*Annual report of the State Superintendent*, 1872, p. 295). The "higher institutions of learning" (meaning high school and college) "are only within the reach of a few" (*Annual report of the State Superintendent*, 1872, p. 295). The city's best high school and only public high school for boys at the time was Boys Central High School. In 1870, 124 boys tested into the school (*Annual report of the State Superintendent*, 1872, p. 342). The school graduated only six students in 1870 and eleven students in 1871 (*Annual report of the State Superintendent*, 1872, p. 296).

In 1870 and 1871, the New Orleans school board approved Horatio Robinson's series of mathematics books for use in the city's public schools ("State Board of Education," 1870; "City School Board," 1871). Horatio Nelson Robinson (1806 – 1867) was a mathematical prodigy who grew up in Hartwick, New York (Wilson & Fiske, 1900, p. 286). He was educated at Princeton and worked as a mathematics teacher, first in the United States Navy and then in private schools in small towns in upstate New York (p. 286). Over the course of twenty years, Robinson wrote a series of mathematics texts, which were used in schools and colleges all over the United States (p. 286).<sup>17</sup> Robinson published his series of mathematical textbooks beginning in 1847, when the

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<sup>17</sup> Robinson was not the earliest mathematics textbook author nor the most prolific or popular. The most significant American textbook author of the nineteenth century was Charles Davies, who began his career at The United States Military Academy at West Point. From 1826 to 1876, Davies published mathematics textbooks covering a range of

mass publication techniques that made textbooks a common classroom tool were still relatively new (Kidwell, 2008, p. 4). In the early nineteenth-century United States when textbooks were relatively expensive, only the teacher would own and use the textbook for the entire class (Kidwell, 2008, p. 5). Students would write out sections of the textbook in their cipher- or copybooks, a practice consistent with the general philosophy of mathematics education at the time that mathematical habits were built by having students memorize and then recite sections of the book rather than working through practice problems (Kidwell, 2008, p. 5). Even when it became common for students to each have their own mathematics textbooks, it would take time for this philosophy of learning through memorization to change. It was standard for American mathematics textbooks in the early nineteenth century to present the steps for solving each kind of problem without giving the students sets of practice problems (Kidwell, 2008, pp. 8-9). As will be discussed in further detail below, artifacts of this old philosophy of education are evident in Robinson's books.

The Robinson series approved in 1871 for use in the New Orleans Public Schools included the following mathematics titles:

*Robinson's Progressive Table Book*

*Robinson's Progressive Primary Arithmetic*

*Robinson's Progressive Intellectual Arithmetic*

*Robinson's First Lessons in Mental and Written Arithmetic*

*Robinson's Rudiments of Written Arithmetic*

*Robinson's Progressive Practical Arithmetic*

*Robinson's Progressive Higher Arithmetic*

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topics from elementary arithmetic to calculus (Kidwell, 2008, p. 11), and his series was so widely used that it became the de facto national standard (Kidwell, 2008, p. 4).

*Robinson's New Elementary Algebra*

*Robinson's New University Algebra*

*Robinson's New Geometry and Trigonometry*

*Robinson's New Surveying and Navigation*

("City School Board," 1871). Additionally, there were some science textbooks in use on Physiology, Astronomy, Chemistry, and Geology as well as a book called *How Plants Grow* ("City School Board," 1871). There was no physics textbook on the list. Also, while the Robinson series included *Robinson's Analytic Geometry and Conic Sections* and *Robinson's Differential and Integral Calculus* (Robinson, 1868, p. ii), neither of those books was included in the list of books adopted by the school board for use in New Orleans public schools.

Robinson's *New University Algebra* was among the most advanced mathematics books in use in New Orleans public schools at that time. Because so few students made it to their fourth year of high school, it was probably used by only by a small number of students in New Orleans every year, and yet it serves as a useful benchmark of the highest level of pre-college mathematics education available to New Orleans' best public-school students at the time. Robinson's *New University Algebra* begins with definitions and an introduction to basic notation (pp. 9-18) and then moves on to elementary topics in algebra such as evaluating simple algebraic expressions (Robinson, 1868, p. 17) and combining "like terms" (p. 20-21). Some of the more sophisticated topics covered in the book are (1) using various methods for solving quadratic equations, and interpreting the results, (2) arithmetic and geometric progressions, (3) the binomial formula, (4) expanding a rational expression into an infinite series by division, and finding the sum of an infinite series, (5) computations with logarithms, and (6) properties of equations and their roots, including imaginary roots (Robinson, 1868).

While Robinson's *New University Algebra* book dealt with topics that were sophisticated and challenging, the tendency was to present them as a series of rules to be memorized with little explanation. The binomial expansion, for example, is presented as a complex set of rules for calculating coefficients, and no effort is made to relate the formula to an earlier section on combinations and permutations, which would have given students a deeper understanding and would have relieved them of the burden of memorizing the rules. The chapter on arithmetic progressions gives students a table of twenty separate formulas to memorize, depending on which quantities are given and which are missing, even though one formula could easily be derived from another (p. 290). The pedagogical approach – presenting mathematics as a series of rules to be memorized – is consistent with the early nineteenth-century American approach described by various scholars including Florian Cajori in *The Teaching and History of Mathematics in the United States* (1890, p. 49) and Kidwell, et al. in *Tools of American Mathematics Teaching, 1800-2000* (2008, p. 5-6). Robinson explained the approach explicitly in the preface: “[T]o the student of Mathematics, labor rightly directed, is discipline,—and discipline, after all, is the true end of education” (p. iv).

*Robinson's New Geometry and Trigonometry*<sup>18</sup> has more basis in reasoning—beginning with axioms and using them to lay out proofs of theorems about parallel lines, triangles, circles. The book also addresses constructions with compass and straight-edge, the measurement of polygons and circles, and some topics in solid geometry (Robinson, 1867). The book is filled mostly with information and contains few practice problems. The first set of thirty-eight

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<sup>18</sup> Robinson published a geometry book in 1867 called *Robinson's Elements of Geometry and Plane and Spherical Trigonometry*, which is different in name from the *Robinson's New Geometry and Trigonometry* used in the New Orleans public schools in 1870. The 1870 text was not located, but 1867 textbook and the key to the 1870 textbook are available. Comparing the problems and page number references, it seems like the two books are virtually identical.

problems appears on page 143, and the next set of ten problems appears on page 229 (Robinson, 1862, p. 5, 18). The second half of the book introduces trigonometry. The focus is on using trigonometric formulas together with trigonometric tables to find missing angles and lengths in problems with polygons and circles (Robinson, 1867). The section on trigonometry does not conceptualize sine, cosine, and so forth as continuous functions of an angle, but rather as discrete lengths of segments constructed in a unit circle (Robinson, 1867, p. 245).

Importantly, none of the mathematics books on these lists of texts approved by the school board in these years addresses the topic of functions, and none uses coordinate geometry, topics that are crucial for studying mathematics at a more advanced level. Robinson's *New University Algebra* addresses the topic of limits indirectly, and it runs into difficulties because of the failure to lay down this conceptual foundation. Robinson's *New University Algebra* includes a section called "Nothing and Infinity," and discusses, among other topics, what happens to an expression of the form  $a/b$  where  $a$  remains constant and  $b$  "continually decreases" (Robinson, p. 135). Division by zero is of course undefined, and Robinson acknowledges at least some of the difficulty with the caveat that division "cannot really exist except between symbols of quantity" (Robinson, p. 135) but then presents the problematic rule,

When the denominator  $b$  becomes less than any assignable quantity, or 0, the value of the fraction must become greater than any assignable quantity, or  $\infty$ . Hence, . . .  
 $A / 0 = \infty$ . That is, *A finite quantity divided by zero is an expression for infinity.*

(Robinson, p. 136). Without laying down the conceptual framework to discuss this difficult and subtle issue in terms of a ratio of functions where one tends toward zero, Robinson runs into problems. Robinson clearly sees the landmines he is stepping around, and yet does not find a

way to avoid them and implies instead that division by zero is defined.<sup>19</sup> Over all, the mathematics education one could receive in a New Orleans public high school in 1871 was probably typical of a public high school education in other large cities of the United States in the late nineteenth century, but it was not equivalent to the standards of the better schools in France,<sup>20</sup> as will be explored in more detail in the next chapter.

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<sup>19</sup> It is also interesting that Robinson assumes without clarifying that the “finite quantity” in the numerator is non-zero, implying that zero is not really a number in the same way that, say, the number four is. This is consistent with his definition of zero, not as a value, but as “the absence of value” (Robinson, p. 135).

<sup>20</sup> “Most [American] colleges required only an understanding of arithmetic and only a bit of algebra and geometry for admission by the 1850s, and they taught from increasingly outmoded translations of eighteenth-century French works by writers like Davies. . . . [M]athematics remained suspended in time in the eighteenth century at many American colleges until well into the second half of the 1800s” (Parshall & Rowe, 1991, p. 20).



## Chapter 5: E. J. Edmunds at the *École Polytechnique* (1871 – 1873)

This chapter examines Edmunds’ relationship with the *École Polytechnique*, first as an applicant and then as a student. The details of the mathematical content of the entrance examination and the records of Edmunds’ scores on that exam together give an intimate picture of the state of Edmunds’ mathematical knowledge as a young man, just as he left New Orleans.

The same summer Edmunds graduated from the Fillmore School, 1871, he traveled to Paris where he took and passed the entrance exam to enter the *École Polytechnique*. A photograph from the *École Polytechnique* archives (Figure 4) shows Edmunds and some of his “Salle 8” [Room 8] classmates in their military uniforms (*Salle 8* [photograph], 1871). The records of the *École Polytechnique* also describe Edmunds’ physical appearance. He was described as having the following features: dark brown hair, an open face, a broad nose, brown eyes, a large mouth, a dimpled chin, a long face, and a height of 179 centimeters (*Edmunds, Edgar Joseph, fiche matricule* [registration card], 1871).<sup>21</sup>

### 5.1 The *École Polytechnique*

The *École Polytechnique* was the most prestigious school of mathematics and science in France and perhaps even the world in the nineteenth century. It was part of a network of French scientific institutions established and run by the government, which “fostered some of the most important mathematical achievements of the early nineteenth century” (Parshall, 1991, p. 6).

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<sup>21</sup> Edmunds’ school record gives other details about him that are consistent with the biographical information his birth record and in census records such as his birth date (January 26, 1851), his birth city (New Orleans), the names of his parents, “Edgard Ambroise” and “Rosa Éuphemie Foy” Edmunds, and his father’s profession as a businessman (*Edmunds, Edgar Joseph, fiche matricule* [registration card], 1871).

Florian Cajori described the *École Polytechnique* in 1890 as a “nurse of giants” and compared American mathematicians, by contrast, as “mere Liliputians” (Cajori, 1890, p. 98). Various renowned scientists and mathematicians attended the *École Polytechnique* with or close in time



**Figure 4: E. J. Edmunds at the *École Polytechnique*, (lower left, seated), circa 1871.  
@Collections *École Polytechnique* (Palaiseau, France).**

to Edmunds, including Nobel prize winning physicist Henri Becquerel (who entered in 1872), and mathematician Henri Poincaré (who entered in 1873) (*Becquerel, Antoine Henri, fiche matricule* [registration card] (1872); *Poincaré, Jules Henri, fiche matricule* [registration card] (1873)). And while the United States produced its first mathematics research journal in 1875, the

*École Polytechnique* had started publishing its journal, the *Journal de l'École Polytechnique*, eighty years earlier (Parshall & Rowe, p. 6).

The *École Polytechnique* was operated under the supervision of the French ministry of defense, and its stated purpose was to recruit and prepare students for all careers that require extensive knowledge in the mathematical, physical and chemical sciences, especially careers in the military and other types of public service (*Programme des connaissances*, 1889, p. 3; Belhoste, 2002, ¶ 2). Students would spend two years at the school studying primarily theoretical mathematics and science, after which they would be placed in one of the various Schools of Application (Council of the Institution of Civil Engineers, 1870, pp. 38-39, 56). Depending on their final rank, students might be placed in the *École des Ponts et Chaussées* [School of Bridges and Roads] or the *École des Mines* [School of Mines] to train become engineers for government works. Other students would study for work in the military in, for example, the *École d'Artillerie* [School of Artillery] (Council of the Institution of Civil Engineers, 1870, p. 28).

The only way to enter the *École Polytechnique* was by passing a set of entrance exams (*Programme des connaissances*, 1889, p. 4). As described in a nineteenth-century British publication, the entrance exam was “so extensive, and [was] carried into effect with such a degree of severity, that it ensure[d] the admission into the school of none but young men of considerable talent and application” (“State of the polytechnic school in Paris,” 1841, p. 230). The director of the *École de Mines* described in 1868 the exacting entrance requirements of the *École Polytechnique*:

About 120 to 150 are admitted per annum, out of a number of more than sextuple of candidates who present themselves. Five-sixths of these therefore find themselves excluded after three years of special study, at the end of numerous examinations which fatigue them extremely . . . .

(Council of the Institution of Civil Engineers, 1870, p. 31).

The mathematical and scientific content on the exam was advanced even for French students, and typically only those who went through the special mathematics program of the *lycées* or had been tutored for the exam would have been prepared. In theory the test was open to all, and the objective and uniform nature of the test was meant to make the whole system of recruitment into the civil service more democratic. However, in practice only those with the specific preparation for the exam would pass, and the exam therefore acted as a filter for social status as well as academic preparation (Belhoste, 2002, ¶ 26). Before a reform in 1855 required a high school diploma, many students would leave high school after the second or third year to enter costly private institutions that employed previous examiners of the *École Polytechnique* to train students specifically for the grueling oral exams (Belhoste, 2002, ¶ 44; Belhoste 2001, ¶¶ 19-32). After the 1855 reform, the *École Polytechnique* claimed to align its entrance exam with the “*programmes d’enseignement des classes de mathématiques spéciales des lycées*” [the curriculum of the special mathematics classes in the high schools] (*Programmes des connaissances*, 1862, p. 6), but the influence in reality went in the other direction. Because students coming out of the mathematical program at the *lycées* would typically all take the entrance exam, the *École Polytechnique* exerted an enormous influence on the mathematical curriculum of the *lycées*, and the special mathematics classes in the *lycées* were devoted almost entirely to preparation for the exam, including training for the oral exams (Belhoste, 2002, ¶¶ 40-42; Belhoste, 2001, ¶¶ 37;).

In addition to the special mathematics classes at the *lycées*, many students would take classes outside of school to prepare for the entrance exam at the *École Polytechnique* and at the other examination schools. As explained by a French civil engineer in 1868:

And in consequence of this principle of admission by competition, a number of colleges and private institutions (these latter conducted either by laymen or by religious fraternities, prepare bachelors of science and pupils for Government schools of all sorts. Public free lectures are given by the most eminent professors of the Sorbonne, the College de France, and the Arts et Méters. Also, public and free evening lectures designed especially for workmen, and established in all quarters of Paris under the patronage and control of the Minister of Public Instruction and of the town of Paris.

(Council of the Institution of Civil Engineers, p. 57).

To qualify to take the admissions exam, students were required to show, among other things, that they were no older than twenty years old on January 1 of the year of the exam and that they were French by birth or by naturalization (*Programmes des connaissances*, 1862, p. 4-5; *Programme des connaissances*, 1889, p. 8-9). Edmunds had turned twenty on January 26 that year, and so he was nearly too old to take the exam. It is unclear how Edmunds satisfied the requirement that he be a French citizen. Louisiana, of course, was no longer a French colony at that point. Edmunds' grandfather, Prosper Foy, was French, but his parents were both born in Louisiana. Someone who claimed to know him said that Edmunds was a naturalized French citizen, but it is unclear if that is true and if so, then how it happened ("People's column," 1875). The issue of Edmunds French citizenship would later become an issue when the pro-segregation press attacked Edmunds and suggested that he was lying about his attendance at the *École Polytechnique*. After 1855, students were also required to have a high-school diploma demonstrating their *bachelier ès sciences* or *bachelier ès lettres* or its equivalent (Belhoste, 2002, ¶ 33; *Programmes des connaissances*, 1862, p. 4; *Programme des connaissances*, 1889, p. 4-5). It is unclear how Edmunds satisfied this requirement since he had not started, much less graduated from, high school. It is possible that he presented his diploma from the Fillmore

School and that the *École Polytechnique* accepted the document, not knowing that it was a grammar school.

## 5.2 The Entrance Exam

The structure of the entrance exam of the *École Polytechnique* changed little between the mid-nineteenth century and the 1990s; it consisted of a set of written exams, and two stages of oral exams focusing mainly on mathematics, and to a lesser extent, science (Belhoste, 2002, ¶ 3). The first stage of the exam, the written portion, was given in various locations around the country in early summer and would take place a few days before the first oral examiners arrived (Belhoste, 2002, ¶ 19). After 1852, the written part of the exam included “compositions” on various topics including mathematics, descriptive geometry, French composition, and drawing. The questions and prompts for the written compositions were sent from Paris in envelopes sealed with wax and were opened in the presence of the candidates. Candidates were positioned in large rooms with at least a meter between them, and when the compositions were completed, they were collected and placed in an envelope, sealed with wax, and sent to Paris (Belhoste, 2002, ¶ 22). Each composition would take three to four hours to complete, and the whole set of compositions would take place over several days. The written compositions were corrected only for those students who pass the first stage of oral exams and, when Edmunds took the exam, were taken into account in a minor way only for the purpose of ranking students who passed the oral exams (Belhoste, 2002, ¶ 19-21).

The first set of oral exams (the “*petit oral*”) took place in multiple locations around the country after the written compositions were completed. The exam consisted of two questions on mathematics. It would take place before two examiners and lasted approximately forty-five minutes (Belhoste, 2002, ¶¶ 16-18). Insufficiently prepared candidates were eliminated at this

stage (Belhoste, 2002, ¶ 18). Students who passed the first stage of oral exams would travel to Paris later in the summer for the second stage of oral exams (the “*grand oral*”). When this structure of examination was set up in 1852, the *grand oral* lasted an hour and a half, and later was reduced to about fifty minutes. Once the exams were over, the results would be sent to an admissions panel, which would consolidate the results of the various parts of the exam into a single ranking. Before 1852 this process was somewhat arbitrary, but in 1852 a scoring system was established to give a specific coefficient of weight to each part of the exam (the compositions and the *grand oral*), and a formula that produced a single score for each student therefore would determine one’s rank (Belhoste, 2002, ¶ 37).

Edmunds was tested in 1871, and the exact structure of the exam that year can be inferred from his school records, which show the detailed results of his exams. Edmunds did the following written compositions in the first stage of his exam: a composition of descriptive geometry, a calculation of trigonometry/logarithms, a French composition, a pencil drawing, an India ink drawing, and a written exercise testing knowledge of the German language. Edmunds took and passed his first set of oral exams (in Paris) and then took the second set of oral exams in algebra, analytic geometry, arithmetic, geometry, trigonometry, physics, and chemistry (*Concours d’ admission en 1871, M. Edmunds, Edgar Joseph* [admission exam results], 1871). Table 3 shows the relative importance of each part of the exam Edmunds took in 1871. Over all mathematics, including descriptive geometry, was more than sixty-three percent of the exam:

**Table 3: Entrance Exam Topics for the École Polytechnique in 1871**

Entrance Exam for the École Polytechnique in 1871, relative of importance of each subtest to over-all rank	
Oral exam in Algebra, analytic geometry	28.3%
Oral exam in arithmetic, geometry, and trigonometry	26.4%
Oral exam in physics and chemistry	18.9%
Composition in descriptive geometry	6.1%
Calculation in trigonometry / logarithms	2.4%
French composition	6.6%
Pencil drawing	5.7%
India ink wash	1.9%
German language	3.8%

The mathematics questions on the written portion of the 1871 exam that Edmunds took were published shortly afterward in a journal called the *Nouvelles Annales de Mathématiques* (*Concours d'admission à l'École Polytechnique, 1871*, pp. 473-474). The published questions cover the topics of descriptive geometry and trigonometry and are shown below:

Composition of Descriptive Geometry

Intersection of surfaces. - An equilateral triangle  $abc$  of side length 5 centimeters, situated in a horizontal plane 6 centimeters above the horizon: one side is parallel to the vertical plane and 6 centimeters from this plane;  
Three spheres having their centers at points  $a, b, c$  and a common radius of 5 centimeters.

To be done:

First, to construct the intersection of the three spheres;  
Second, to draw the parallel projections of the solid common to these three spheres.



### Trigonometric Calculation

Given the following side lengths of a triangle ABC:

$$a = 22618.78 \text{ m,}$$

$$b = 28481.17 \text{ m,}$$

$$c = 34518.95 \text{ m,}$$

to find the three angles.

The other mathematics questions Edmunds answered on the exam would have been in the two oral exams, and unfortunately those questions were not included in this journal. Descriptive geometry was a topic that covered methods for drawing two- and three-dimensional representations of solids. In the 1871 exam question, candidates were given a description, with exact placement and measurements, of three intersecting spheres. Candidates were instructed to draw the intersection of the three spheres, including three two-dimensional projections of the solid figure. A question in trigonometry gave students the side lengths of a triangle and asked them to calculate the internal angles of the same triangle. This task would have been much more difficult, of course, in 1871 when calculations were done by hand, and the particular measurements here, each given to seven significant digits, seem designed to make that task difficult even for someone who understood the procedure. It is not known what resources students were permitted to have with them in the test, but presumably they did have trigonometric tables and logarithmic tables. According to Belhoste, students had hours to complete each of these written tasks (Belhoste, 2002, ¶ 19-21), and so they seem designed to reward students who were persistent and careful.

Pamphlets of the tested curriculum were published by the *École Polytechnique* in the mid-nineteenth century and give further details about the mathematics content of the exam (*Programmes des connaissances*, 1862; *Programme des conditions d'admission à l'École*

*Impériale Polytechnique*, 1865; *Programme des conditions exigées pour l'admission à l'École Polytechnique*, 1875; *Programme des connaissances*, 1889). The pamphlets include several pages of detail about the mathematical content knowledge tested on the exam, and the documents are similar (with some differences noted below). Edmunds would have been tested under a curriculum published in 1865 when he took the 1871 entrance exam. Portions of the 1865 curriculum that were made available to this author suggest that it was very similar to the 1862 document, and that some significant curricular changes were incorporated into the exam just after Edmunds' time there. But taking a broader view of the exam curriculum from 1862 to 1889 also gives a sense of just how quickly mathematical advances led to curricular changes at the *École Polytechnique* and how the school, through its testing changes, in turn, was raising the level of French secondary mathematics education in that period.

The curriculum pamphlets in the 1862 to 1889 period, which include broad language such as requiring a knowledge of the “*Théorie des équations*” [theory of equations]), while also including pages of detailed requirements, make it clear that the school expected its students to understand the mathematics they were tested on flexibly and deeply, not merely to know how to use formulas and carry out procedures. This expectation is consistent with the manner in which a prominent French civil engineer explained in 1868 the school's pedagogical approach: “[T]he modes of instruction have progressed with the sciences themselves . . . so that the memory has been relieved of a useless burden and the judgment more powerfully appealed to” (Council of the Institution of Civil Engineers, p. 38). This approach was different than the approach in the Robinson algebra textbook at use in New Orleans public schools at the time, which, as discussed in the previous chapter, tended to emphasize instead the memorization and application of rules and formulas.

The contents of the 1875 and 1889 exam curricula were in some respects more advanced than the contents of the 1862 and 1865 exams. All included derivative functions, for example, but the 1889 exam also included the “*Notion de l’intégrale définie*” [notion of the definite integral]. Also, while the exams all included sections on trigonometry, the 1862 and 1865 curricula conceived of sine, cosine, and so forth as static lengths or ratios of length — “*les rapports des lignes trigonometrique au rayon,*” [ratios of trigonometric lines to the radius]. By 1875, the curriculum conceived of these ratios in their more modern and sophisticated sense, as “*Fonctions circulaires,*” that is, as continuous functions of an angle. Arithmetic and elementary geometry were also dropped as topics by the time the 1889 curriculum was published, which reflected an exam that was newly focused on the more advanced mathematical content that would help distinguish among advanced candidates (*Programme des connaissances*, 1889, p. 16). Even with those differences, the exam curricula throughout this period contain highly sophisticated mathematical content, and there were broad topics that were on both *École Polytechnique* entrance exams but were not covered in the Robinson textbooks adopted by the New Orleans school board. Table 4 shows examples of categories of mathematical content that were tested on the 1871 entrance exam but were not taught in New Orleans public schools at the time. The topic categories shown are the ones in the source documents. Today we would characterize some of the algebra topics as topics in pre-calculus, or calculus.

**Table 4: Topics on the 1871 Exam to Enter the École Polytechnique That Were Not Taught in New Orleans Public Schools**

**Examples of Topics from the 1871 Entrance Exam That Were Not Taught in New Orleans Public Schools at That Time**

Algebra

- Analyzing the behavior of functions, such as knowing the domain and range, knowing where a function is increasing and decreasing, finding the tangent line to a curve at a point, and reasoning about the zeroes of a function.
- The relationship between the limit of  $(1 + \frac{1}{m})^m$  as  $m$  grows toward infinity and the binomial theorem.
- Finding a derivative function by using the idea of a limit.
- Differentiation of functions of various types including a composition of functions, logarithmic and exponential functions, and implicit functions
- Newton's method for finding successively better approximations of the zeroes of a function

Trigonometry

- Properties of spherical triangles

Analytic Geometry

- Working with straight lines and curves of second degree on the coordinate plane, including reasoning about asymptotes, concavity, and convexity, and tangent lines
- Theory of conic sections
- Working in polar coordinates
- Three-dimensional analytic geometry including conic sections in three dimensions

### Descriptive Geometry

- Constructing three-dimensional objects such as a plane tangent to a conic section at a given point, or the intersection of two cones

Many of the topics covered on the *École Polytechnique* exam were not merely supplementary to the topics studied at the best public high schools in New Orleans; they were more sophisticated. Much of the knowledge required to pass the exam, for example, presumed a deep understanding of functions. It was not enough to understand algebra as a means to calculate and manipulate static unknown quantities, as it was presented in the Robinson textbooks. The concept of a function allows one to understand an equation as a relationship between two variable quantities and therefore as dynamic mathematical object with behaviors that can be studied. Analytic geometry, which was also avoided by the Robinson algebra book, was another large piece of the entrance exam to the *École Polytechnique*. It was covered in its own dedicated section of the exam and was used implicitly in other mathematics sections. As with the study of functions, analytic geometry is not merely an additional topic – it offers a fundamentally different and deeper way to understand mathematics, in this case by merging algebra and geometry so that equations can be visualized as geometric objects. Analytic geometry gives one both a geometric understanding of algebra and an algebraic understanding of geometry. To prepare for the entrance exam to the *École Polytechnique*, one would need to have studied mathematics well beyond what was offered in the most advanced New Orleans public high school classes.

The contents of the *École Polytechnique* entrance exam are consistent with the description of the French approach to mathematics given by Parshall and Rowe in *The*

*Emergence of the American Mathematical Research Community 1876 – 1900* (1991). Parshall and Rowe explain that at the turn of the nineteenth century, the French were superior to the British in almost every respect in the field of mathematics and of mathematics education – in mathematical notation, in mathematical methods, in style of instruction, in the sense of intellectual independence and adventurousness, and even in knowledge of basic principles (Parshall and Rowe, 1991, pp. 2-7). The British, and later the Americans, eventually opened up to the advances in continental Europe, but it should not be surprising that in 1871, the knowledge expected of young men coming out of the best French schools would be much different—and higher—than that of the best New Orleans high schools. It is evident from the entrance exams that even at the high school level, French students were familiar with the methods and ideas that developed in France and caught on only later in Great Britain and in the United States (Parshall and Rowe, 1991, p. 5).

### **5.3 E. J. Edmunds’ Preparation and Performance on the Entrance Exam**

Edmunds’ school records from the *École Polytechnique* show the results of his entrance exam (*Concours d’ admission en 1871, M. Edmunds, Edgar Joseph* [admission exam results], 1871). The author’s translation of the document showing the results are shown in Table 5. The exam results do not indicate the highest number of points that it is possible to score on each section of the exam, and so it is difficult to know if Edmunds had any particular strengths or weaknesses.

Table 5: Results of E. J. Edmunds' Entrance Exam at the École Polytechnique, translated from the Concours d'Admission en 1871 (Concours d' admission en 1871, M. Edmunds, Edgar Joseph [admission exam results], 1871).

École Polytechnique		Admission Exam in 1871				Town of exam: Paris	
No. of certificate of admissibility 232		M. Edmunds, Edgard Joseph					
Designation of the tests	Score from the oral exams	Coefficie nts of importan ce	Product of $M$ and $m$	Score from the written composit ions	Coefficie nts of importan ce	Product of $N$ and $n$	Sum of the products $P$ and $p$
	$M$	$m$	$P$	$N$	$n$	$p$	$S$
Oral exams	Algebra, analytic geometry	15	60	900			
	Arithmetic, geometry, trigonometry	14	56	784			
	Physics and chemistry	12	40	480			
							2164
Written compositions	Composition of descriptive geometry				16	13	208
	Trigonometric calculation, logarithmic calculation				15	5	75
	French composition				13	14	182
	Pencil drawing				1	12	12
	<i>Lavis</i> (a kind of ink wash technique of drawing)				3	4	12
	German language				4	8	32
							521
							2685

Given Edmunds' unusual background, it is unclear how he prepared himself for the entrance exam. As discussed in the previous chapter, there was no traditional school in New Orleans that was available to Edmunds to learn this material, and he was competing against students who had come from a system of education that was specifically aligned with the content

of the exam, many of whom also took separate preparation classes from graduates of the school. However unlikely, Edmunds did pass the exam and was ranked 135 out of 144 admitted students (Edmunds, Edgar Joseph, fiche matricule [registration card], 1871). As discussed above, it was common among the pre-war Afro-Creole community to be educated through tutors and in small private schools, and there is reason to think that Edmunds was educated that way too; he was not enrolled in school before the war, and when he did enter school, he entered a grammar school because he did not have the credentials to enter high school. The difficulty of this particular entrance exam gives weight to the hypothesis that Edmunds received much of his pre-college education either through private tutors or by working on his own with books he had acquired. Given the specific curriculum and style of the *École Polytechnique* entrance exam, it is also reasonable to conclude that Edmunds spent time studying in France or had the help of a French mathematics teacher in the United States, although no direct evidence of this hypothesis exists. Either way, it is clear that no school in New Orleans was teaching mathematics at this level, and ironically, if Edmunds had attended New Orleans best public high school, the Boys' Central High School, he would not have been prepared for this difficult and specialized exam.

#### **5.4 E. J. Edmunds' French Education as Both Typical and Anomalous**

It was not uncommon for families among New Orleans' Afro-Creoles to send their sons to France to study. In Rodolphe Desdunes' book, *Our People and Our History*, he gives short biographies of prominent members of his community, and for several of them, he indicates that they were educated in Paris, such as poet and author Adolphe Duhart (Desdunes, 1973/1911, p. 68), Dr. Alexandre Chaumette, who received his medical education in Paris (Desdunes, 1973/1911, p. 76), and Edmond Dédé, a violinist who studied at the Paris Conservatory of Music and worked as a conductor in France before returning to New Orleans (Desdunes, 1973/1911, p.



85). Desdunes also implies that the practice of receiving an education in France was common when he says of the teacher and newspaper editor, Armand Lanusse that he “did not enjoy the opportunity of being educated abroad as so many of his compatriots did” (Desdunes, 1973/1911, p. 76). Similarly, in her 1916 work, *People of Color in Louisiana*, Alice-Dunbar Nelson wrote of the Creoles of color before the war, “Some of them, like their white neighbors, sent their sons to France and their daughters to convents to continue their education” (Dunbar-Nelson, 2017/1916, p. 29). It is probably not true that *most* young men from the community were educated in France. Indeed, it seems to have been a status symbol because of the way Desdunes speaks about French education almost as a badge of honor. However, given that E. J. Edmunds was highly intelligent and came from a family with the means to educate him, it was not strange for E. J. Edmunds to look to France to continue his education beyond what was available to him in the United States.

While many New Orleans Afro-Creoles traveled to France for an education, it was not at all typical for New Orleans Afro-Creoles, or indeed for any American, to study at the *École Polytechnique*. An 1841 report on the school showed that of the 271 students enrolled in the school that year, nearly all were French-born students of French parents. Seven were either living outside of France (including two in French colonies) before they were admitted or were French-born citizens of foreign-born parents (“State of the polytechnic school in Paris,” 1841, p. 235). Additionally, twenty-six men, including one American, were permitted to attend lectures without being formally admitted (“State of the polytechnic school in Paris,” 1841, p. 235). If these statistics were typical, it would have been very unusual and remarkable for Edmunds to have taken the admissions exam at all much less to have passed it, attended, and graduated from the school. A search of the electronic database of alumni of the *École Polytechnique* confirms this. The database records only one other student as having lived in New Orleans before attending the

school: Nicolas Labiche, a white man who was born in Saint-Domingue (Haiti) in 1789 and moved to New Orleans before starting at the school in Paris in 1807 (*Labiche, Nicholas, fiche matricule* [registration card], 1807). Labiche would have been a French citizen by virtue of having been born in a French colony. According to the records of the *École Polytechnique*, Edmunds' ethnic background also made him almost unique at the school. According to the same electronic database, the only black man who was recorded to have entered the school before Edmunds was François Auguste Périnon in 1832. He was the son of a freed slave woman and a white man from Martinique, another French colony (*Périnon, François Auguste, fiche matricule* [registration card], 1832).

### **5.5 E. J. Edmunds' Time in Europe**

E. J. Edmunds entered the *École Polytechnique* in the fall of 1871 for the two-year course of study. Students were of course tested and ranked as they entered the school, and in addition to the grades they received in their courses, they were tested and ranked again each spring. An 1841 publication described the culture of testing at the school:

The main principle on which the system turns is that of perpetual partial examinations (called interrogations), which are made during the courses of lectures, and of general examinations, enforced at the end of each scholastic year. These examinations of all kinds are very efficient, and are carried off with great impartiality. No respect is paid to mere personal rank in this establishment, but all the promotions and nominations are given entirely according to merit, and the spirit of competition thereby engendered is remarkably great.

(“State of the polytechnic school in Paris,” 1841, p. 230).

Edmunds' end-of-year report for the school year 1871 to 1872 shows that he took a range of courses in mathematics and science and that he was carefully scored and ranked based on his performance. The courses Edmunds took in his first year were analysis, mechanics, descriptive geometry, physics, chemistry, astronomy, French literature, and two kinds of drawing (“*dessin*”

and “*lavis*”) (*Classement général de fin d’année, M. Edmunds* [end-of year report card], 1872).

The contents of the report, showing his scores and the relative weight given by the school to each course, were translated by the author into English, and are shown in Table 6.

Table 6: Table of the End-of-Year Scores of E. J. Edmunds in His 1871 - 1872 Classes at the École Polytechnique

<i>École Polytechnique</i>		General End-of-Year Ranking			
2 <sup>nd</sup> Division 1871-1872		M. Edmunds			
Course	Sub-tests for each course	Score on each subtest	Weight for each subtest	Total score for each subtest	Total for each test
Analysis	Particular questioning	13.50	15	202.50	412.50
	General questioning	14	15	210	
Mechanics	Graphical work	9.33	8	74.64	374.70
	Particular questioning	16.67	18	300.06	
Descriptive geometry	Graphical work	10	12	120	347.50
	Particular questioning	11.75	10	117.50	
	General questioning	11	10	110	
Physics	Particular questioning	9	15		135
Chemistry	Particular questioning	12.75	10	127.50	325.85
	General questioning	14	10	140	
	Manipulations	11.67	5	58.35	
Astronomy	Particular questioning	12.50	15	187.50	231.50
	Composition and graphical work	11	4	44	
French literature	Composition	13.75	12		165
German language	Particular questioning	--	5	--	--
	General questioning	--	5	--	
Drawing		6.83	10		68.30
<del>Lavis</del>		9.50	3		28.50
Total:					2,088.85

Additionally, Edmunds took a set of first-semester exams in the 1871 to 1872 school year, for which only his rank (119 out of 144) is given (*M. Edmunds (Edgard Joseph) / Rangs obtenus successivement . . .* [school record including ranks obtained successively], 1871), and he took a set of final exams at the end of his first school year for which we have more detail. Edmunds took final exams in analysis, mechanics, descriptive geometry, physics, and chemistry. His final exam scores are shown in Table 7 (*Classement général de fin d'année, M. Edmunds*, [end-of year report card], 1872). Edmunds passed his first-year courses and exams with a rank of 129 out of 144 students, moving up slightly in his ranking from 139, his rank upon admission to the school (Edmunds, Edgar Joseph, fiche matricule [registration card], 1871).

**Table 7: E. J. Edmunds' Final Exam Scores for the School Year 1871 - 1872**

	Course	Score on each subtest	Weight for each subtest	Total for each test
End-of-year exams	Analysis	13.50	30	405
	Mechanics	14	30	420
	Descriptive geometry	8.50	20	170
	Physics	11	25	275
	Chemistry	7	20	140
			Total (including scores from courses and final exams)	3498.85

Edmunds school records also contain notes about other aspects of his abilities and performance. It is noted that Edmunds' conduct was good, that he received three demerits of some kind, that his constitution was good, and that he was fit for service (*M. Edmunds (Edgard Joseph) / Rangs obtenus successivement . . .* [school record including ranks obtained successively], 1871). It is not clear from Edmunds' record how common it was to receive demerits.

Students normally spend two years at the *École Polytechnique*, studying primarily abstract topics in mathematics and science. After the two-year course of study, students are placed in various Schools of Application where they continue their studies with a more practical focus. The director of one of these Schools of Application, the *École des Mines*, described the culture of abstract mathematics at the school in 1868: “The *École Polytechnique* is, in reality, . . . a School of Mathematical Sciences, and not a School of Engineers” (Council of the Institution of Civil Engineers, 1870, p. 31). He went on to complain that the curriculum was too “exclusively abstract” and that “pupils have not acquired any important or exact knowledge of a practical nature” (p. 31). Efforts made to change the curriculum to make it more practical were unsuccessful because the students and professors were unwilling to incorporate the changes (p. 31). In fact, every year many of the best students who received coveted placements in the best Schools of Application “abandoned these careers, in order to follow that of teaching, in the *Lycées*, the faculties of Sciences, or in the *École Polytechnique* itself” (p. 31).

As all students were, Edmunds was given a placement at one of the Schools of Application based on his rank: On February 10, 1873, Edmunds was transferred to the *École d'Application de l'Artillerie* [The School of Application of the Artillery] (*M. Edmunds (Edgard Joseph) / Rangs obtenus successivement . . .* [school record including ranks obtained successively], 1871), which was in Fontainebleau at the time, about seventy kilometers southeast of Paris. Edmunds was ranked thirty seventh out of the ninety-two students who were transferred to *École d'Application de l'Artillerie* that year (Edmunds, Edgar Joseph, fiche matricule [registration card], 1871). Having finished his course of study at the *École* in Paris, Edmunds was technically a lieutenant in the French army while he continued his studies.

At some time in 1874, Edmunds left the artillery school, and eventually pursued a career in mathematics teaching. It is unclear what Edmunds did immediately after dropping out of the artillery school in 1874. It is known that a year later, in the spring of 1875, Edmunds was in New Orleans again, which will be discussed in the next chapter. There is some evidence that Edmunds enrolled at the University of Strasbourg, which was in Germany at the time. As will be discussed in Chapter 8, in 1879 Edmunds wrote a letter that was published in the *New England Journal of Education* in which he claimed to have studied in France and Germany (*New England Journal of Education*, January 1879, p. 55). Also, when he advertised himself as a tutor years later, Edmunds claimed that he had studied both in Strasbourg and in Paris (“Prof. E. J. Edmunds,” 1882). This study was not able to confirm whether Edmunds did in fact study in Germany.

## **Chapter 6: The Appointment of E. J. Edmunds**

The aim of this chapter is to explore the appointment of E. J. Edmunds as a teacher of mathematics at the Boys Central High School. Edmunds' appointment as an African-American mathematics teacher at a prestigious, white, public school during Reconstruction in the South was highly unusual and possibly even unique. Of course, school integration did ultimately fail in New Orleans. The failure of New Orleans' nineteenth-century experiment with school integration is part of the larger story of the failure of Reconstruction to incorporate newly-freed people into society. That story is too large to tell here and has been addressed by other scholars (White, 2017; Baker et al., 2013; Stewart, 2009; Valelly, 2004; Egerton, 1994; Benedict, 1974; Du Bois 1935). This chapter will instead explore the more immediate circumstances of Edmunds' appointment to understand how it could have occurred at all at this moment and why it ultimately failed as a step toward further integration of public schools.

The years prior to Edmunds appointment were characterized by a paradox – the rise in the political power of black civil rights leaders in New Orleans and their Radical Republican allies, but also the rise in white-supremacist terror groups and their allies in the conservative press. The political climate in the fall of 1875 was heated as different interest groups fought for control over the direction of Reconstruction, resulting in Edmunds' appointment in the fall of 1875 and also resulting in the explosive reaction to that appointment. This chapter explains the immediate events that contributed to the heated political climate of September 1875 and looks at the controversy itself in detail by examining the role of the conservative newspapers in whipping



the public into a frenzy of fear and anger over the Edmunds' appointment and ultimately ending school integration.

## **6.1 The Conservative Press and the Events of December 1874 Preceding Edmunds' Appointment**

From January 1871 until the fall of 1874, public schools in New Orleans were at least partially integrated, as covered in previous chapters. White people generally tolerated mixed schools, and for years there was no major incident in New Orleans over the issue (DeVore & Logsdon, 1991; Vaughn, 1974, Blassingame, 1973; Harlan, 1962). In 1874, the climate over school integration and over black civil rights generally began to shift as white supremacists grew more vocal and ultimately even physically aggressive. On September 14, 1874 an armed gang of 8,000 men affiliated with the White League attempted to overthrow the Republican governor, William Kellogg, causing a wave of violence ("The White League rebels," 1874; "The Louisiana outrages," 1874). Kellogg was re-installed by federal troops, but white supremacists were undaunted, and in fact the events of September 14 served as a rallying cry for further violence.

In the years 1874 to 1875, when the Edmunds controversy unfolded, there were several newspapers in New Orleans. The loudest conservative voice came from the *New Orleans Bulletin*, the voice of the White League. As Republicans' power was waning, and white supremacists were growing bolder and more violent, an event occurred on December 14, 1874—a group of girls from a "colored" grammar school arrived to take the admissions exam to get into one of the girls high schools. It was an event that should have gone unnoticed given that the schools had been integrated for years. And yet because of the charged atmosphere, and because the event was leveraged by the conservative press, it started a movement. The *Bulletin* had been complaining about school integration and about the school board since the paper was founded

earlier that year. As part of the *Bulletin's* campaign against school integration, it published *ad hominem* attacks, particularly against black politicians who were executing the policy of integration (“The school board,” 1874b), it questioned the legitimacy of the Republican government (“The irrepressible conflict,” 1874), it made arguments purportedly based on science, history, law, and religion about the supposed inferiority of the black race and the dangers of racial mixing (“The co-education of the white and colored races,” 1874), and it made vague threats to expose information about members of the school board (“The school board,” 1874a). The paper had also tried unsuccessfully to encourage boycotts of the schools (E.g., “The school board,” 1874a; “The public schools,” 1874a; “The school board,” 1874b). Nothing really stuck until the *Bulletin* embraced the cause of the white students in the December 14, 1874 incident.

The basic facts of what happened on December 14, 1874 which were consistent across different newspaper accounts are these: A group of girls (as few as three or as many as sixteen) from the Coliseum Street Colored Girls School arrived to take the entrance exam at the Upper Girls High School. (There was no separate “colored” high school at this time.) The principal claimed to turn the girls away because they were not registered properly, but the school’s current students were not satisfied and threatened to boycott the school until the school clarified its policy about admitting black girls (“The color line,” 1874; “The race issue in the schools,” 1874a). Considering that the city had just survived an attempted paramilitary coup, the event was relatively minor, and only two papers, the *Bulletin* and the *New Orleans Times*, initially reported the incident. The *Bulletin* ran a front-page story, praising the girls and making a plea for the importance of their act of protest. The paper called the protest the “first gun in the war” and “their 14<sup>th</sup> of September”— a reference to the coup from earlier that fall. The *Bulletin* also

organized and encouraged further protests by meeting with students in its offices and by printing calls for others to follow the lead (“The race issue in the schools,” 1874a). The *New Orleans Times* was the only other paper to run a story on the same day, praising the protesters and declaring that it was an “Exciting Time” for opponents of mixed schools. Other papers followed. The *Daily Picayune* followed the lead a day later in praising the “brave New Orleans girls who have so earnestly . . . asserted their rights” and wished them success (“The public schools,” 1874b). Once the story caught on, the conservative papers ran stories every day on the movement they were simultaneously building, praising copycat acts of student protest, such as when a group of boys (so-called “youthful knights”) patrolled the perimeter of Boys Central High to prevent black boys from taking the school’s entrance exam (“Youthful knights,” 1874).<sup>22</sup>

The unrest snowballed from there with more protests and walkouts (“The race issue in the schools,” 1874b; “The race issue in the schools,” 1874c; “Lower Girls,” 1874), all applauded by the *Bulletin* as it “call[ed] upon the scholars, girls and boys, of all the schools to make common cause with their comrades and friends, who have been so grossly insulted,” (“The race issue in the schools,” 1874b). The district school superintendent, Charles Boothby, was attacked by a mob, threatened to be hanged, and held until he signed a document promising not to support integration (“Excitement in the girls high school,” 1874). The *Bulletin* reported the incident in a joking way, made light of the threat: “There was some talk about a rope and some glancing about for a convenient tree, in order to frighten the little fellow” (“Excitement in the girls high school,” 1874). From there, the movement spread further and triggered more violence. The junior class of

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<sup>22</sup> The Catholic paper, the *Morning Star and Catholic Messenger*, did not report on this incident but in the past had defended racial segregation in Catholic schools, writing that admitting a single black student to one of its schools would “ruin [the] institution” (“Philosophical law suits,” 1868).

students from Boys Central High adopted the talking points of the conservative press in a letter to the school board. They spoke of the “miserable stench” of the “negro” and the need to preserve the “sacredness” of all-white classrooms (“The race issue in the schools,” 1874c). A group of students from the school then took matters into their own hands by entering a nearby integrated girls school and removing students forcibly from their classrooms. It must have been a bizarre and tragic scene – a group of high school boys checking each classroom, classifying girls based on the color of their skin, with the girls whom they “found spiced a little too highly” in tears as they collected their things to leave (“The Lower Girls High School,” 1874). A single girl refused, telling the boys that “she would not leave, she could fight as well as they . . . , and they had better not force her.” Yet the paper praised the *gang of boys* for their pluck, calling them “high spirited” (“The Lower Girls High School,” 1874). The movement spread to other schools over the next few days (“The war commenced,” 1874; “The school question,” 1874; “The week,” 1874). The boys discovered that identifying students of African descent was not easy, making mistakes of both over-inclusion and under-inclusion. They ejected some dark-skinned Jewish students and left alone some students whose African ancestry was not apparent; they returned later to correct the mistakes (“The week,” 1874; “The school question,” 1874). One of the girls claimed to be related to the governor, and another outed some of the aggressor boys as being “colored” themselves, which led to further investigations and scandals about racial purity (“The week,” 1874). As bumbling as this effort was, the movement ignited by the *Bulletin*’s rhetoric spread, leading to more forced removals, mobs, street violence, and even the death of a man (“The war commenced,” 1874; “The school question,” 1874).

## 6.2 The Events of E. J. Edmunds' Appointment

With the racial unrest, white Republicans voices grew timid about integration, but the school board did not. In September 1875, African-American political leaders<sup>23</sup> dominated the seventeen-member school board wanted to push the idea of race-neutral schools as far as they could. The most vocal member of the 1875 board, and its de facto leader, was P.B.S. Pinchback, the son of a slave from Georgia. Pinchback was no ordinary school board member. Before his school board appointment, Pinchback helped draft the 1868 constitution, served briefly as governor, was an elected United States Senator, and founded the *Weekly Louisianan* (White, 2017, p. 138; “Circular to the Republicans,” 1868). Pinchback’s decision to put his political weight behind Edmunds’ appointment, and to take credit for it years later (“Créole vs. Américain,” 1882), generally speaks to the importance of the issue of school integration—and the symbolic nature of Edmunds’ appointment in particular—to New Orleans’ black leaders. Edmunds’ appointment to Boys Central High School – the very same school whose student had just committed violence in the name of racial purity –was an act of defiance for the board, but also for E. J. Edmunds himself, who would have been aware of the context. In this charged atmosphere, Edmunds and the board must have known that the conservative press would see his appointment as a shot across the bow.

On September 11, 1875 the Pinchback school board appointed E. J. Edmunds<sup>24</sup> as one of six teachers at the Boys Central High School in New Orleans (*Orleans Parish School Board*

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<sup>23</sup> The *Bulletin* identified school board members by race, claiming that nine out of seventeen were “colored” (“A model(?) school board,” 1875). David Rankin, in his study of black leadership in Reconstruction New Orleans, identified four of the 1875 schoolboard members as among New Orleans’ “black leadership” (Rankin, 1974, pp. 436-440).

<sup>24</sup> The School board minutes announce the results without reporting individual votes. The *Bulletin* later questioned the board and reported that the vote was twelve to five, with three white members joining the black majority (“The vote,” 1875).

*Minutes*, 1875 to 1877, p. 60). It was not clear at the time where the idea of Edmunds candidacy originated, and the secrecy of the process caused some scandal. The board minutes handwritten that day do not record the discussions or the vote tally, and the board was later accused of making the decisions secretly so that no one member could be blamed (“The indignation meeting,” 1875). Wherever the idea came from originally, the school board knew Edmunds well. The same board had appointed him a few months earlier as principal of the all-black Sumner school to fill in for the last few months of the school year (*Orleans Parish School Board Minutes*, 1875 to 1877, pp. 7-8). Edmunds also called attention to himself as principal of Sumner by making a formal complaint to the school board of “disturbances” from boys from the nearby, all-white Fisk school (*Orleans Parish School Board Minutes*, 1875 to 1877, p. 27).

On September 12, 1875, the day after Edmunds’ appointment, the press did not yet realize its significance and ran an innocuous looking announcements about the year’s appointments, such as the one below, which appeared on page five of the *New Orleans Republican*:

High Schools.  
Central.  
[Burgundy Street, between Customhouse and Bienville.]

Mr. J. E. Seaman, Principal.  
Mr. Jules Lambert, Associate Teacher.  
Mr. E. J. Edmunds, Associate Teacher.  
Mr. J. B. Willis, Associate Teacher.  
Mr. A. Jacquet, Associate Teacher.  
Mr. L. Bourges, Associate Teacher.

(“Public school notice,” 1875). The *Bulletin* also reported the appointment of Edmunds on September 12, 1874, not realizing its significance.

The next day, Monday September 13, was the first day of school, and when Edmunds arrived to teach, the members of the senior class walked out in protest. On September 14, the *Bulletin* ran the following headline:

#### THE BOYS CENTRAL HIGH SCHOOL

E. J. Edmunds (colored) Placed in the School as Professor of Mathematics.

The Seniors Leave the School.

(“The Boys Central High School,” 1875). The *Bulletin* called the walk-out “highly commendable” and encouraged others, including teachers, to do the same, this time going one step further in calling those who attempt racial integration “for political purposes” to be “enemies of the State” (“The Boys Central High School,” 1875). The *Bulletin* made vague accusations that the school board was corrupt and was accepting bribes (“Public school shame,” 1875). Another newspaper, the *New Orleans Times*, included different details of the story—including that only eleven students actually left, and the rest of the school carried on with its day without a problem (“Protesting pupils,” 1875). Additionally, the *New Orleans Times* reported that Edmunds was accosted by a student on the way home:

[H]e was accosted by a lad—aged about eighteen—who had come from the direction of the school building, and who upon coming up with the Mr. Edmunds, began a wordy attack upon him, upbraiding him for having forced himself into the school, declaring that he was nothin but a “nigger,” and otherwise visiting his pent up wrath upon the teacher. . . Edmunds [sic] said but little in response to the lad’s tirade, save that he didn’t choose to have any trouble, but that he didn’t fancy being abused without cause.

(“Protesting pupils,” 1875). Edmunds stepped into a nearby office until the assembled crowd left.

On Wednesday of that same week, Pinchback gave a speech that was run by the newspapers the next day in which he defended the actions of the school board. Pinchback blamed “an irresponsible press” for stirring up unrest and embraced the charge that Edmunds’ appointment was meant as a test case:

With the government, national and State, in the hands of the Republican party, if they are powerless to protect the citizen, it is high time that the colored man should know it. If we are to be mere “hewers of wood and drawers of water,” no matter what proficiency we may have attained, the sooner we understand this the better.

(“The school board / speeches by Pinchback and McCarthy,” 1875). Pinchback could not have chosen a better test case. Edmunds’ education placed him, at least in that respect, far above any other candidate the board could have chosen to fill the position. Additionally, he came from a respectable, old New Orleans family, and was very light in skin color.<sup>25</sup> In the current atmosphere, the city’s historically blurred color lines were becoming fixed, and any objection to Edmunds’ appointment would push white supremacists to state clearly what their position was – that any African ancestry tainted a person and relegated them to a lower caste.

On Friday, September 17, 1875, the *Bulletin*’s campaign against Edmunds continued. Since his resume was unimpeachable, the paper found a new tack. The paper claimed that Edmunds was lying about his degree from the *École Polytechnique* after a Frenchman had written in to inform the paper that one could not attend the school without demonstrating French citizenship (“Edmunds,” 1875). When Edmunds responded with a letter to the “Ignorant Frenchman,” inviting him to come to 354 Claiborne Avenue to see his diploma, the *Bulletin* called Edmunds impertinent and insolent and said that his temper made Edmunds unfit to be in

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<sup>25</sup>One newspaper described Edmunds as “a very slightly tinged, colored man” (“Our colored schools,” 1875).



charge of youths. When the diploma could not be denied, the *Bulletin* claimed that Edmunds entered the school by committing a fraud over his citizenship and claimed that the diploma itself was evidence of his unfitness to serve (“Query?,” 1875).

In a piece printed on Sunday, September 19, a week after the original appointment, the *Bulletin* ratcheted up its attacks, focusing on the black school board members and questioning their motives, their morality, their understanding of basic issues, and even their literacy (“A model(?) school board,” 1875). The *Bulletin* continued to press for more boycotts, and its language about black people in public schools grew even more vile too, for example comparing a school where black children are removed to a shop being “fumigated for disinfection” (“Temporary abandonment,” 1875) and claiming that white parents must withdraw their children “in order to save them from contamination” (“The movement against the city,” 1875). The *Bulletin* published a list of the names of black teachers and even a black child who were currently working in or attending “white” schools under the headline “Colored Teachers in White Schools” (“Colored teachers in white schools,” 1875). No context or explanation was given to the list, but none was needed. It was clear that the *Bulletin* was encouraging its readers to threaten or remove them from the schools.

The frenzy that the *Bulletin* whipped up resulted in a large demonstration in Lafayette Square on the evening of Wednesday September 29, in which thousands of people gathered to listen to protest speeches against Edmunds’ appointment and against school integration. (“Indignation meeting,” 1875). One speaker, Judge Kennard, went on at great length, making various legal arguments that racial integration was not required under Louisiana law. In a moment of great candor, then, the judge swept all of those legal arguments aside. None of it mattered because he did not care what the law was:

One step further, and I will have finished. I care not whether the Constitution of the United States contains the one hundred and thirty-fifth article of the Constitution of Louisiana; I care not whether the Civil Rights bill includes instead of omits the school question; I care not how carefully may have been written the present one hundred and thirty-fifth article; nor do I care what may have been the legislation since to enforce it; because, as I said at the outset, there are some things which no human legislation shall regulate. [Applause.]

(“Indignation meeting,” 1875). Judge Kennard must have spoken for many people who opposed school integration, including the editorial board of the *Bulletin*, when he concluded that if the law were a hindrance to his goal, it would be ignored. The *Bulletin* showed that it would take extralegal steps to get its way, including threatening the school board and the black teachers, as well as encouraging gangs of boys to accomplish their ends through physical intimidation. The *Bulletin* continued to publish stories about Edmunds throughout the school year, trying even to negotiate a compromise in which Edmunds would take another job (“A chance for Edmunds,” 1876).

Edmunds stayed at Central Boys High School at least two school years, until the Compromise of 1877 led to the withdrawal of federal troops from the South, as will be discussed in the next chapter. Without federal oversight, power shifted and racial categories became cemented in New Orleans public schools, and they would remain that way until the next civil rights movement in the next century.

## **Chapter 7: E. J. Edmunds' Career as a Teacher of Mathematics under Segregation**

The aim of this chapter is to describe Edmunds' career as a teacher of mathematics during an important period in the history of black education in New Orleans, from approximately 1877 to 1882 when the school system was re-segregated and new black educational institutions were established. The details of Edmunds' career as a teacher of mathematics during this period of transition, when white, Democratic Redeemers barred black students and teachers from the city's best schools and new, under-funded black institutions were established, gives new insight into this important moment in the history of black education. It shows how segregation disrupted the lives of individual students and teachers and placed barriers to their educational and teaching careers, and it also shows the determination of individuals who were determined, in spite of the obstacles, to create paths to higher education for black students.

Edmunds remained at Boys Central High School through the uproar over his appointment and stayed for at least two full school years. The spring of 1877 was Edmunds' last full semester at the school, and a report filed on July 15, 1877 by the principal, J. E. Seaman, gives some of the details of Edmunds' time there. The school was the only public boys' high school in the city and was a source of pride for New Orleans. It had approximately 150 students at a time. Seaman reported that the boys studied on average eleven to twelve hours a day, including four daily "recitations." (*Annual report of the State Superintendent*, 1878, p. 307). Seaman praised the graduating senior class of 1877 for their "beautiful" "docility and obedience" and yet somewhat paradoxically, when he spoke of the qualities he wanted in teachers for his school, he spoke

explicitly about the need to teach students to think rather than simply to memorize information: “We want . . . men who give formation to the youthful mind rather than information—develop rather than cram” (*Annual report of the State Superintendent*, 1878, p. 309). Seaman made an effort to maintain high standards at the school; he complained that students were arriving with insufficient preparation for their studies in algebra, complaining, “The High School is not the place for purely elementary drilling or for becoming familiar with Primary English studies and the fundamental rules of Arithmetic” (*Annual report of the State Superintendent*, 1878, p. 309). He reported dismissing twelve first-year students that spring for failing “to give evidence of mental discipline and improvement,” (*Annual report of the State Superintendent*, 1878, p. 307). That June, the school graduated ten members of its senior class (*Annual report of the State Superintendent*, 1878, p. 307), which was a typical graduating class size for the school.

Edmunds was one of six “professors” (as they were called) at the Boys Central High School including the principal himself, who taught classes in addition to carrying out his administrative duties (*Annual report of the State Superintendent*, 1878, pp. 307-308). Edmunds was the primary mathematics teacher at the school. Other professors taught science courses and courses in commercial arithmetic and mechanical drawing, but only Edmunds taught abstract mathematics as a subject in its own right. Additionally, the students took language classes in rhetoric, composition, and literature, including four years of Latin and French. Edmunds’ course responsibilities for each of the four grades of the school are reflected his 1877 report:

REPORT OF PROFESSOR EDMUNDS.

*First Year*—Algebra, through Quadratic Equations.

*Second Year*—Algebra, completed.

*Junior Year*—Geometry, books six, seven, eight, and nine.

*Senior Year*—Mensuration, Surveying, and Navigation.

(*Annual report of the State Superintendent*, 1878, p. 308).

The Compromise of 1877 changed the political balance of Louisiana and put Edmunds' job in jeopardy. Public school teachers in nineteenth-century New Orleans were appointed by the school board annually for one-year positions. Edmunds' first appointment to Boys Central High was in September 1875, and he was reappointed on December 6, 1876 (*Orleans Parish School Board Minutes, 1875 to 1877*, pp. 60, 200), both under Republican-appointed school boards. Edmunds' second appointment to Boys Central High took place a month after the disputed presidential election of November 7, 1876 between Republican Rutherford B. Hayes and Democrat Samuel J. Tilden, during the period of negotiations that would lead to the end of Reconstruction, the rise to power of white-supremacist Democratic Redeemers in Louisiana (including an ex-Confederate general as governor), and the re-segregation of New Orleans schools (DeVore & Logsdon, 1991, p. 81).

A Democratic politician and staunch white supremacist named Robert M. Lusher became the new state school superintendent as a result of the Compromise of 1877, with the power to appoint his own allies to the New Orleans school board. Lusher had claimed to be the rightful State Superintendent of Education ever since the disputed state elections of 1872, and had even referred to himself in the past as "State Superintendent de jure of Public Education" ("Education," 1875) while an African-American man named William G. Brown held the post. Now with the removal of federal troops and the rise to power of the Democratic party, Lusher could finally move into the position he had claimed for so long. On April 4, 1877, even before Louisiana's new Democratic governor was sworn in, Lusher appointed a new, New Orleans school board (*Orleans Parish School Board Minutes, 1877 to 1878*, p. 2). Lusher made reference to the urgency of replacing the board in his end-of-year report:

The Board of Directors of the Public Schools of the city of New Orleans was fully organized, at noon, on the fourth of April, 1877, in obedience to that provision of section of twenty-three, which made it incumbent on the State Superintendent to carry the school system into effect as early as practicable.

*(Annual report of the State Superintendent, 1878, p. iv).*

Lusher spoke openly and forcefully about his priority to re-segregate the schools. In his end-of-year report Lusher wrote that when the new school board took over, it had “but one obstacle of an embarrassing character,” which was the provision in the 1868 Constitution forbidding segregation in schools. Lusher dismissed the provision as the result of “partisan rancor and blind fanaticism” which had now “dissipated by the sunlight of peace and reconciliation” in “this purer political era” (*Annual report of the State Superintendent, 1878, pp. iv-v*). In truth, the board’s actions to re-segregate schools spurred aggressive resistance in the form of litigation and protests, which would last until the end of the century (DeVore & Logsdon 1991, pp. 87-89).

In spite of his claim that Louisiana was in a new era of “peace and reconciliation,” and that even nine-tenths of “our colored fellow citizens” agreed with him (*Annual report of the State Superintendent, 1878, p. v*), Lusher felt the need to defend the school board’s new policy. Lusher argued that educating black children in separate public schools was necessary to bring about racial harmony. According to Lusher, the state was at a point of “transition between a bad system and a regenerating one” and that a “harmonious citizenship” could come about only when black people recognized the superiority of whites and when they were educated to believe that their disparate treatment under the law was just:

If they are to make common accord with the whites, only recognizing in the latter the superiority that lies in lineage and in noble memories, indissolubly connected with the history of the world’s most exalted civilization; and if they are to work

with these, with good heart and earnest endeavor, to a common patriotic end, they must be taught that their State has no preferences, but that, like a kindly Mother, she gathers in her tender bosom all the children who owe their existence to her.

(*Annual report of the State Superintendent*, 1878). The New Orleans' school board's Special Committee with Reference to Mixed Schools, which had been appointed by Lusher, agreed with him about the need and rationale for segregated schools, arguing that school integration was a failure and that separating the races was the only way to allow racial hostility to "gradually fade away and be forgotten" (*Annual report of the State Superintendent*, 1878, pp. 305).

When the board met on July 3, 1877, it voted to re-segregate the schools. Article 135 of the 1868 Constitution (which forbade segregation) had not been repealed yet at this point, but Democrats who were now in power felt free to ignore the provision because of the circumstances of its enactment under the military government, which they considered illegitimate. On August 1, 1877, the school board minutes listed every New Orleans public school along with its new racial designation as either "white" or "colored" (*E.g., Orleans Parish School Board Minutes*, 1877 to 1878, p. 75-77 (categorizing schools by race)).<sup>26</sup>

Lusher saw the city's mixed-race population, who were organizing the resistance to segregation and already had children attending majority white schools,<sup>27</sup> as a threat to his plan. Lusher had an idea to pacify them by setting up a new, more advanced school for the city's mixed-race students:

[I]t would seem wise to establish a separate, intermediate class of schools for their instruction. This the City Board of School Directors have already done by opening

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<sup>26</sup> There were political and legal challenges to the board's action, including a federal law suit about the city's refusal to admit black children to the Fillmore School, the same school that Edmunds and his brother had attended. Consistent with the Supreme Court's other Fourteenth Amendment rulings, the federal judge held that the Equal Protection Clause did not prohibit segregated schools (DeVore & Logsdon, pp. 87-89).

<sup>27</sup> Lusher's report of 1877 records that at the time the schools were re-segregated, 300 black students attended majority-white schools. Most were likely mixed-race African Americans.

an “Academy No. 4,”<sup>28</sup> in charge of a very competent and deserving colored teacher. (*Annual report of the State Superintendent*, 1878, pp. v). The school Lusher referred to in the report was also called the “Colored High School,” and the “very competent and deserving colored teacher” Lusher praised was E. J. Edmunds. Edmunds was appointed as the principal of the school in November 1877. In spite of Lusher’s assertion that the school was for the city’s mixed-race population, Edmunds himself did not describe the school that way (“Academic School No. 4,” 1878), and there is no reason to think that the school turned away anyone based on race. The Colored High School had two teachers (including Edmunds) and operated in a rented building in the French Quarter on corner of Royal and Hospital (today Gov. Nicholls Street) Streets in the French Quarter (*Annual report of the State Superintendent*, 1878, p. 253). In its first year, the school had a single graduate, “Miss Madeleine Campanel, a young and modest Creole” (“Academic School No. 4,” 1878), a young woman who began her high school career in the Girls Lower High School and was forced to leave her school in the middle of her senior year by Lusher and the new board because of her African ancestry (*Report of the Chief Superintendent*, 1879, p. 15, 39).

In the same fall that Edmunds was moved to Academic School No. 4, the Peabody Normal School for Colored Students was organized by the city school superintendent, William Rogers, and funded with 700 dollars from the Peabody Fund, to create a pipeline for training black teachers for the newly segregated schools. According to the Lusher’s annual report, the school was established “for the free professional training of graduates and advances scholars, of either sex, over seventeen years of age, who desire to improve their qualifications as teacher or to fit themselves properly for the exercise of the teacher’s vocation” (*Annual report of the State*

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<sup>28</sup> Academic School No. 1 was the Boys Central High School. Academic School No. 2 and 3 were the two girls high schools. Academic School No. 4 would be the co-educational high school for black students.



*Superintendent*, 1878, p. 325). Edmunds was appointed to the position as assistant principal and professor of mathematics of that school on December 12, 1877 (“The Colored Normal Institute,” 1877) with a monthly salary of \$35. He held the position at the same time he worked as the principal of Academic School No. 4. The Peabody Normal School for Colored Students had two teacher / administrators and thirty-nine students in its first year and operated out of the same rented building as Academic School No. 4, which was now on Rampart Street near St. Ann in the French Quarter (“Education,” 1878). Students were admitted to the school for a two-year course of study that taught content courses—the subjects taught in public schools—and courses in pedagogy. The school met in the weekday afternoons and on Saturdays (*Annual report of the State Superintendent*, 1878, p. 325; “Peabody school matters,” 1877).

Lusher’s move to re-segregate schools was not his only controversial and disruptive policy, and his tenure as State Superintendent of Education left the public school system crippled. Lusher was ambivalent about any kind of taxpayer-funded education for the poor, writing in his annual report that taxes should not be imposed to educate the poor “beyond the necessities of their condition” (*Annual report of the State Superintendent*, 1878, p. 300). Lusher praised the New Orleans school board for being “energetic in revising the extravagant budget of its predecessors” which it managed by cutting programs and teacher salaries (*Annual report of the State Superintendent*, 1878, p. iv). A letter of appeal to the public, signed by several teachers including Edmunds in January 1878, explains that the salaries of teachers across the city were cut by forty percent the previous year. Additionally, the schools, and therefore teacher salaries, were suspended altogether for four months to save the city money. The hardships suffered by the teachers, they say, were too humiliating to detail in the letter (“Teachers’ appeal,” 1878). The next school year, Lusher proposed rescinding the law that obligated New Orleans schools

to stay open for nine months of the year and proposed giving the board discretion from year to year over which months to open the schools. He also ordered the closing of all school programs for children under eight years old and dismissed current students under that age effective immediately, on the grounds that the average child before that age is not teachable, and the precocious child should be “protected from undue cerebral excitement” that would cause his memory to develop abnormally (*Annual report of the State Superintendent*, 1879, pp. xi-xii).

The city’s three high schools were hardest hit because Lusher viewed them as unnecessary “luxuries” – providing advanced education that the poor did not need (*Annual report of the State Superintendent*, 1878, p. 300). To cut spending on high schools, Lusher rejected all high school candidates for the 1877-1878 school year, whether or not they had passed the entrance exam. Lusher then cut the high school course from four years to two and limited high schools to four administrators and teachers (*Annual report of the State Superintendent*, 1878, p. 301). In the same 1878 report, Lusher expressed his opposition to co-education of the sexes beyond the age of ten to twelve years old and his intention to segregate the city’s co-educational grammar schools, creating an additional financial burden on the system. Lusher rationale for keeping girls out of boys schools was that “[t]he advancing years bring health to the majority of boys, but develop the seeds of weakness and seasons of lassitude, weariness, and pain in the other sex”; educating boys and girls together was “a violation of the first laws of physiology,” he asserted (*Annual report of the State Superintendent*, 1878, p. 302). After actively promoting sex segregation in education, the next year Lusher applauded the New Orleans school board for saving money by cutting the number of girls high schools from two to one (*Annual report of the State Superintendent*, 1879, p. viii).

Edmunds dedicated himself to a career in the city's segregated school system after leaving Boys Central High School, but it was difficult for him to settle into a position because of the disruption caused by Lusher's assaults on the public school system, and because of his own illness. Edmunds finished his first school year at the "Colored High School" and the "Colored Normal School" in June 1878. Edmunds was ill at the end of the year and stayed home for the high school's closing exercises, perhaps with the same illness that would take his life nine years later. While Edmunds was confined to his home, he proudly wrote into the *Louisianan* about his students:

Dear Sir.—Knowing the interest you show to all educational matters concerning the colored people, I take pleasure to sent you a detailed account of the closing exercises . . . at the Colored High School. . . . The affair was quite a success, and shows considerable progress from the past of the colored children attending the school.

("Academic School No. 4," 1878). By November of 1878, a combination of factors compelled Edmunds to resign his position at the Colored Normal School. Less than a year after its founding, the Peabody Fund reduced its funding, permitting the school to retain only a single teacher.<sup>29</sup> At the same time funding was cut for Edmunds position, his poor health caused him to scale back and focus on his duties at the high school. Edmunds wrote to the *New Orleans Daily Democrat* (referring to himself in the third person):

Rev. Dr. Sears, agent of the Peabody fund, having reduced the funds used for the Peabody Colored Normal School, Mr. Lusher, the agent for this State, is now compelled to retain only one teacher, which is the worthy principal, Miss Julia Kendall. Prof. E. J. Edmunds has, as a worthy servant of the public, having at heart the success of the school, and having sufficient work at his Academic School No. 4, tendered his resignation to the Hon. R. M. Lusher.

Prof. Edmunds leaves with sorrow, and on account of ill health, an institution where he had more pride than remuneration. He tenders, in retiring from the Normal School, his heartfelt thanks to the state and city superintendents for kindness bestowed upon him. He will, however, continue to cooperate with the

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<sup>29</sup>In 1883, the Colored Normal School would lose all remaining funding and would close (DeVore & Logsdon, 1991, p. 107).

board of regents to raise the standard of the colored teachers, who, according to Mr. Lusher, are in constant demand in the colored schools and in the country. I take this opportunity to appeal to the colored people to come forward and take hold of such an excellent opportunity.

(“The Peabody schools,” 1878).

It is unclear how long Edmunds stayed at the Academic School No. 4. The school lasted at most a few years before being shut down by the Board of Education. Lusher and the school board pushed for racially segregated education, and once they achieved it, they were unwilling to provide funding to maintain the city’s black institutions. Lusher gained support – or at least acquiescence – from some part of the black community for segregation by promising concessions such as appointments to the school board (DeVore & Logsdon, 1991, pp. 82-85). Yet by January 1882, the only schools in the city that permitted black children were thirteen schools that were combined “Grammar B” and primary schools (*Report of the Chief Superintendent*, 1882, p. 5). The “Grammar B” designation, which existed both for black and white schools, meant that the schools paid their teachers less, had fewer resources, sent fewer students to high school and were “poorest . . . in every way” (Harlan, 1962, p. 668). Whether it was because his school closed or for some other reason, Edmunds opened a night school to teach French and mathematics in April 1880 (“Prof. E. J. Edmunds informs his friends . . .” 1880) and then left New Orleans some time later that year to teach in Paris. Edmunds taught English, French, and mathematics out of an apartment at 11 Rue Toullier in the Latin Quarter of Paris (*The Analyst*, November 1880, p. 199).

While no integrated schools remained by 1879, integration received a symbolic final blow that year when the Democrats in power held a constitutional convention to rewrite the 1868 Constitution, removing, among other things, the school integration clause. P. B. S. Pinchback, the man who likely orchestrated Edmunds’ appointment to Boys Central High School, saw

segregation as inevitable and supported the new constitution in exchange for, among other things, a constitutional provision guaranteeing the creation of a public university for black students (Stern, 2018, p. 102). Many prominent black people did not yet accept Jim Crow laws as inevitable and saw Pinchback's pragmatic support of a segregated university system as a mistake that would undermine their cause of racial equality (DeVore, 2015, Ch. 1). The new Southern University, which is open still today in Baton Rouge, Louisiana, was chartered in the fall of 1880 and opened in 1881. Pinchback served on its first Board of Directors. Edmunds served as the professor of mathematics—and one of the two original faculty appointments—of the new Southern University.

An article from October 21, 1880 describes an early meeting of the Board of Trustees in which trustees decided upon details about the university, including the election of its new faculty. The board sought to open the university in November of that year and was hastily looking for a rental space and an interim mathematics professor while Edmunds returned to New Orleans from Paris. The requirements established for entrance to the university were as follows:

Before a student can be admitted to the University he must be of good moral character, and not less than 14 years of age, and pass a satisfactory examination in the following studies: English grammar, geography, history of the United States, and arithmetic.

("The Colored State University," 1880). Once at the university, students would study "mathematics, languages, ancient and modern, and natural sciences" ("The Colored State University," 1880). The board of trustees' pronouncement shows a very particular vision of a university as a place for advanced study and a broad, liberal education rather than a school that is primarily vocational, as some of the historically black colleges started.

As ambitious as the Board of Trustees was, the original plan for the university was even bolder. Henry Demas, a black state senator who was one of the university's chief architects,

introduced a bill to the state senate earlier that year (which ultimately failed) in which he laid out the full scope of his vision for a prestigious university, open to black but also to white students. If passed, Dumas' bill would have provided the university with funding for two years, a guaranteed number of faculty members, and scholarships to indigent black students. The bill would have enabled the university to "grant all degrees appertaining to letters and arts known to universities and colleges in Europe and America," established a school of law whose graduates could practice law in all courts of the state, and established also a school of medicine. Consistent with the race-blind vision of equality that the city's black leaders had pushed from the beginning, Southern University would have admitted students of any race and guaranteed white students "like and equal advantages, honors and privileges in all respects" ("The legislature," 1880). Dumas' vision for the university was rejected by the Democratic majority in the state legislature. The Senate committee on education struck much of Dumas' language before sending the bill to the floor for a vote where, by that time, it was so unobjectionable that it passed unanimously (*Official Journal of the Proceedings*, p. 269, 295). A small, cash-poor university opened the next year, in March 1881.

Edmunds' illness must have been worsening from the time he started at Southern University because there were complaints to the board of trustees about his unexplained absences ("Southern University," 1881). It was also at this time that Edmunds seems to have stopped his active contributions to journals of mathematics and education (to be discussed in the next chapter), suggesting that the illness was debilitating. A year later Edmunds moved to St. Joseph, Louisiana, a town of about 500 people on the Mississippi River in Northeast Louisiana, to teach the school for black children there ("The school for colored children," 1882). Edmunds also opened a night school, which offered private instruction in French, German, and Spanish:

Prof. E. J. Edmunds  
(From University of Strasburg and Paris.)

Desires to announce to the public that he will on MONDAY, March 6, 1882, open a NIGHT SCHOOL in St. Joseph, and is prepared to give private tuition in French, German and Spanish.

(“Prof. E. J. Edmunds,” 1882).<sup>30</sup> Edmunds remained well enough to travel back to New Orleans (by “steamer,” down the Mississippi River) at least twice in 1882—in April and again in August (“Local,” 1882; “Personal,” 1882).

At some point after August 1882, Edmunds grew too ill to work or to take care of himself. According to his obituary, his “mind became deranged” (“Death of a colored teacher,” 1887), and he spent the end of his life at the Louisiana Retreat, an insane asylum. Edmunds died in 1887 at the age of 36, leaving a wife (Rosa, a schoolteacher) and three young daughters (U. S. Census Bureau, 1880, p. 93). Edmunds’ parents held a service for him at the house where he grew up on Claiborne Street (“Death of a colored teacher,” 1887). One of Edmunds’ contemporary Afro-Creoles, Rodolphe Desdunes, eulogized him in a brief biography, which illustrated the hope that Edmunds must have brought to the community and also addressed his illness:

We must eulogize the name of Professor E. J. Edmunds. . . . On his return from school in France, state authorities quickly profited from his talents . . . . As always the newspapers attacked him. . . . The battle between the press and the young professor was of short duration. In order to end the annoyance, the master challenged all of his detractors to meet him at the blackboard. After that they left him alone. Professor Edmunds lost his mind as a result of a grievous illness.

(Desdunes, 1973/1911, pp. 72-73).

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<sup>30</sup> Edmunds also advertises himself as being from the “University of Strasburg and Paris,” which suggests that Edmunds may have attended the University of Strasburg in approximately 1874-1875 after leaving the Artillery School and before returning to New Orleans.

## Chapter 8: E. J. Edmunds' Contributions to Academic Journals

E. J. Edmunds was an active participant in various academic journals throughout his brief career. Edmunds' communications with these journals allow us to go beyond an analysis of the facts of his life and give a more direct window into who Edmunds was as a teacher. The communications express Edmunds' mathematical interests and beliefs and also show a man who was dedicated to his profession as a teacher and eager to connect with his peers. Additionally, the communications give national context to Edmunds' story and show the clear dichotomy in how Edmunds was treated by his peers in and out of the South.

Edmunds contributed to various journals of education and mathematics from around the country. His mathematical contributions were diverse, covering a range of mathematical topics and a range of levels. One contribution was to the *National Teachers' Monthly*, published in New York and Chicago from 1875 to 1877. The journal included a wide range of material such as articles on how to drill students in arithmetic problems, why history should be studied, and whether intelligence is innate. The journal also included correspondence with readers, including correspondence about mathematics problems. The problems were above a high school level at the time and likely were included in the journal for the purpose of allowing high-school mathematics teachers to practice their skills and learn from each other. Edmunds submitted an algebra problem to the journal in the spring of 1875 while he was the principal of Sumner School for black students, the very first job that he held in New Orleans:



Given:

$$x + y = 3\sqrt[3]{x - 1}$$

$$x^3 + y^3 = \frac{27}{x + y}$$

to find the values of  $x$  and  $y$ .

(*National Teachers' Monthly*, January 1876, p. 91).<sup>31</sup> He continued to submit problems and solutions to this journal over the next three years, including another published in November 1877 in which he asked, "How high above the centre of the earth must a person be raised to see one third of its surface?" (*National Teachers' Monthly*, November 1877, p. 26)

The *New England Journal of Education* had a similar format of article with letters from correspondents. Edmunds contributed problems and solutions to the journal at least from 1876 to 1879 (E.g., *New England Journal of Education*, December 1876, p. 256; *New England Journal of Education*, January 1879, p. 166). In the January 1879 edition of the *New England Journal of Education*, Edmunds also published an essay on entitled "The Study of Geometry":

As "Subscriber No. 2" asks for more information on so important a subject, I take pleasure in giving the results of my experience. I have studied in France and Germany, and can speak advisedly on the subject. I may even add that the majority of text-books on that science are defective. The only geometries that I find worthy of notice are Chauvenet's and Venable's. But I condemn Robinson's and Loomis's. The great meteorologist makes the words *equivalent* and *equal* synonymous. Robinson omits entirely to speak of geometric *loci*.

(*New England Journal of Education*, January 1879, p. 55). Edmunds' criticism of the two American mathematics textbooks and preference for the French is not surprising. The essence of his criticism, that the textbooks were imprecise and had not kept up with advances in the field, is

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<sup>31</sup> The correspondence related to the algebra problem Edmunds submitted gives a window into some of the hard feelings about his appointment to Boys Central High in 1875. A teacher named "D. M. Brosnan" writes in to say that he hasn't seen Edmunds' solution to the problem Edmunds himself submitted but "I have heard his is wrong." He then submits his own solution. Brosnan was the mathematics teacher Edmunds replaced at Boys Central High. When the school system was re-segregated and Edmunds was removed, Brosnan took his old position again.

consistent with scholars' later criticisms of nineteenth-century American mathematics textbooks. In fact, to the extent that the United States did start to catch up to Europe in mathematics education, it was only by copying French textbooks and methods (e.g., Parshall & Rowe, 1991, pp. 13-14; Cajori, 1890, p. 99).

Edmunds continued in his essay with advice about teaching geometry, and this advice, too, reflects his experience in France:

To teach geometry with success, the pupil must be taught how to think and how to investigate for himself. . . . I don't know of a better exercise for the improvement of a student than the working of problems. . . . There is no study so interesting and so important for the improvement of the mind [than geometry]. It rectifies the wrong directions our mind is generally inclined to take, and accustoms us to reason and be inquisitive.

E. J. Edmunds.  
Prof. of Mathematics  
New Orleans, La., Jan., 1879.

(*New England Journal of Education*, January 1879, p. 55). While it may seem self-evident today that students would learn mathematics through working problems, at the time the statement would have been controversial. When Edmunds wrote this essay in 1879, it was still common in the United States (and England) for students to learn mathematics by copying and memorizing procedures and proofs from a textbook and then reciting them by memory for the teacher. The French, by contrast, made enormous advances in mathematics in the nineteenth century, and those advances proceeded side by side with advances in mathematics education. It was the French who reformed mathematics education by focusing on problem solving over memorization. The Robinson textbook that Edmunds criticized in his essay, which was a popular and typical American geometry textbook and the one he used as a teacher at Boys Central High School, contains hundreds of pages of proofs and few practice problems (Robinson, 1862).

Edmunds contributed to at least three other education journals: *The Ohio Educational Monthly, Educational Notes and Queries*, and the *Louisiana Journal of Education*. His contributions were often, but not always, related to mathematics teaching. He shared a French geometry book for the primary grades with one journal (*The Ohio Educational Monthly*, 1881, p. 158) and a French book of philosophy and also a copy of the first issue of *Revue Pédagogique* with another journal (*Louisiana Journal of Education*, April 1881, p. 60; *Louisiana Journal of Education*, July 1881, p. 163). In a third journal, Edmunds responded to a reader's question about the political situation in France with a letter about a school teacher there who became a communist and political activist (*Educational Notes and Queries*, March 1881, p. 33-34). Edmunds also delivered a lecture at Pike's Opera Hall in Baton Rouge in June, 1882 about women's suffrage and public education ("75 years ago," 1957). (The content of the speech is unfortunately not recorded).

In addition to his contributions to educational journals, Edmunds contributed to the various mathematics journals of the time. Historian Florian Cajori (1890) addressed the history of mathematical journals in the United States in the nineteenth century leading up to the founding of the country's first real research journal of mathematics, the *American Journal of Mathematics* in 1877. Before that, journals existed to provide the mathematical teaching community with a forum to exchange practice problems, but original mathematics was not even a clear goal of college mathematics departments until late in the century. The country's earliest mathematics journal was the *Mathematical Correspondent*, which started in New York City in 1804 and lasted only eight issues (Cajori, 1890, p. 94). Cajori named several other journals published over the course of the century. Some contained occasional original mathematics by the few important figures of the period like Benjamin Peirce, but none lasted long (Cajori, 1890, p.

94-97). The end of the nineteenth century included journals of a “higher grade,” including the *Analyst: A Monthly Journal of Pure and Applied Mathematics*, a monthly (later bi-monthly) journal published by Joel E. Hendricks, a self-taught mathematician, out of De Moines, Iowa from 1874 through 1883. Cajori called the list of contributors to that journal a “new generation” – “the most prominent teachers of mathematics in this country” (Cajori, 1890, p. 279-280).

The *Mathematical Visitor* and the *Mathematical Messenger* were published around the same time by another self-taught mathematician, Artemas Martin. As Martin explained in the preface to the first edition of the *Mathematical Visitor* in October 1878, his purpose was to cultivate a new generation of mathematical talent:

In England and Europe periodical publications have contributed much to the diffusion of mathematical learning, and some of the greatest scientific characters of those countries commenced their mathematical career by solving problems proposed in such works. . . . Similar publications have produced like results in this country. Not a few of our ablest teachers and mathematicians were first inspired with a love of mathematical science by the problems and solutions published in the mathematical department of some unpretending periodical.

(*The Mathematical Visitor*, October 1878, p. 1). Martin made it clear in this introduction that his primary purpose was to reach people new to mathematics and to cultivate their interest with unpretentious problems. Perhaps Martin, a self-taught mathematician, was thinking about how he was first inspired. To ensure that he was reaching everyone, Martin included a “junior department” for “students and persons who have not advanced very far beyond the elementary branches” (*The Mathematical Visitor*, October 1878, p. 1) and yet also included a more advanced “senior department” and even a section of unsolved problems.

In spite of its elementary content, contributors to the *Mathematical Visitor* – even its junior department – included the century’s most important American mathematicians at the peak of their careers, including James Joseph Sylvester and Benjamin Peirce. E. J. Edmunds, too,

contributed a many solutions and a few problems to the *Mathematical Visitor*, including the three following problems:

227.—Proposed by E. J. Edmunds, B. S., New Orleans, Orleans County, Louisiana [for the Senior Department].

Prove that  $\Gamma\left(\frac{1}{n}\right) \cdot \Gamma\left(\frac{2}{n}\right) \cdot \Gamma\left(\frac{3}{n}\right) \dots \Gamma\left(\frac{n-1}{n}\right) = (2\pi)^{\binom{n-1}{2}} \cdot n^{-1/2}$ ,  
 $n$  being a positive integer and  $\Gamma$  denoting the well known Eulerian integral.

(*The Mathematical Visitor*, January 1879, p. 83).

121.—Proposed by E. J. Edmunds, B. S., Principal of Academic School No. 3, New Orleans, Louisiana [for the Junior Department].

A triangle being given it is required to compare its area with that of the triangle formed by connecting the feet of the bisectors of its three angles.

(*The Mathematical Visitor*, July 1880, p. 125).

270.—Proposed by E. J. Edmunds, B. S., Professor of Mathematics, Southern University, New Orleans, Louisiana [for the Junior Department].

Circumscribe a circle about a triangle  $ABC$ ; draw  $AD$ ,  $BE$  perpendicular to  $BC$  and  $AC$  and intersecting in  $P$ ; produce  $AD$  to meet the circle in  $F$ , and show that  $DP = DF$ .

(*The Mathematical Visitor*, January 1881, p. 176). One of Edmunds' problems from *The Mathematical Visitor* with its solution was re-published more than one hundred years later in a volume published by the Mathematical Association of America:

$P$  is an arbitrary point on the side  $BC$  of  $\Delta ABC$ . Determine how to draw a segment  $QR$  across the triangle which is parallel to  $BC$  and which subtends a right angle at  $P$ .

(Honsberger, 2004, p. 147-148). Edmunds also contributed solutions and at least two problems to the *Analyst*, the journal described by Cajori as being of a higher level than the *Mathematical Visitor*:

310. *By Prof. Edmunds.*—Required the locus of vertices of a right angled spherical triangle whose legs pass through two fixed points given on the surface of the sphere.

(*The Analyst*, May 1880, p. 103).

309. *By Prof. E. J. Edmunds, Professeur de Francaise & Anglais et de Mathématiques, 11 rue Toullier, Paris.*—Three points,  $A, B, C$ , being given, to find a point  $M$ , whose distance from  $A, B$ , and  $C$  shall be a minimum.

(*The Analyst*, November 1880, p. 199). This problem, to find the Fermat point of a triangle, was well known in Europe and demonstrates again the influence that European sources of mathematics had on Edmunds and how those influences could make their way to the United States.

Edmunds was an active participant in the country's community of professional educators and in the country's mathematical community where, at least in that context, he stood side by side as a peer and was respected by the country's best mathematical minds. Edmunds made these contributions from approximately 1875 to 1881, at the same time he was enduring racist attacks and professional turmoil at home after he was removed from one position and then another as the New Orleans public school system was dismantled. The academic journals must have been a source of intellectual stimulation for Edmunds but also a place where he could be treated with the respect that he deserved. Edmunds' contributions also give a glimpse into his beliefs and attitudes about mathematics teacher and show his breadth of interests as a mathematics teacher.

## **Chapter 9: Conclusions and Recommendations**

The present study investigated all aspects of the life and career of E. J. Edmunds. The study gives a rare example of a nineteenth-century African-American man who was able to overcome the many obstacles placed before him to achieve the highest level of mathematics education. Viewing Edmunds' life as a unit of study also helps us to understand better the educational practices and institutions in the time period in which he lived. Gert Schubring (1987) argues that traditional methods of studying the history of mathematics education, such as analyzing a textbook out of context, "neglects the social and cultural context" and that to gain a broader understanding, it is productive to look at the dynamic relationship between a textbook, on one hand, and the teachers, students, and institutions that interacted with it. Similarly, Edmunds' life is a thread that touches and connects various communities, publications, and institutions that are of interest to the historians of nineteenth-century American mathematics education, and the details of each interaction Edmunds had contributes a more dynamic, fuller social context to our understanding of this time period.

The present study was motivated by various research questions, which are answered below.

### **9.1 Research Questions Answered**

#### **Research question 1a: What was the cultural and family background of Edmunds?**

As explained in Chapter 3, Edmunds came from a culturally distinct group in New Orleans. Edmunds' background helps to explain both the opportunities and obstacles that he encountered in his education and career. The Afro-Creoles came into existence in the first place because of the relative openness of French colonial New Orleans. French men had relations with

women of African descent even though prohibitions on marriage remained in place. Those women who were enslaved were sometimes freed, but even when they were not, often their children were freed. Over time there arose a large French-speaking, mixed race group, which lived with the paradox of being connected to white, French families of high status and yet also burdened with the legal designation of “f.p.o.c.” The Afro-Creoles were integrated into privileged New Orleans society in some respects. They owned property, they inherited money, they were well educated, and they sent their sons to France to study. And yet they lived with increasingly burdensome restrictions over the course of the nineteenth century.

Edmunds family reflects these contradictions. While he lived with the indignity and restrictions of a “free person of color,” he came from a family with both the education and the means to open doors for him. Edmunds’ father, a successful African-American businessman, who traveled widely, owned both real estate and stocks, and worked his way up to the position of director in the firm where he spent his career. Edmunds’ grandfather, Prosper Foy, was a prominent, white French plantation owner with broad intellectual interests and a vast library of books. While Edmunds’ African-American mother, Rose Foy, lived in New Orleans in a separate household from her father, the evidence from Foy’s archives shows that he cared about his children the way a father would, that the children wrote letters to him and spent time with him at his plantation, and that he supported their education, and that he left them his estate when he died. There is also reason to believe that Edmunds’ African-American family on his mother’s side were sophisticated and well-educated. Edmunds’ grandmother, Zélie Aubry, owned property (even slaves) and managed her complex financial affairs through the courts when necessary. All together, the circumstantial evidence suggests that Edmunds’ family had the means and



sophistication to provide him with educational opportunities, including perhaps tutors and study in Paris.

Edmunds' circumstance was also unique because he grew from a teenager to a young man during a unique time in the history of African Americans in which – at least in this one community – there was optimism about achieving legal equality, and there was powerful political and social momentum in the direction of achieving that goal. As explained in Chapter 3, Edmunds and his siblings were among the first Afro-Creoles to enter white public schools, and they did so even before the school board policy had changed to allow integration. New Orleans, which was one of the few (and the largest) Southern city with a significant free black population before the war, was one of the only places that such a movement could have happened, and therefore the city drew ambitious African-American leaders from around the country to help the cause. Given the energy of the moment, it should not be surprising that Edmunds, growing up in this time and place, would have his own ambitions and would have the optimism to believe that he could return to New Orleans and have a meaningful career.

**Research questions 1b and 1c: What was Edmunds' educational background, and how was Edmunds able to prepare himself for the rigorous entrance exam of the École Polytechnique? What educational opportunities were available to free blacks in New Orleans before Reconstruction, and how typical was Edmunds' educational background?**

As unlikely as it seems that an African-American man born in the pre-Civil-War American South could test into one of the world's best colleges of mathematics and science, it is incontrovertible Edmunds did exactly that. As far as is known, no direct evidence exists of how Edmunds prepared for the examination, and so this study relies on circumstantial evidence, including evidence of what education was available generally to free people of color in pre-war

New Orleans. As mentioned in Chapter 3, Edmunds was recorded as being not enrolled in school at the time of the 1860 census, which was typical for children among the Afro-Creoles at that time. While Afro-Creoles were excluded from the city's public schools, they found ways to educate their children. At the time Edmunds was growing up, there was a network of small community schools run by private tutors out of homes. As discussed in Chapter 4, many of the prominent members of the community were involved in the community's educational institutions and taught as private teachers. A receipt among Prosper Foy's papers suggests that his son, Florville, was educated that way, and it is reasonable to think that Edmunds was educated that way as well.

While Edmunds would have learned to read and write in French and English at these schools and would have learned arithmetic too, there is no evidence of anyone in New Orleans at the time that could have taught Edmunds mathematics at the level he would have needed to test into the *École Polytechnique*. The well-known teachers and intellectual figures of the community, detailed by Marcus Christian and Rodolphe Desdunes, included poets, writers, and musicians, but no high-achieving mathematical figures, other than Edmunds himself. In fact, evidence presented in Chapter 4 shows that even among white people with access to Louisiana's best institutions, no one would have had the mathematical background (including the study of analytic geometry, functions, limits, and descriptive geometry, for example) to prepare Edmunds for the entrance exam of the *École Polytechnique*. Edmunds would have needed access to people, or at the very least books, from France to prepare for the exam. And considering that most French people who took the exam received a very specific training in the secondary schools and also in private classes—training not only in mathematics content, but in exam strategies—it is

very difficult to imagine Edmunds passing the exam without some connection to the French system of education.

It is possible that Edmunds spent time in France studying mathematics and preparing for the entrance exam to the *École Polytechnique*. Approximately eight years of his childhood, from 1860 (when he was nine years old) until 1868, are undocumented. However, it is known that in the years just prior to taking the exam in 1871, Edmunds was enrolled in a public grammar school in New Orleans, the Fillmore School, and it seems unlikely that if Edmunds were studying mathematics at a high level in France and preparing to enter the *École Polytechnique*, that he would return to New Orleans at seventeen years of age to enter a grammar school.

Another possibility is that Edmunds taught himself from French books. Edmunds' father traveled to France multiple times on business, and Edmunds' grandfather maintained a vast library of French books including Legendre's geometry and trigonometry book, and so it is reasonable to think at least that Edmunds had access to the books and testing information that he would have needed to prepare for the exam. If indeed Edmunds prepared for the examination from books alone and without access to specialized tutors who were familiar with the exam, then he would have been at an enormous disadvantage compared to French applicants, and if so, it speaks to Edmunds' unusual intelligence and aptitude for mathematics.

**Research question 2a: What events led up to Edmunds appointment, and how was the controversy resolved?**

As discussed in Chapter 6, Edmunds' appointment was a highly significant event in the heated political climate of post-war New Orleans. Radical Reconstruction under the federal occupation of New Orleans had made room for African Americans from both in and out of Louisiana to rise to positions of political power. These political elite were ambitious and highly

principled and uniform in their goals. They envisioned a post-war Louisiana in which racial designations would be stripped away and all (male) citizens of the state would comprise a homogenous citizenry of free and equal individuals. Crucial to that vision was a public school system open to all children regardless of race, and from approximately 1871 to 1877, the city's African-American leaders and their allies created the South's only integrated public school system from that era. While integration was not complete and was not free of problems, it is significant that it existed at all, and the schools that implemented integration successfully operated that way without major incidents for several years.

In December 1874 came the first major clash as a group of African-American girls tried to enroll in one of the city's high schools and the white-supremacist press had its first success in pushing back against integration by organizing protests and walk-outs. As tension and urgency grew, the majority-black school board of 1875, led by the city's most ambitious and outspoken African-American politician, P.B.S. Pinchback, took a bold step by carrying integration one step further and appointing Edmunds as the mathematics teacher for the city's best public high school, the Boys Central High School. (The feeling among white supremacists, as reflected in the newspapers of the time, was that having black children sitting next to white children was an indignity, but that having a black man in charge of white children was a threat to the balance of power.) Pinchback must have understood both that Edmunds' appointment would be controversial and that Edmunds was the perfect test case. He was from a well-respected, old New Orleans family, he was highly intelligent and highly educated, and he was approximately seven-eighths white. If the city's white-supremacists objected to Edmunds, then they would be forced to take the extreme position that any African ancestry, no matter how little, would place an individual in a lower caste.

In fact the press and their white-supremacist reader base did push back against Edmunds. The press whipped the public up into a frenzy of anger and indignation – a strategy they had developed in organizing the protest over the girls high school the previous year. In response to Edmunds’ appointment, the newspapers ran stories every day talking about the dangers of racial mixing and encouraging citizens – including parents, teachers, and students – to protest and even boycott the schools. Edmunds and Pinchback were successful in the short term; Edmunds largely ignored the storm around him, avoided the fights that white supremacists tried to instigate, and kept his job for two years. However, in the long run, the overwhelming tide of racial fear was too much, and when the protection of federal troops was abruptly lifted from Louisiana in 1877, the state descended into what would be decades of racial segregation and racial oppression.

**Research question 2b. What arguments were made in the press about the Edmunds’ controversy, and which groups were involved in the campaign in the press?**

The white supremacist press was one of various constituencies who had an interest in Edmunds’ appointment. The Afro-Creoles must have seen him as an inspiring representative of their community. Ever since the enslaved population was freed, the status of the Afro-Creoles was precarious. For years under the federal occupation it was unclear whether they would retain their status and their freedoms. The 1868 Louisiana Constitution and the later push for school integration would have given them hope, and in fact, as discussed in Chapter 4, it seems that the Afro-Creoles began to enter white public schools quietly as soon as the 1868 constitution was ratified, well before the school board forced the issue in 1870. By doing so, the Afro-Creoles staked out their claim to full participation in the city’s public institutions. Yet, while there was hope, the Afro-Creoles also witnessed the white supremacists’ violent backlash, including an attempted coup in 1874 and a campaign to physically intimidate and remove black students from

their classrooms in December 1874. When Edmunds was appointed in September 1875, the Afro-Creole population likely felt this mix of hope and fear.

The city's African-American political leaders had their own interests that were separate from those of the Afro-Creole community, even though some of them were part of that community. Those who were culturally French were worldly and sophisticated and had internalized the anti-aristocratic ideals and the energy of the French Revolution. The most prominent African American leaders of the time, however, including Pinchback and Brown, were not Afro-Creoles. They were American and Caribbean blacks who were drawn to Louisiana and to the possibility there of drafting a new Constitution and founding a new political system based on racial equality. These men were willing to take bold, visible actions to achieve their ends in spite of the obvious risks of igniting violence and even losing the ground that they had achieved, which is of course what ultimately happened.

When the city's African American leaders took steps to strip racial designations from the city's schools and other institutions, the ex-Confederates and their allies who had been stripped of power felt an urgency to establish a clear, new post-slavery racial order. That urgency was greater in New Orleans than elsewhere because Louisiana was a majority black state, and the pre-war status of the mixed-race Afro-Creole community meant that the lines between black and white, had not been clear. Because the end of slavery meant that the old, precarious social hierarchy no longer existed, there was an urgent push to create a new one based on clear, binary racial categories. The city's ex-Confederates and other white supremacists did this work through various institutions that worked outside the political process. This included the White League, a paramilitary organization responsible for the 1874 coup, and the *New Orleans Bulletin*, the press arm of the White League.

While other contemporary New Orleans newspapers tended to echo the same white supremacist language as the *New Orleans Bulletin*, the *Bulletin* was the most vocal on issues of racial integration, particularly in schools, and was instrumental in organizing and giving fuel to the protests of December 1874 as well as the protests over the Edmunds appointment. As explained in Chapter 6, the *New Orleans Bulletin* published the a story about the Edmunds appointment on September 14, 1875, the day after Edmunds started at Boys Central High School, to draw attention to the senior class protest. From there, the *Bulletin* published stories daily—sometimes multiple times a day – over Edmunds’ appointment in an effort to stir up anger and ignite protests in the way it had done successfully with the December 1874 protests. The *Bulletin* encouraged further protests including urging teachers to boycott the schools and parents to withdraw their children – to abandon the schools for the sake of saving them – and even encouraged further violence by publishing the names of black teachers and students to be removed by vigilantes.

Coupled with the imperative to act was a propaganda war to justify the movement’s moral high ground, and the language grew more extreme over time. The *Bulletin* and the rest of the conservative press painted a picture of an us-versus-them war between two poles – white versus black, good versus evil, purity versus filth, even human versus animal. While the language of the *Bulletin* seems extreme even for nineteenth-century white supremacists, the editors of the *Bulletin* must have understood clearly what was at stake. If they could not offer an urgent moral justification for removing Edmunds, who was of approximately one-eighth African descent, then the lines would be blurred and the racial hierarchy would crumble. These views could not have been universally held among New Orleans’ white population or school integration would not have lasted as long as it did. It seems that most New Orleanians, at least in

the French-speaking parts of the city, at least tolerated racial mixing. Whether or not the majority of New Orleans citizens at that time held such racist views, the loudest voices were the ones who did. And as soon as federal protection was withdrawn from New Orleans' political process, the white supremacists seized power, removed Edmunds from his position, and re-segregated New Orleans' school system, which is how it remained for more than eighty years.

**Research question 3a: What are the details of Edmunds' career in mathematics education after he was removed from his controversial appointment? In particular: What contributions did Edmunds make to black education and to mathematics education after the controversy?**

As detailed in Chapter 7, Edmunds never fully recovered from his removal from Boys Central High School. It is clear from available evidence that Edmunds began to suffer from an illness of some kind which would eventually take his life at the age of 36. Also, the difficulties Edmunds had under the Democratic-controlled schools system were not unique to Edmunds. Aside from problems that came with re-segregation, there was a general attitude of ambivalence about public education from the very politicians who were in charge of running and protecting it. Spending was cut, schools were closed, positions were eliminated—all in the name of eliminating extravagance and waste. The city's black schools bore much of the brunt of this assault on the school system. After Democrats gained support – or at least acquiescence – for segregating schools with the promise that there would be a black school system, they soon withdrew funding and support for these schools. After his removal from Boys Central High School, Edmunds briefly held various positions in the black schools of higher education. He was the principal of the “Colored High School,” and the mathematics professor of the “Colored Normal School,” until the positions were eliminated and the schools closed. Edmunds returned to



Paris to teach for a short time until the position at Southern University was offered to him, and this was the one black institution of higher education from that period that did last. Edmunds was the school's first professor of mathematics, although he held that position only briefly, probably because of ill health.

While Edmunds was struggling to find his place as a mathematics teacher in New Orleans, he was also reaching out to various journals of education and mathematics, as detailed in Chapter 8. Edmunds was an active contributor of problems, solutions, and even an essay on the teaching of geometry. These journals were not journals of research mathematics, but they were significant in nineteenth century mathematics education as a teaching tool and a form of community outreach from the country's prominent mathematics professors to teachers, students, and autodidacts around the country. Edmunds found, connected with, and contributed to this broader mathematics community even as he struggled to be accepted in his own city.

**Research question 3b: What do the details of Edmunds' career clarify about the relationship of American and French mathematics at the time?**

As explained in Chapter 1, in the nineteenth century, there was very little cultural exchange between the French and American mathematical communities. And yet Edmunds maintained a foot in both mathematical worlds. He was culturally French, and as was common in the Afro-Creole community, he studied in France. While this cultural exchange was uncommon among Americans generally, Edmunds was unique even in his community in that he tested into, attended, and graduated from France's most prestigious college of mathematics and science, the *École Polytechnique*. A study of Edmunds' career reveals rare evidence of the contemporaneous opinions of someone with firsthand knowledge of both mathematical cultures. Edmunds' letter, for example, published in the January 1879 edition of the *New England Journal of Education*,

showed someone familiar with both French and American teaching methods and textbooks. Edmunds' opinion aligns with what mathematics education researchers have noted – that nineteenth century Americans had lagged behind the French in both mathematics and in methods of mathematics education. Even Edmunds' presence at the *École Polytechnique* tells us something about the relationship between French and American mathematics education at the time. It shows at least one example of the ways cross-cultural exchanges can happen and can spread novel ideas about mathematics education across an ocean. James Joseph Sylvester's movement to Johns Hopkins is perhaps the most well-known example, but Edmunds' movement between French and American mathematics classrooms shows how the same cultural exchanges can happen on a smaller scale.

## **9.2 Limitations of the Study**

The present study used documents from various archives in Paris and New Orleans, as well as many documents available in online databases, to piece together the story of Edmunds to understand both what happened and why it happened. While the present study uncovered much of Edmunds' story, there remain gaps due to limitations in availability of evidence. The study used mostly circumstantial evidence, for example, to draw conclusions about Edmunds' pre-college education. The direct evidence available consists of three documents (or sets of documents): (1) the 1860 census, which recorded that Edmunds was not in school at age nine, (2) newspaper reports from the period 1868 to 1871, and “white” birth certificate filed in 1868, showing that Edmunds took advantage of the opportunity to enroll in a white grammar school when it was available to him at approximately seventeen years old, and finally (3) Edmunds' entrance exam results at the *École Polytechnique* in 1871. These documents leave many holes to fill in – primarily the great mystery of how Edmunds was able to prepare for the entrance exam

of the *École Polytechnique* without the very specialized training that French students receive. And yet it remains incontrovertible that Edmunds did test into the school and that he did spend his adolescence (at least mostly) in New Orleans, not Paris – two facts that seem incongruous. Logically, there are various possibilities for how he could have prepared for the test, and only further documentary evidence (such as travel records or diaries) could give a definite answers.

Finally, Edmunds’ time in France is partially documented through the archives of the *École Polytechnique*, but those records do not fill in all of the details. It is known, as explained above, that Edmunds started, but did not finish his appointment at the artillery school after finishing at the *École Polytechnique*. This study was not able to uncover evidence of how Edmunds was able to avoid military service and why he left. This study was also not able to confirm whether Edmunds did indeed study at the University of Strasbourg and, more generally, what happened from the time he left the artillery school in France in approximately 1873-1874 until he took the position as the principal of the Sumner School in New Orleans in 1875. It is possible that there are documents in the archives of the University of Strasbourg that could answer some of these questions, but this study was not able to uncover such documents within the time frame of the study.

### **9.3 Recommendations for Further Study**

This study raises several issues for further study. One significant event to researchers of the history of education and African-American history generally is New Orleans’ unique nineteenth-century experiment with school integration. While this is a well-worn area of study, this study complicates the picture painted by other researchers by showing, for the first time, that Afro-Creoles were quietly entering New Orleans public schools in significant numbers before it was the official policy of the school board. Even before the school board was in the hands of

Afro-Creoles and their allies, ordinary Afro-Creoles took matters into their own hands, in at least one case even changing the racial designation on a birth certificate, to break down the racial barriers that had kept them out of New Orleans public schools since their founding decades earlier. Additionally, this study shows evidence that local school officials looked the other way as Afro-Creoles entered schools in the French-speaking parts of the city and in the case of Olivia Edmunds and the Bayou Road girls, even lied to protect the girls. These new facts raise more questions than they answer, and therefore a valuable area of study would be to look at individual school records more closely to see how widespread this Afro-Creole movement to enter schools was and who, if anyone, directed it.

Another important issue raised in this study was how Edmunds, who had connections to both New Orleans mathematics and French mathematics, made sense of the two very different systems and to what extent his French training informed his teaching. The value of Edmunds as a case study lies, in part, in seeing how various trends, institutions, and communities in mathematics education interact when they are forced into contact with each other. The United States was largely isolated from the developments in French mathematics until the late nineteenth century, and Edmunds was one of the few individuals who was in a position to hasten the French influence in the United States. It is known, as mentioned in Chapter 8, that Edmunds wrote a brief essay about geometry teaching which sounded more French than American and was highly critical of American textbooks. And yet Edmunds taught in a traditional American high school, presumably with those same American textbooks. The available evidence from this study does not answer the question of how Edmunds reconciled that contradiction in his teaching. It is also known that Edmunds contributed two French mathematics textbooks to journals of education, presumably because he felt that the Americans could learn something from the

French. Further research into the writings of Edmunds may uncover more evidence of his thoughts about French and American mathematics pedagogy. Additional research may also uncover similarly situated mathematics educators with cross-cultural experiences that would give them a valuable perspective about this period of change and European influence in American mathematics education.

Another potential area of further study concerns the mathematics journals to which Edmunds contributed. Some research has been conducted on these journals, primarily viewing them as precursors to more “serious” research journals like the *American Journal of Mathematics*. However, seeing the connection that Edmunds had to these journals and the importance of the journals in his own career – in connecting him to a mathematical community since none was available to him locally – raises the question of whether these mathematics journals played a similar role in the lives of other aspiring mathematics teachers and mathematicians.

Also of interest is the question of Edmunds’ uniqueness. New Orleans was certainly unusual and perhaps unique among Southern cities in the nineteenth-century South. Edmunds’ circumstance was unusual even in New Orleans. He was a person of color who came from a family with the education and the means to see his potential and to make available to him the best possible education. One potential topic for further study is whether other cities, such as perhaps Charleston, South Carolina, which also had a significant population of free people of color before the war, produced individuals such as Edmunds who also reached high levels of mathematical preparation. Kelly Miller, the first black graduate student in mathematics (born in South Carolina in 1863) and Robert Robinson Taylor, the first African American to attend the Massachusetts Institute of Technology (born in North Carolina in 1868) were two such

individuals. Further research would help determine if there were others and to see what common threads their lives might have had.

#### **9.4 Final Remarks**

E. J. Edmunds was born under a unique set of circumstances. He was privileged enough to have access to the best education, and yet because of his racial background, he faced indignities, restrictions, and even threats when he dared to seek an education and career commensurate with his intellect. Edmunds' life was unusual also in that he was also born during a moment of revolution in the United States in which the country fought a war over the idea of "citizenship" and who was really an American deserving of the country's privileges and protections. Edmunds was educated in New Orleans before the Civil War started, and he spent his short life and career during the war and its aftermath – in a time where the rights of African Americans were broadened and then suddenly curtailed by Democratic Redeemers. In this short period of his 36-year life, Edmunds was, first, a child forbidden from attending New Orleans public schools because of his legal designation as a "f.p.o.c.," then a student at the world's best college of mathematics and science, then the head of the math department at New Orleans' best high school, and finally a moral "threat" to the city's white students who must not be allowed in contact with them. As Edmunds navigated this shifting social and political landscape, aspects of his life were documented in government and school archives and in family records. Those documents give us a window not only into the details of Edmunds' life, but also into the enormous obstacles and fleeting opportunities in the lives of nineteenth-century African Americans with talent in mathematics.

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