

RECONCILIATION NARRATIVES

–“The Birth of a Nation” after the US Civil War– *

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Abstract

We study how the spread of the *Lost Cause* narrative – a revisionist and racist retelling of the US Civil War – shifted opinions and behaviors towards national reunification and racial discrimination against African Americans. Looking at screenings of *The Birth of a Nation*, a blockbuster movie that greatly popularized the *Lost Cause* after 1915, we find that the film shifted the public discourse toward a more patriotic and less divisive language, increased military enlistment, and fostered cultural convergence between former enemies. We document how the racist content of the narrative connects to reconciliation through a "common-enemy" type of argument.

Keywords: Reconciliation, Narratives, US Civil War, Segregation, African Americans

JEL Codes: D74, N92, Z1

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“History is a set of lies agreed upon.”

–Napoleon Bonaparte–

Although recurrent wars and persistent hatred are common throughout history, former enemies have also been known to reconcile, sometimes quite suddenly.¹ One such famous reconciliation was between France and Germany, which fought three wars in less than a century but went on to become founding nations of the European Union. What are the cultural drivers of these reversals of distrust and animosity?

Historians and social scientists have long emphasized how narratives of past wars can keep old wounds alive or, conversely, heal minds and foster reconciliation (see Cilliers, Dube and Siddiqi 2016). Mental framing of memories and selective recollection of facts about the causes of conflicts, the deployment of violence, and the settlement of disputes can profoundly influence beliefs and representations. These narratives can take many different forms, from founding myths to divisive expressions of hatred. When it comes to nation building, narratives often rely on the existence, real or imagined, of a common enemy.² But what is the actual impact of these historical narratives? Do they causally and meaningfully change opinions and behaviors? Or are they rather ex-post rationalizations and simplified explanations for economic and political processes that involve deeper stakes and special interests? We research these questions using quantitative empirical methods.

Specifically, we study how the spread of the *Lost Cause* narrative – a revisionist retelling of the history of the American Civil War (1861-1865) – contributed to national North-South reunification. The Civil War caused unparalleled destruction and violence, and left American society deeply divided. Post-war reconstruction was slow and fragile.³ In a population experiencing a generalized sentiment of loss and trauma, the *Lost Cause* emerged as a way to preserve the honour of those who lost the war, by offering an alternative narrative about the real causes of the conflict and the threats the country faced. In 1915, an extreme version of the *Lost Cause* narrative, which had formerly been confined to educated circles, was popularized across large segments of the population by the Hollywood blockbuster *The Birth of a Nation* (BON hereafter). The narrative and movie plot are about reconciliation, racism and discrimination, based on a common-enemy logic whereby in the aftermath of the conflict, former enemies from Unionist and Confederate states, threatened by the enfranchisement of African Americans, must unite to restore white supremacy. While the racist legacy of the movie and its impact on anti-Black violence has long been acknowledged by scholars in American history (see Ang (2020) for compelling evidence), our aim here is to analyze another, often overlooked, facet of the *Lost Cause* narrative, namely its impact on reconciliation. In particular, we explore the hypothesis put forth by David Blight (2009) that the societal cost of

¹Collier and Hoeffler (2005) find that more than two thirds of conflict outbreaks take place in countries where multiple conflicts have been recorded. DeRouen and Bercovitch (2008) document that a large majority of civil wars stem from enduring rivalries. More broadly, Voigtländer and Voth (2012) and Voth (2020) discuss the persistence of hatred and hostile attitudes.

²Several examples of common-enemy narratives are reported in Section VI.

³Considerable animus persisted on both sides after the end of the war (see Buck 1937; Foster 1988; Silber 1997 and Blight 2009, among others). Online Appendix Figures A1 and A2 illustrate this with newspaper extracts referring to on-going sectional tensions and debates about the causes and consequences of the Civil War five decades after the end of the conflict.

reunification was the re-subjugation of Black Americans.⁴

We explore a variety of attitudes towards reconciliation and racism in the US between 1910 and 1920 and estimate the impact of the screening of BON on these attitudes at the county level after its national release in 1915. Our analysis is focused on reconciliation. Our main outcome variable is a new monthly county-level measure of opinions related to national unity, derived from a text analysis of a large dataset of local newspaper articles, containing more than 25 million pages from around 3,760 newspapers located across more than 1,000 US counties. We also consider two outcome variables that we interpret as behavioral markers of reconciliation. The first one measures patriotism by looking at enlistments in the US Navy. The second one relates to the cultural origins of the names given to newborn babies.⁵

Our baseline finding is that the screening of the movie induced (i) a semantic shift in public discourse towards a more nationalistic and less divisive rhetoric, (ii) a surge in patriotism, with increased enlistment in the Navy, and (iii) a cultural convergence between former Confederate and Unionist states, with higher uptake of first names traditionally associated with the former enemy's regional identity. All in all, these findings show that the exposure to the *Lost Cause* narrative, as framed in the movie, shifted opinions and behaviors towards reunifying the country. Note that our empirical setting limits us to examining the effect of the narrative in its entirety: we cannot disentangle the separated effects of its different tenets (e.g. the celebration of the courage of soldiers, the rising threat of African American enfranchisement. . .). In support of the common-enemy logic of the narrative, we document how the movie concurred to an increase in racial discrimination throughout the country, strengthening white supremacy in public discourse and discrimination against African Americans on the labor market. All of these empirical results appear to be stable and statistically robust to a large battery of sensitivity checks (alternative definitions of the variables, estimation samples, econometric models, etc.). Importantly, we detect an impact of the narrative within both former Confederate states and former Unionist states.

There are several methodological challenges in the study of reconciliation narratives. The first is measurement. Here, using a movie as the main vector of the large-scale diffusion of the *Lost Cause* offers a unique opportunity to trace its spread within the population in a fine-grained and accurate manner. The 1910s – the decade immediately preceding the Golden Age of Radio – is the last period in US history in which the media environment consisted of a limited number of mostly local media sources. Screenings of BON in town theaters, with the film's astonishing visual effects (see section I.), may have left long-lasting impressions on audiences, who had few alternative sources to counter the perspectives offered by the *Lost Cause* narrative.

A second challenge arises because exposure to a narrative is endogenous. In the context of social media, for example, it is now well established that users tend to self-select into the news and information content they are exposed to (Bakshy, Messing, and Adamic 2016, Halberstam and Knight 2016). To address this concern, we instrument screenings of BON (our treatment variable) with screenings of *The Million Dollar Mystery* (MDM hereafter), an adventure that was released 231

⁴In Blight's (2009) words: "In the end this is a story of how the forces of reconciliation overwhelmed the emancipationist vision in the national culture, how the inexorable drive for reunion both used and trumped race."

⁵We also look at intermarriages between spouses from former Confederate and Unionist states in Online Appendix G.

days before BON. The plot of MDM, a film about a secret society that attempts to gain control of a missing million dollars, is politically neutral and radically different from that of BON. The statistical power of the instrument relies on the fact that the spatio-temporal distribution patterns of MDM and BON are highly correlated. Our key identifying assumption is that the demand for MDM is exogenous to local opinions and attitudes, particularly those related to reconciliation and discrimination. In support of the exclusion restriction assumption, we perform two falsification exercises. First, looking at cross-county mismatches between the instrument and the treatment variable, we show that MDM impacted attitudes only in counties that screened BON. Second, we show that the instrument affected attitudes only after the official release of BON in the country, and not before.

Our empirical analysis, and the paper by Ang (2020), are the first quantitative studies to document the large-scale impact of BON across the US. Ang (2020) documents how exposure to the movie increased lynchings, race riots and local support for the KKK, with effects on racial violence that persist to the present day. Our study shows that the movie played a key role in national reconciliation and illustrates how its racist content was in fact instrumentally exploited to foster reconciliation. While our paper and Ang (2020) were originally conceived and developed independently, the two research teams combined efforts at the revision stage, cooperating on important methodological aspects, such as data collection and measurement of the historical spread of the movie.

Our main contribution is to the literature on conflict and reconciliation, joining a stream of new empirical research that explores reconciliation, peace- and nation-building policies (Cilliers, Dube, and Siddiqi 2016; Fearon, Humphreys, and Weinstein 2015; Depetris-Chauvin, Durante, and Campante 2020). Within this stream of research, we join quantitative works documenting how, at the end of a conflict, memory becomes the new battlefield (Fouka and Voth 2016; and Ochsner and Roesel 2017, Tur-Prats and Valencia Caicedo 2020). Our paper also contributes to a rich pre-existing qualitative literature on the role of memory in US history (Buck 1937, Foster 1988 and Blight 2009). It also relates to studies that investigate the role of propaganda and mass media in triggering changes in political preferences (Adena et al. 2015; Voigtlander and Voth 2015; Strömberg 2004; Gentzkow 2006; Martin and Yurukoglu 2017) and nationalism (Della Vigna et al. 2014; Blouin and Mukand 2019). We address an unexplored facet of the Civil War and Reconstruction era, enriching the empirical economic history literature that explores the deployment (Dippel and Heblich 2021; and Costa and Kahn 2010) and consequences of the US Civil War (Costa, Yetter, and DeSommer 2018; Ager, Boustan, and Eriksson 2021; Feingenbaum, Lee, and Mezzanotti 2018) and the history of discrimination against African Americans (Boustan 2010; Fouka, Mazumder, and Tabellini 2022; Shertzer and Walsh 2019; and Tabellini 2020, among others).

The paper is structured as follows. In Section I., we provide a brief historical background and describe the data. In Section II., we discuss the empirical strategy. We report baseline estimation results for each of the three outcome variables related to reconciliation in Sections III., IV. and V.. We investigate the interplay between racial discrimination and reconciliation in Section VI., followed by a comparison of the results between the North and the South in Section VII.. Section VIII.

concludes. The paper has an Online Appendix (OA hereafter).

I. Historical Background and The Birth of a Nation

A. The US after the American Civil War: A Slow Way to Reconciliation

The American Civil War (1861-1865) stands out as a conflict of intense violence and destructiveness. According to estimates, more than 2% of the country's population died in the line of duty.⁶ In addition to the direct losses of human and physical capital, the war's lasting legacy was a deeply fractured society (Foster 1988; Blight 2009). While the war preserved the Union, the end of the war did not mean that wartime hatred and partisan animosities were resolved.

When the military action ended, public memory became the new battlefield. Competing *narratives* about the "true" causes of the war, the behaviors of soldiers in battle and the rightness of reconstruction policies emerged on both sides.⁷ In this context, the *Lost Cause* narrative secured its place in the national discourse, shaping regional identity and race relations for generations.

The *Lost Cause* was an interpretation of the American Civil War that was developed to preserve the honor of those who lost the war.⁸ It was an interpretation of the Civil War promulgated by Southern elites, mostly ex-Confederates, as a way to reconcile the psychological trauma of the defeat. The main tenets of the *Lost Cause* are: i) the South only lost the war because of the overwhelming advantage of forces of the North; ii) the motivation for the war was the Southerners' desire for freedom, not the preservation of slavery; iii) the life and values of the antebellum South are to be celebrated, and the enfranchisement of Black people threatens the whole country, both North and South; and iv) as a consequence, the white North and South should pursue national reconciliation, since neither side in the conflict had been truly wrong, in the face of this common threat.⁹ Many scholars claim that the *Lost Cause* was fundamental to the reunification of the country, but the movement was limited to white Americans, and its narrative prioritized reconciliation between the white North and white South, obscuring Black participation in the war and its legacy of emancipation (Buck 1937; and Blight 2009).

B. *The Birth of a Nation*

Although the *Lost Cause* narrative originated among Southern elites, it was a movie that gave it national prominence. The extreme version of the *Lost Cause* narrative reached the mainstream via a Hollywood blockbuster of unparalleled fame: the 1915 movie *The Birth of a Nation* by D. W. Griffith.

⁶Recent research combining newly digitized census data from the 19th century calculates the number of military victims to be around 750,000 (Hacker and McPherson 2011). According to Goldin and Lewis' (1975) estimates, the South lost a total of 683,939 soldiers and civilians while the North lost 954,922. Note that the exact number of military and civilian casualties is contested, given the challenges of making reliable quantitative assessments.

⁷For insightful accounts on the role of memory and narratives in the post-bellum US see, among others, Buck (1937); Silber (1997); Blight (2009); and Foster (1988).

⁸In the words of Gallagher and Nolan (2000), the *Lost Cause* was a "rationalization, a cover-up to vindicate the name and fame" of the defeated South.

⁹On the *Lost Cause* see, among others, Foster (1988) ; Gallagher and Nolan (2000); and Blight (2009).

The movie purported to tell the “true” story of the Civil War (see Appendix [AI](#) for more details about the plot). In this version, the war arises not because of conflict over slavery, but because of the ambition of a greedy Northern Republican “mixed-race” politician who is attempting to enforce Black rule in the region. The emancipation and enfranchisement of African Americans is depicted as a common threat to the white populations of the North and the South. In the end, thanks to a renewed push by white Northerners and Southerners to unite against this common enemy, national reconciliation and white supremacy are restored. The movie proposes reconciliation between the white North and South based on an exclusively racial basis, discriminating against and ignoring the emancipation of African Americans.

In spite of its disturbing message, the movie was an unprecedented box office success. Its positive reception was largely a consequence of its innovative techniques, aesthetic beauty and storytelling power, along with the comforting narrative it offered to the defeated white South, and more generally to a country seeking reconciliation. At the same time, civil rights activists accused the movie of fueling dangerous anti-Black sentiment with its racist portrayal of African Americans.

C. Measuring Movie Diffusion from Historical Newspapers

By 1930, an estimated fifty million people had seen *BON*.¹⁰ However, there is no contemporaneous accurate data about either the movie’s profit or audience size across locations.¹¹ In the absence of official sources, the most complete, systematic and comparable source of information on the movie’s distribution over time and space is local newspapers.¹² We undertook extensive data collection to map the distribution of the movie’s diffusion by retrieving information on film screenings from the online newspaper archive *newspapers.com*.¹³ We explain below the main steps of this data construction procedure; additional elements are presented in OA Section [A.2](#).

Local newspapers publish the locations and dates of screenings via a heterogeneous body of texts, including movie advertisements (Figure 1, top left panel), movie time tables for local theaters (Figure 1, bottom left panel), and also a large amount of general articles about the movie that also report screening place and date (see two examples on the right panel of Figure 1). To extract information from these three categories of text, we started by collecting all newspaper pages containing the keyword “The Birth of a Nation”. We retrieved a total of 55,044 pages from 1837 newspapers.¹⁴ *BON* was a phenomenal success that prompted an intense public debate over the narrative

¹⁰A number set forth by Carl E. Milliken, secretary of the Motion Picture Producers and Distributors of America (MPPDA), cited by Stokes (2007). As Stokes (2007) recalls, “Local newspapers made approximate estimates of the audiences who had seen the film toward the end of its run in particular cities: 185,000 in Boston, 100,000 in Kansas City..”

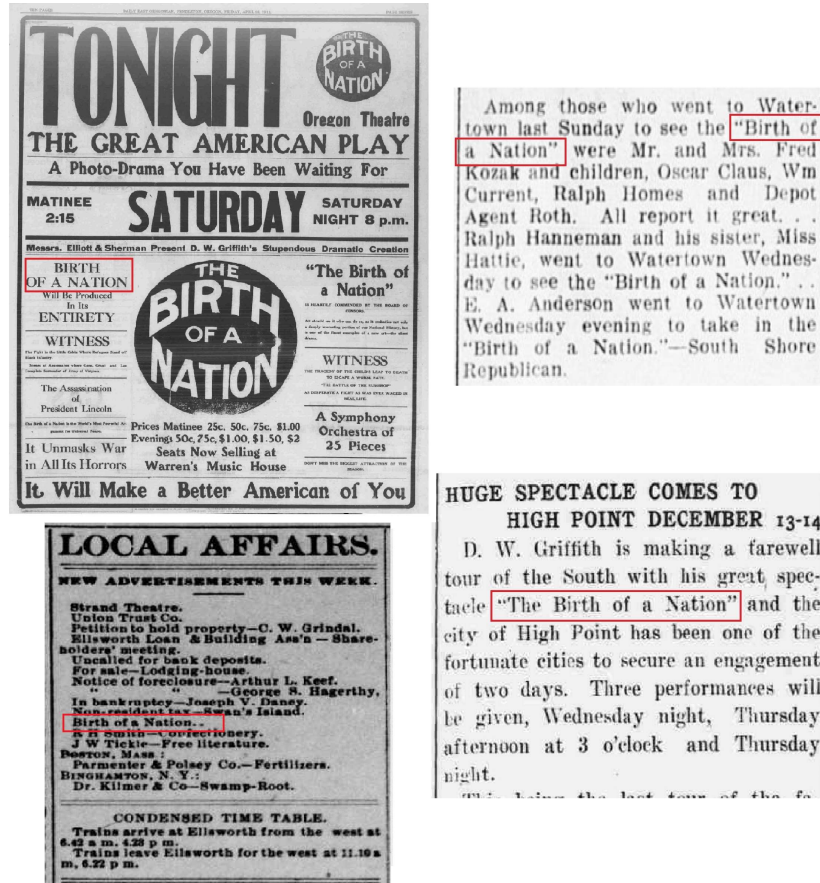
¹¹This may also be because the company that produced the movie (Epoch Producing Company) sold local distribution rights to other companies. For instance, Harry Sherman of Minneapolis acquired the rights to show the film in sixteen western states, while a syndicate headed by Louis B. Mayer acquired distribution rights for New England (Stokes 2007).

¹²This was also aided by the marketing strategy of the distributing companies to advertise the movie’s release in theaters in “local newspapers across the country through press agencies and wire services” (Stokes 2007).

¹³The newspaper archive covers a large variety of *local* newspapers. For example, for the state of Alabama, between 1910 and 1920, newspaper records are available for 93 different cities. By contrast, in other states, the coverage is shallow: for Wyoming, for instance, we only have access to newspapers from three cities. OA Figure [A3](#) maps the counties that hosted the headquarters of at least one newspaper.

¹⁴Note that the repository only allows us to retrieve the number of newspaper pages containing each keyword and not the total number of keywords.

Figure 1: Newspaper Page with *The Birth of a Nation* - Ads and Movie Table



NOTE: Top Left Figure An advertisement for the screening of the movie *The Birth of a Nation* at the Oregon Theater in Pendleton, Oregon. Source: *The East Oregonian*, 28 April 1916. Bottom Left Figure Movie schedule documenting the screening of *The Birth of a Nation* in Ellsworth, Maine. Source: *Ellsworth American*, 5 January 1916. Top Right Figure Newspaper section reporting on the screening of *The Birth of a Nation* in Watertown, South Dakota *Saturday News*, 30 March 1916. Bottom Right Figure Newspaper article reporting on the screening of *The Birth of a Nation* in High Point, North Carolina. Source: *The Review*, 7 December 1916. Newspapers pages retrieved through the Library of Congress, <https://chroniclingamerica.loc.gov/>.

it presented. The items retrieved through this keyword search are thus not only related to movie’s screenings but are also general reviews of the film or articles discussing reactions to it across the country (see OA Figure A4). As a consequence, a careful visual inspection of all the search items is vital for constructing a sound and accurate measurement of the screening of the movie. We asked external judges to read each item in full and assess whether it refers to a movie screening; if not, the item was discarded. As an additional safety check, we re-inspected the results for counties where our measurement of screening and that of the companion paper by Ang (2020) differed (see below). All in all, inspection of the items yielded 14,421 “validated” screening records, from 866 newspapers located in 581 counties.

In our empirical design, we define the treatment as the *local screening* of the movie.¹⁵ Hence, we

¹⁵Note that this approach is also the one chosen in Ang (2020); this commonality makes our respective measurement

associate each validated screening record with the county where the newspaper had its headquarters. We used external judges and instructed them to only validate a record as a local screening if it documents a screening of the movie in the same county as the newspaper’s headquarters. This requirement was met for the majority of items that documented a screening. However, in several instances, newspapers advertised screenings of BON taking place in nearby counties and not in the county of the newspaper’s headquarters. The latter county was therefore exposed to screenings taking place elsewhere. Given that, in the data, the effects of local and distant screenings are likely to differ in magnitude, we specifically look at the effect of distant screenings in OA Section B.12 where we estimate the extent of spatial spillovers.

In order to correctly measure the movie’s diffusion, it is imperative to distinguish county-month cells for which we have information on whether a screening took place or not (i.e. “treated” or “untreated” cells) from county-month cells for which *no* digitized newspaper is stored in the archive (i.e., cells with missing information). We drop county-month cells with missing information and include in our estimation sample only the cells with at least one digitized newspaper page for the month.¹⁶ Hence, we choose not to impute a treatment status to cells with missing information. This is a conservative choice that limits the coverage of our measure but has the advantage of reducing measurement errors. Our sample is an unbalanced panel of 1,070 counties that we are able to track at the monthly level from January 1910 to December 1920. There is unbalancedness because, for a given county, the set of newspapers stored in the *newspapers.com* archive varies over time. We address this issue by controlling for newspaper coverage at the county-month level in all of our econometric specifications. In addition, in robustness checks, we verify that our results hold with a balanced subsample of our dataset.

Our baseline treatment variable at the county-month level, which we label BON_{ct} , takes a value of 1 (and 0 otherwise) for all months after at least two validated screening records were found in a given county.¹⁷ The threshold of two records minimizes false positive measurement error, and namely instances in which the item was erroneously validated as proof of a screening. In our sensitivity analysis, we show that the results are robust to alternative threshold values. OA Figure A6 displays the time-series evolution of the share of counties that had screened the movie, i.e., $BON_{ct} = 1$. We see that the movie had been screened in about 12% of the counties in our sample by the end of 1915, 31% by the end of 1916 and 38% by the end of 1917. The left panel of Figure 2 displays the spatial dispersion of counties that had screened the movie (or not) by the end of 1920. Out of the 1,070 counties that are covered in our estimation sample, 440 of them have screened the movie by this date.

Alternative measurement of local screening. The companion paper by Ang (2020) provides an alternative way of measuring local screenings of BON. Ang’s measure is based on information sources that partially overlap with ours. Like us, he relies on *newspapers.com* that he combines

of screening comparable.

¹⁶See OA Section A.2 for details.

¹⁷Note that the verified screening records do not necessarily identify distinct screening events. For instance, in the case of an op-ed article announcing the arrival of the movie in the local theater and a timetable of movie screenings in town, both records may refer to the same event.

with two smaller newspapers' archives, and the movie industry periodical *Moving Picture World*. However, from the newspaper archives he only counts the movie ads; with the periodical, he looks at dispatches from the film's roadshow. In the OA [A.3](#), we compare Ang's measure to ours. We also show how we can combine information from the two measures to perform several important robustness checks. We summarize the main insights from this discussion here.

In spite of different data collection strategies, the two measures are highly congruent. In the cross-section of counties, out of the 1,070 counties that make our estimation sample, the two measures are identical in 884 of them. When discrepancies arise, it is because the two measures exploit different information, not because they interpret the same pieces of information differently. Hence, each measure is a reliable cross-validation of the other. Neither clearly dominates, as each identifies screenings of the movie that are not detected by the other. Given that they are based on different sources, it is also possible to combine their information to construct additional measures of local screenings. There are several ways to proceed, depending on whether we aim at reducing the risk of false positives and/or false negatives.

In total, we are equipped with four variants of the treatment variable: our measure of local screening of BON, that of Ang (2020) and two combinations of them. In the baseline analysis, we use our measure. This choice is dictated by our willingness to retain consistency in the measurement of the treatment variable and its instrument (MDM). Indeed, screenings of BON and MDM are recovered from the same source (*newspapers.com*). In our robustness analysis, we replicate all our baseline estimations with the three other variants. Results are reported in OA Section [B.2](#). The estimation results remain stable and statistically significant whatever the retained measure of screening. Overall, we are confident that the results of the paper do not rest on any specific choice in the data collection strategy and construction of the treatment variable.

The case of Kansas. Kansas was the only state that legally enforced a ban of the movie. The legal battle that led to the ban was a convoluted process, with several appeals to the decision of state authorities and a lot of resistance from local movie owners who sometimes decided to screen the movie illegally (Stokes 2007). After the ban came into force, local newspapers advertised screenings in neighboring counties across the state border.¹⁸ Hence, people circumvented the ban by watching the movie in other states. The case of Kansas City is an extreme example as the city is located on the border between Kansas and Missouri, but many places close to the state border experienced this phenomenon. OA Figure [A7](#) provides examples. Both the interpretation and the magnitude of the treatment effect – defined as the effect of *local* screening in our empirical setup – are likely to differ between Kansas and the other states. First, the potential for unobserved illegal screenings in Kansas contributes to measurement errors in the treatment variable. Second, even if the movie was not aired locally, some people in Kansas were still exposed to it. For the 965 counties not located in Kansas, local screening appears to be a valid proxy of exposure to the movie, as documented by the

¹⁸Due to this peculiarity, our measurement of local screening in the previous version of this paper [Esposito et al. \(2021\)](#) was affected by a high rate of false positives in Kansas. There, the external judges were prone to validate as proofs of local screening items that were documenting screenings taking place in neighboring states. These measurement errors have been corrected in the current version.

analysis on spatial spillovers in OA Section B.12: There, we find that for counties outside Kansas attitudes barely react to screenings in neighboring counties. Third, with 105 out of 1070 counties, Kansas is clearly over-represented in our data. This over-sampling could be a problem because, as just discussed, the patterns of exposure to the movie in this state are not representative of the rest of the sample. For all these reasons, we drop Kansas counties from our baseline estimation sample, which is an unbalanced panel of 965 counties observed from January 1910 to December 1920. In the OA Section B.1, we replicate our baseline analysis with an extended estimation sample that includes Kansas. Estimates are in line with those in the main text.

II. Empirical Design

We want to assess the impact of BON screening on an array of attitudes toward reconciliation and discrimination between 1910 and 1920, at the county level.

A. Econometric Equation

The film was officially released in February 1915 and had a rolling release across the country. Given its staggered distribution in space and time, a natural starting point for the empirical design is a two-way fixed (FE) effects estimation, controlling for county and time fixed effects. Under this approach, we estimate the treatment effect (i.e. the coefficient β) of the binary variable BON_{ct} in the following OLS regression:

$$outcome_{ct} = \beta \times BON_{ct} + \alpha_c + \alpha_t + \epsilon_{ct}. \quad (1)$$

The unit of observation is a county (c) \times period (t) cell, where a period is a year-month (e.g., March 1915); the variable BON_{ct} codes for the post-screening period and is equal to 1 in all periods following the screening and 0 otherwise; α_c and α_t are county and time fixed effects. The variable $outcome_{ct}$ varies across specifications depending on the attitude we are scrutinizing: type of rhetoric in newspaper articles, enlistment in the Navy, cultural type of name, white supremacy, or discrimination in the labor market. We explain below how each variable is constructed and provide the related estimation results. Note that in all cases, $outcome$ is a county-level variable, except in the case of names, where it is defined at the individual level. In the baseline analysis, standard errors are clustered at the county level, which corresponds to the aggregation level of the treatment BON_{ct} . In robustness checks, we allow for more complex clustering structures of the estimator of the VCV matrix that take into account the spatial nature of the error terms ϵ_{ct} (Colella et al. 2020).

In equation (1), the main estimation challenge is the possibility that the treatment BON_{ct} is endogenous. Balancing tests (OA Table A1) provide quantitative confirmation that counties that aired the film at some point are different from those that did not. These tests are rejected for several observable factors: areas that are more populated, have a lower share of rural population or a higher share of literate inhabitants were more likely to host the film. Importantly, these factors may also correlate with $outcome_{ct}$. For example, cities tend to be more progressive than rural counties and to

have more theaters, two features that impact their odds of screening the film (i.e., factors that shift the movie demand and supply, respectively).¹⁹

The two-way fixed effects estimation strategy alleviates this endogeneity concern as long as the parallel trend assumption holds. There, identification assumes that factors affecting movie screening exert a time-invariant influence on the outcome variable that can be filtered out by the battery of fixed effects at the estimation stage. However, in the context of BON, the presence of time-varying confounders is a real concern. As documented above, the film fueled protests and social unrest and magnified existing divisions in politically polarized places, with calls for censorship and attempts to ban the movie (Stokes 2007).²⁰ Areas where there was already social conflict might have been more or less likely to screen the movie, depending on the local context. Another confounder could be economic distress, which drives both the odds of screening the movie and attitudes.²¹ For example, in rural counties (73% of our sample), transient climate shocks could adversely impact the local economy and potentially reactivate frustration, angers and scapegoating.

As we cannot rule out time-varying confounding factors, two-way fixed estimates might be biased. From the previous examples we know that the direction of the bias could be in both directions, upward or downward. We can deal with this by including flexible controls and county-specific polynomial time trends in the OLS estimation of equation (1). Both options are demanding of the data and somewhat limited in scope. Flexible controls deal only with observable factors – e.g., urban areas with fast-growing populations and quickly evolving opinions and attitudes – but our historical data restricts the set of observables at hand.²² And county-specific trends may involve unobserved factors (e.g., local memories of the Civil War), but at the cost of imposing parametric restrictions on their time-series impact.²³ Given these limitations, our preferred solution is to instrument the treatment in a 2SLS version of equation (1). We explain the logic and construction of our instrument in the next section.

¹⁹The presence of movie theaters is highly correlated with county-level population. Using 1910 census data on the share of projectionists in the population as a proxy for the presence of movie theaters, we find a correlation of 0.93 between population and the presence of theaters.

²⁰Protests and organized political campaigns attempting to ban the movie started to emerge around the country with the very first public screenings, with mixed results. In February 1915, in Los Angeles, the National Association for the Advancement of Colored People (NAACP), together with other organizations, appealed to local authorities and courts for the movie to be banned, complaining that it encouraged "bitterness and strife between the races" (Stokes 2007). The movie *matinée* was canceled, but not the evening *première*. There were similar mixed results in the rest of the country, where political campaigns to stop the movie clashed with a myriad of different local rules about film censorship (Stokes 2007). In some cities, such as Chicago, protesters had the movie banned for brief periods of time, while it was prohibited for longer in Kansas and Ohio (Stokes 2007).

²¹There is a rich literature on economic distress and attitudes. Important contributions include Autor et al. 2020; Guiso, Herrera, Morelli, and Sonno 2017; Dal Bó, Finan, Folke, Rikne, and Persson 2021; Pastor and Veronesi 2018; Gethin, Martínez-Toledano, and Piketty 2022; Guriev 2018; and, for a review, Guriev and Papaioannou 2020.

²²In practice, flexible controls imply that for all observables X_i , which appear to be unbalanced, we include $X_i \times FE_t$ on the RHS of equation (1).

²³Whenever the effect of interest changes over time, group-specific linear time trends are less than ideal, since the trend might also capture the difference in the evolution of the outcome between treated and control variables, biasing estimates (see, for instance, Wolfers 2006; and Kahn-Lang and Lang 2019).

B. Instrumenting the Screening of *The Birth of a Nation*

The Million Dollar Mystery. The idea behind our instrumental variable strategy is that the distribution of movies in the US in the early 20th century followed recurrent spatio-temporal patterns. This was due to logistical constraints related to movie theaters, pre-existing agreements between theaters, and shipping limitations on the number of film reels that could be distributed across locations.

As our baseline instrument, we rely on the movie *The Million Dollar Mystery* (MDM), which was the highest-grossing movie before BON. It was released in June 1914, 231 days before BON. The movie tells the story of a secret society that attempts to gain control of a lost million dollars. Hence, its plot is *radically different* from that of BON.²⁴ We retrieved information on MDM screenings using a data collection strategy similar to that employed for BON.²⁵ We then define our instrumental variable MDM_{ct} as an indicator variable coding for the post-screening period of MDM, *transposed 231 days later*: Specifically, $MDM_{ct} = 1$ (0 otherwise) if two MDM screening records in county c have been collected from local newspapers before date $t - 231$ days. Our premise is that MDM_{ct} is a relevant and exogenous predictor of BON_{ct} in both the cross-sectional and time-series dimensions.

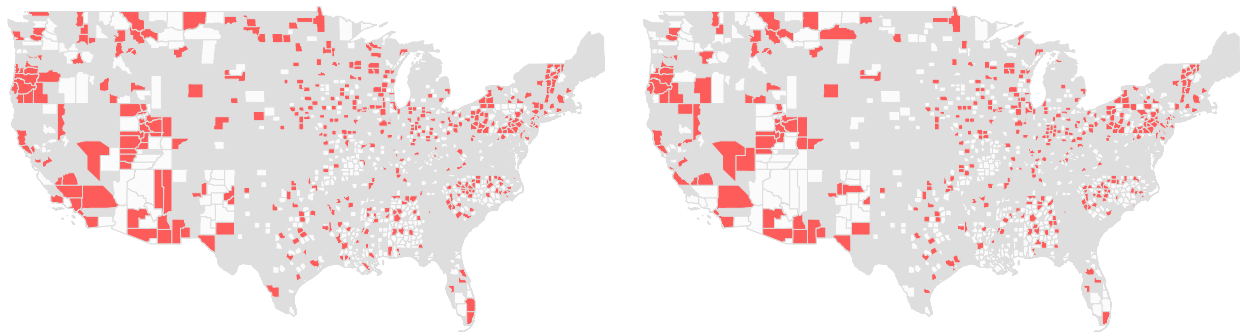
Identification Assumption. The relevance of the instrument relies on the fact that the spatio-temporal distribution of MDM *transposed 231 days later* correlates quite closely with the spatio-temporal distribution of BON. The correlation is tied to logistical constraints specific to the film industry of this period. The first and main constraint is that many places did not have a movie theater. This feature makes MDM a powerful instrument for BON for cross-sectional analysis. Secondly, the number of reels of a film was limited, and they had to be physically moved around the country. On top of this, established distribution practices targeted big cities first, as admission prices in cities were higher (Nowell-Smith 1996). Consequently, the time elapsed between national release and local screenings tended to be similar across movies. These features make MDM an appropriate instrument for the time-series dimension. Finally, our key empirical assumption is that the airing of MDM is exogenous to local opinions and attitudes, in particular those related to reconciliation, racism, and discrimination. This makes sense, given that MDM was basically a comedy with a politically neutral plot. As robustness tests, we replicate our instrumentation strategy with other movies that were released before MDM: *Traffic in Souls*, released in 1913, and *What Happened to Mary*, released in 1912.²⁶

²⁴MDM is an ideal choice because, while it deals with very different topics with respect to BON, it also created a true mania across the country. Its serial format provided a richer and more engaging experience, increasing audiences and revenues. Bean (2017) describes the mobs congregating at theaters on "Mystery Nights," waiting to find a seat. This format also increases the likelihood of the movie being screened in large storefront theaters with a regular movie programming season, which were also the theaters where BON, distributed with a cohort of projectionists, electricians, other technicians and an orchestra, was more likely to be screened.

²⁵In a nutshell, we searched for the keyword "The Million Dollar Mystery," which returned 25,858 items. Out of these, judges verified that 18,168 (70%) were related to actual screenings of MDM in a county.

²⁶As further discussed in OA Section B.5, MDM and BON reached a similar share of counties. *Traffic in Souls* and *What Happened to Mary* were screened in substantially fewer counties.

Figure 2: BON and MDM Screenings - Spatial Distribution



NOTE: *Left Figure* Map of in-sample counties that had screened *The Birth of a Nation* by 1920. *Right Figure* Map of in-sample counties that had screened *The Million Dollar Mystery* by 1920. On each map, counties in red were exposed to the movie and counties in white were not. See Section C. for a definition of the baseline estimation sample.

Table 1: BON and MDM screenings - Treated Counties

	Million Dollar Mystery			
	County		County-Month	
	(1)	(2)	(3)	(4)
	Untreated	Treated	Untreated	Treated
Untreated	445	80	94,408	8,919
Treated	132	308	6,775	17,278
$\mathbb{P}(\text{BON} = \text{Treated} \mid \text{MDM})$.23	.79	.07	.66

NOTE: The table reports the number of observations for which we record a screening (treated) or no screening (untreated) of the movies *The Million Dollar Mystery* and *Birth of a Nation*. The sample is pooled at the county-level in Columns 1 and 2. The sample corresponds to the baseline estimation sample (county-month) in Columns 3 and 4.

Some Evidence. Figure 2 (right panel) maps the spatial distribution of counties that had screened MDM by the end of 1920. They represent 40% of counties in our sample and around 79% of the counties that had also screened BON. Table 1 displays evidence that MDM_{ct} is a strong predictor of BON_{ct} . Columns (1) and (2) report the joint distribution of BON and MDM screenings, as observed at the end of 1920, at the county level. We see that the conditional probability of being treated by BON goes from 0.23 when a county was not treated by MDM to 0.79 when it was. This corresponds to an odds ratio of 13.²⁷ Columns (3), and (4) report the joint distribution of BON_{ct} and MDM_{ct} in our estimation sample (i.e. county-month level). Here, the association between the two variables is even stronger: The conditional probability of being treated by BON increases from 0.07 (not treated by MDM) to 0.66 (treated by MDM) and the odds ratio is equal to 27.

²⁷The odds ratio is a simple way to capture the strength of the association between two binary variables. In our case, the odds ratio is equal to the odds of being treated with BON in counties treated with MDM ($=308/80$) divided by the odds of being treated with BON in counties not treated with MDM ($=132/445$).

Instrumented specifications. We estimate two instrumented versions of equation (1): a standard 2SLS estimator with MDM_{ct} as the instrument and a reduced form specification (RF) with MDM_{ct} as the explanatory variable. As discussed above, OLS can be biased downward or upward depending on the confounding factors at play. We show below that the OLS coefficient is typically smaller than its 2SLS counterpart: In our set of baseline results, the ratio between the two coefficients ranges from 1.8 ($=0.076/0.041$ in Table 4) to 2.7 ($=1.092/0.4$ in Table 3). This discrepancy between OLS and 2SLS could be driven by three elements. First, whatever the measure of BON screening used in the estimation (see Section C.), we cannot exclude the existence of false positives and false negatives in the data. Such measurement errors cause attenuation bias in the OLS coefficient that the 2SLS estimator fixes. Moreover, dealing with two dichotomous variables as endogenous variable and instrument can magnify the difference between OLS and 2SLS estimates (see, for instance, Pischke 2007 and Black, Berger, and Scott 1995).²⁸ Finally, the 2SLS coefficient captures the local average treatment effect (LATE) on the sub-population of compliers, which refers to the population of counties whose adoption of BON is affected by the presence of MDM. The impact of BON in this sub-population might differ from the impact of BON on the populations of counties at large (ATE). In OA Section C.3.4, we show that compliers are associated with more urban (less rural) counties. We expect the effect of BON to be larger in urban areas than in rural, disconnected and isolated areas: Indeed, in the former, the denser presence of clubs, churches, and party branches, where the message of the movie could resonate, is likely to amplify the initial effect of BON.

III. Reconciliation in the Public Debate

In the United States in the 1910s, before the advent of radio and television, public debates took place entirely in newspapers, which were inexpensive and ubiquitous. This makes local newspapers the natural forum to monitor prevailing attitudes towards reconciliation.

A. Measuring Rhetoric in Newspaper Articles

The online archive *newspapers.com* that we use to measure screenings of the movie is also a rich data source for studying the evolution of language in local newspapers: It stores more than 25 million pages from around 3,760 newspapers covering the 1910-1920 period. The main limitation of this historical repository is that it does not permit access to the *full* text of articles. To measure attitudes toward reconciliation, we therefore perform a text analysis based on a “bag-of-words” approach, in the spirit of Gentzkow and Shapiro (2010) and Enke (2020), among many others.

List of *Patriotic* and *Divisive* words. Our bag-of-words approach is based on two sets of keywords.²⁹ The *Patriotic* keywords relate to reconciliation, patriotism and national unity. The *Divisive* keywords recall the Civil War, the Reconstruction Era and the sectionalism of the times. In our

²⁸This issue is further discussed in OA Section B.3.

²⁹With a slight abuse of terminology, we use the generic concepts of “words” or “keywords” to refer either to single words (e.g. “patriotic”) or to short combinations of words (e.g. 2-grams, [“united”, “country”]).

baseline analysis, each bag comprises 20 keywords.³⁰ We designed the procedure for building those bags in a way that would limit arbitrariness and discretion in the selection of the keywords. We summarize the main steps of this procedure below; OA Section A.5 displays the details.

Step 1: On the basis of their relevance in the BON movie script (e.g. Figures AI and AII), in the tenets of *the Lost Cause* narrative, or in the speeches of famous historical figures advocating for reconciliation, we identify two *starting* lists of 12 *Patriotic* and 17 *Divisive* words.³¹ Given that these lists are built on a discretionary basis, we ask external judges to evaluate and validate their semantic relevance as part of the corresponding rhetoric. We refer to these validated terms as *seed words*.

Step 2: From the archive *Chronicling America*, we extract 300,000 pages of full texts that are representative of the (pre-treatment) language in newspapers articles between 1904 and 1914.³² Out of these texts, we identify words that co-occur with our seed words. Our metric of co-occurrence is borrowed from computational linguistics and is based on the Pointwise Mutual Information (PMI) score.³³ For each seed word, we build the list of the 1000 words/bi-grams that are its closest neighbors according to the PMI metric. Finally, we define co-occurring words as those that appear in multiple lists (4 lists for the *Patriotic* seeds and 6 lists for the *Divisive* seeds). This definition ensures that the retained co-occurring words have semantic properties that capture multiple facets of the *Patriotic/Divisive* rhetoric.

Step 3: External judges inspected the set of seed words augmented with co-occurring words. We asked them to assess the semantic relevance of all the words. Aggregating across judges, we obtained a ranking for *Patriotic* words and a ranking for *Divisive* words. In our baseline

³⁰The *Patriotic* list includes the terms: American flag, American people, Americans, Americans together, liberty and equality, liberty and freedom, national hymn, national salute, our flag, patriotic, patriotism, reconciliation, restoration of peace, salute flag, Stars and Stripes, The Star-Spangled Banner, true patriot, U.S. flag, united country, and United States. The *Divisive* list includes the terms: armed conflict, armed intervention, battle flag, carpetbaggers, civil war, Confederacy, Confederate Flag, confederates, General Lee, negro domination, picket line, race problem, secede, secession, Secession flag, secessionist, sectionalism, slavery, Southerners, and unpatriotic.

³¹For *the Lost Cause*, the most relevant sources are found in the manifestos from Pollard (1866 and 1868), famous speeches from the period including, among others, Jefferson Davis’s speeches (such as the one to a group of veterans of the Army of the Tennessee in 1878) and Reverend Moses Drury Hoge’s speeches (such as the one on Memorial Day in Richmond 1875). For the selection, we followed the commented review proposed by Blight (2009). Also according to Blight (2009), the skeleton of the reconciliatory view takes shape from a series of speeches, orations and public addresses, including Wilson’s address in Gettysburg (1913), Horace Greeley’s campaign speeches (1872), Rutherford B. Hayes’s letter of acceptance as a Republican candidate (1872), and Oliver Wendell Holmes Jr.’s public address at the Keen Memorial Day (1884), among others. From this body of texts, we selected words that resonate intuitively with a divisive/reconciliatory message and either appear directly in the texts or are strictly related to terms that appear in the texts.

³²Having full texts is a pre-condition for performing our co-occurrence analysis. In contrast with *newspapers.com*, it is possible to download entire pages and not just single words from *Chronicling America*. However, it covers fewer newspapers and counties.

³³Given two words x and y , we define $\mathbb{P}(x, y)$ as the fraction of articles where both x and y appear and $\mathbb{P}(x)$ as the fraction of articles containing x . The PMI is computed as follows:

$$PMI(x, y) = \log \left[\frac{\mathbb{P}(x, y)}{\mathbb{P}(x)\mathbb{P}(y)} \right]$$

For a relevant and exhaustive review of Pointwise Mutual Information, see Manning and Schütze (1999).

analysis, we assign to each bag of words the top 20 keywords of each ranking. We propose robustness exercises to verify that results do not rely on any single step of this procedure.

Log Frequencies of Words. For each keyword in the *Patriotic/Divisive* bags, we compute its log frequency of occurrence in a given county \times month cell:

$$\log\text{Freq}_{ict} \equiv \log \left[\frac{1 + \text{Page}_{ict}}{1 + \text{TotPage}_{ct}} \right] \quad (2)$$

where i is the keyword and Page_{ict} stands for the number of newspaper pages where i appears (at least once) and TotPage_{ct} measures the total number of newspaper pages in county c and month t .³⁴ Importantly, to avoid the possibility of keywords referring directly to the plot of *The Birth of a Nation*, we exclude all pages containing the words “The Birth of a Nation” from the word counting exercise for Page_{ict} .

Considering frequency (rather than number of occurrences) controls for variations in the availability of digitized newspapers and limits measurement errors by reducing the influence of outliers.³⁵ Moreover, taking the log allows us to compare changes across keywords with different baseline average frequencies of occurrence (i.e., rare vs frequent keywords). When computing frequency, the +1 transformation is a standard and convenient way to deal with zeros in keyword occurrence. However, this functional form can cause distortions in the distribution of the variable, especially when occurrence is low. Hence, in OA C.1, we propose alternative definitions and coding options for keyword occurrence (e.g., without log, without +1, etc.). Further, to make sure that our results are not driven by anomalous variations in newspaper coverage, we account for the total number of newspaper pages available in the county-month in a flexible way by including fixed effects for page number percentiles (and decile fixed effects as a robustness exercise).

B. Regionalism vs Nationalism

As a first pass at the data, our empirical analysis starts with log frequency as the dependent variable in equation (1). This preliminary approach has the virtue of transparency but is not parsimonious because it must be conducted separately for each keyword. For the purpose of illustration, we show the results for three keywords only. Specifically, in Table 2, we look at how BON screening impacted references in newspapers articles to “American People” compared to references to the regional identity of the former enemies, namely “Northerner(s)” or “Southerner(s).” In Panel A, we estimate equation (1); in Panel B, we repeat the analysis with state \times month fixed-effects (e.g.

³⁴Since information about the total number of printed words (across all newspapers in a county) is not available, we proxy the total number of pages available for each county during each month by taking the maximum value between: i) the total number of pages as computed by *newspapers.com* and ii) the total number of pages containing at least one of the terms “he”, “you” or “I”.

³⁵Certain counties display some digitized pages that cover a few months and then disappear for most of our sample. For our baseline exercise, we focus on a subset of counties with a sufficient coverage of historical newspapers digitized on *newspapers.com* from between 1910 and 1920. We define such sufficient coverage as all counties that have at least one newspaper page digitized for 25% of the 132 months in the sample. We present robustness exercises including all counties irrespective of coverage and focusing on a balanced sample of counties covered throughout the 132 months.

California - April 1916) to account for time-varying confounders that operate at the state-level. In the first three columns, we look at *relative* frequency: The dependent variable is the (log) relative frequency of the *patriotic* keyword i (American People) with respect to total frequency of *divisive* keywords j (Northerner *or* Southerner). Indeed, we are primarily interested in documenting how the movie affected rhetoric and the salience of patriotic words relative to divisive words. In the remaining columns, we explore the effect on the *absolute* frequency of patriotic and divisive keywords separately.

Columns (1), (4) and (7) display the OLS estimation results, where the main explanatory variable is the (non-instrumented) treatment BON_{ct} . In Columns (2), (5) and (8), we estimate the reduced form version by replacing the treatment with its instrument MDM_{ct} . Columns (3), (6) and (9) present the 2SLS results. The first stage estimates, reported in Appendix Table BI (Column 1), confirm that MDM_{ct} is a strong and relevant predictor of BON_{ct} with a Kleibergen-Paap statistic of 217. Switching MDM_{ct} from 0 to 1 increases the probability of switching BON_{ct} by about one third. For each outcome variable, the 2SLS point estimate is larger than its OLS counterpart. The explanations for this pattern are discussed in Section II. Note also that, in contrast with what we observe with these three specific keywords, the OLS/2SLS coefficient expansion is typically smaller in the rest of our baseline analysis.

All in all, we see that the treatment effect is positive and statistically significant at the 1% threshold. In terms of magnitude, using the 2SLS estimate as a benchmark, exposure to BON brings about a 66% increase in the relative frequency of the keyword “American People” with respect to “Northerner/Southerner.” We interpret this as evidence that the screening of BON induced a shift in local papers’ rhetoric: there was less regionalist language and a relative increase in references to a united country. Looking at the effect of the movie on unification and regionalism separately, we see that the treatment effect is statistically significant in both cases with a reversal of the coefficient from a positive to a negative sign. Hence, beyond its relative effect, the movie increased (decreased) the salience of patriotic (divisive) words in absolute terms: The effect amounts to a 37.4% increase in nationalistic keywords and a 28.5% decrease in references to the identities of the former enemies.

C. Reconciliation Rhetoric

In our baseline analysis, we opt for a more compact approach than the previous one by reducing the dimensionality of the dataset using a principal component analysis (PCA). More precisely, we compress information on the log frequencies of the 40 keywords into two scalars, $Patriotic_{ct}$ and $Divisive_{ct}$, which correspond to the first principal component of the sets of patriotic and divisive keyword log frequencies, respectively.³⁶ The two scalars have comparable scales because the PCA is conducted after standardizing the data. Finally, we compute our main dependent variable,

³⁶Information related to the PCA components (loading, share of variance, etc.) are reported in OA Section A.6. For the bag of patriotic keywords, the first eigenvector explains 81% of the variance, with a corresponding eigenvalue of 9.68. In the first principal component, all words from the list have positive weights and the overall score for the Kaiser-Meyer-Olkin measure of sampling adequacy is 0.96. For the bag of divisive keywords, the first eigenvector explains 96% of the variance, with a corresponding eigenvalue of 11.48. Again, all words in the first principal component receive positive weights and the overall score for the Kaiser-Meyer-Olkin measure of sampling adequacy is 0.98. As the share of variance explained by the first eigenvectors is high in both cases, we decide to retain only the first principal components.

Table 2: North/South vs American People - Newspaper Analysis

	Am. People - North/South			American People			North/South		
	(1) OLS	(2) RF	(3) 2SLS	(4) OLS	(5) RF	(6) 2SLS	(7) OLS	(8) RF	(9) 2SLS
Panel A: Equation 1									
Birth of a Nation	0.239 (0.020)		0.658 (0.061)	0.164 (0.020)		0.374 (0.055)	-0.075 (0.013)		-0.285 (0.039)
Million Dollar Mystery		0.247 (0.022)			0.140 (0.020)			-0.107 (0.014)	
1st Stage F-Stat	-	-	217	-	-	217	-	-	217
Panel B: State x Month FE									
Birth of a Nation	0.232 (0.023)		0.732 (0.085)	0.160 (0.022)		0.416 (0.072)	-0.073 (0.017)		-0.316 (0.053)
Million Dollar Mystery		0.219 (0.024)			0.125 (0.022)			-0.094 (0.015)	
1st Stage F-Stat	-	-	124	-	-	124	-	-	124
Dep. Var. Std. Dev.	0.93	0.93	0.93	0.85	0.85	0.85	1.00	1.00	1.00
Observations	89,325	89,325	89,325	89,325	89,325	89,325	89,325	89,325	89,325

NOTE: The table reports OLS (Columns 1, 4 and 7), reduced form (Columns 2, 5 and 8), and 2SLS (Columns 3, 6 and 9) estimates. The dependent variable is the log frequency of "American People" minus the log frequency of "Northerner/Southerner" ($\log \text{Freq}_{ict} - \log \text{Freq}_{jct}$) in Columns (1) to (3), the log frequency of "American People" ($\log \text{Freq}_{ict}$) in Columns (4) to (6), and the log frequency of "Northerner/Southerner" ($\log \text{Freq}_{jct}$), in Columns (7) to (9). Panel A reports results for our baseline specification, while Panel B considers the introduction of fixed effects at the state-period (month) level. The reported standard deviation and number of observations refer to estimates in Panel A. See Section B. for further details. The unit of observation is the county (c) in the month-year (t). Birth of a Nation is an indicator variable taking a value of 1 after the movie was screened in the county and 0 otherwise (see Sections C. for details). Million Dollar Mystery is an indicator variable taking a value of 1 after the movie was screened in the county and 0 otherwise, transposed 231 days later (see Section B. for further details). All regressions control for county, month-year, and coverage percentile fixed effects. Standard errors are clustered at the county level.

$\text{Reconciliation}_{ct}$, as the difference $\text{Patriotic}_{ct} - \text{Divisive}_{ct}$. This variable has a natural interpretation: It represents the relative log frequencies of patriotic and divisive keywords in local newspapers. Its log linear nature makes it additively separable, a convenient feature for analyzing the contribution of each of its components. Descriptive statistics are displayed in OA Section A.7 and we briefly summarize them here. They show that $\text{Reconciliation}_{ct}$, which is a text-based measure, correlates positively with our two alternative measures of reconciliation, that are based on actual behaviors (Navy enlistment and the Enemy Name Index, see below). This feature suggests that the text-based measure is a credible marker of reconciliation in the public discourse. Moreover, we see that $\text{Reconciliation}_{ct}$ tends to increase with the outbreak of the World War I in Europe in August 1914 and then with the active involvement of the US in 1917. This pattern is consistent with historical anecdotes about the war-induced surge in nationalism observed in the US after 1914 (see Zieger 2001). It also motivates important robustness checks that are designed to rule out the potential confounding effect of war.

Equipped with these variables, we extend the previous analysis to the full set of 40 keywords in order to scrutinize the semantics of reconciliation in a multidimensional manner. In Table 3, we replicate the previous table with the following set of dependent variables: $\text{Reconciliation}_{ct}$ (col.1-3); Patriotic_{ct} (col.4-6); Divisive_{ct} (col.7-9). In Panel A, we estimate equation (1); in Panel B, the construction of the three dependent variables is based on the extended set of keywords; Panel C is similar to Panel A except that state \times month fixed-effects are included.³⁷ In Columns (1) to (3), the coefficient of interest is consistently positive across specifications, showing that the screening of BON shifted the language in local newspapers in a more reconciliatory direction. The pattern found above with the three specific keywords persists with this more comprehensive measure of reconciliation. However, given the PCA-induced rescaling of the dependent variable, we cannot use plain log frequencies to assess the magnitude of the effect. The point estimate in Column (3) indicates that screenings led to an increase in $\text{Reconciliation}_{ct}$ of 1.18 standard deviations. In Columns (4) to (9), we examine the impact of the movie on patriotic and divisive rhetoric separately. We continue to find evidence of antagonistic patterns, with a post-screening increase in the salience of patriotic keywords and a decrease in the salience of divisive keywords.

Timing of the Effect. Our premise is that the movie was a powerful vehicle for the *Lost Cause* narrative. Following the logic of Dawkins (1976) and Shiller (2019), we view narratives as memes spreading in a viral manner. The *Lost Cause* narrative initially "infected" the county when the movie was aired. In the months following the screening, the narrative kept spreading locally in the form of fiery debates and controversies within the echo chambers of the time – churches, branches of political parties, charities, family gatherings, newspapers, etc. Hence, shifts in attitudes were likely not immediate, but gradual and cumulative. It took time for the narrative to penetrate all areas of local society and for echo chambers to have their full effect. To summarize, our interpre-

³⁷With respect to the lists used in Panels A and C, the extended lists of Panel B include few keywords that were ranked below top 20 in the lists of *Patriotic* and *Divisive* words, according to the judges' evaluations (see OA Section A.5): American Revolution and Fraternity for the *Patriotic* bag; Bloody shirt, Dixie, *Lost Cause*, Northerners, Scalawags, Stars and Bars, and Yankee for the *Divisive* bag.

Table 3: Patriotic vs Divisive Discourse - Newspaper Analysis

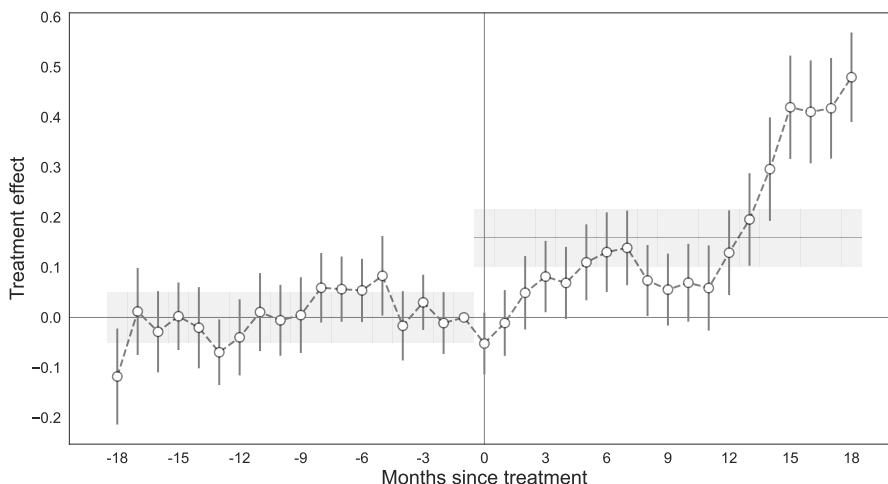
	Reconciliation			Patriotic			Divisive		
	(1) OLS	(2) RF	(3) 2SLS	(4) OLS	(5) RF	(6) 2SLS	(7) OLS	(8) RF	(9) 2SLS
Panel A: Equation 1									
Birth of a Nation	0.400 (0.021)		1.092 (0.071)	0.345 (0.023)		0.849 (0.071)	-0.056 (0.017)		-0.243 (0.047)
Million Dollar Mystery		0.410 (0.025)			0.319 (0.026)			-0.091 (0.017)	
1st Stage F-Stat	-	-	217	-	-	217	-	-	217
Panel B: Extended Word Lists									
Birth of a Nation	0.357 (0.021)		0.958 (0.068)	0.324 (0.025)		0.788 (0.075)	-0.033 (0.018)		-0.169 (0.052)
Million Dollar Mystery		0.359 (0.025)			0.296 (0.028)			-0.064 (0.019)	
1st Stage F-Stat	-	-	217	-	-	217	-	-	217
Panel C: State x Month FE									
Birth of a Nation	0.356 (0.023)		1.121 (0.095)	0.309 (0.027)		0.892 (0.095)	-0.047 (0.020)		-0.229 (0.060)
Million Dollar Mystery		0.336 (0.027)			0.267 (0.029)			-0.069 (0.017)	
1st Stage F-Stat	-	-	124	-	-	124	-	-	124
Dep. Var. Std. Dev.	0.93	0.93	0.93	3.74	3.74	3.74	4.12	4.12	4.12
Observations	89,325	89,325	89,325	89,325	89,325	89,325	89,325	89,325	89,325

NOTE: The table reports OLS (Columns 1, 4, and 7), reduced form (Columns 2, 5, and 8), and 2SLS (Columns 3, 6, and 9) estimates. The dependent variables are the first principal component of patriotic words' log frequencies minus the first principal component of divisive words' log frequencies, $Reconciliation_{ct}$ (Columns 1 to 3), the first principal component of patriotic words' log frequencies, $Patriotic_{ct}$ (Columns 4 to 6), and the first principal component of divisive words' log frequencies, $Divisive_{ct}$ (Columns 7 to 9). Panel A reports results for our baseline specification. Panel B reports results from regressions using extended word lists. Finally, Panel C considers the introduction of fixed effects at the state-period (month) level. The reported standard deviation and number of observations refer to estimates in Panel A. See Section C. for further details. The unit of observation is the county (c) in a particular month-year (t). Birth of a Nation is an indicator variable that takes a value of 1 after the movie was screened in the county and 0 otherwise (see Section C. for details). Million Dollar Mystery is an indicator variable that takes a value of 1 after the movie was screened in the county and 0 otherwise, transposed 231 days later (see Section B. for further details). All regressions control for county, month-year, and coverage percentile fixed effects. Standard errors clustered at the county level.

tation of the post-screening changes in attitudes is that they capture not only the initial spark, but also reactions that followed.

A natural way to document the change of the effect over time is to augment the two-way fixed effect estimator setup with richer dynamics of lags and leads. We estimate a variant of equation (1) that embeds a set of 36 monthly leads and lags of the treatment effect, relying on the method devised by Chaisemartin and D'Haultfoeuille (2020) (variations of the lags/leads structure leaves the results unaffected). The estimated coefficients are reported in Figure 3. We find a gradual and cumulative impact of the screening of the movie on our reconciliation measure, in line with our

Figure 3: Patriotic vs Divisive Discourse - Lags and Leads



NOTE: The figure plots estimates of the effect on the variable $\text{Reconciliation}_{c,t}$ of 18 of lags and 18 leads (monthly increments) of the variable $\text{BON}_{c,t}$. The gray solid lines show the average effect for the placebo estimates and the average treatment effect. Coefficients are estimated following De Chaisemartin and D’Haultfoeuille (2020).

expectations. Importantly, the data do not seem to reject the parallel trend assumption, as visual inspection of the Figure reveals the absence of a pre-treatment effect.

D. Sensitivity Analysis

We perform a battery of sensitivity checks to test for the robustness of the baseline estimates (Panel A, Table 3). Here we report only a summary of the sensitivity analysis; all tables and a detailed discussion are in the Online Appendix. Note that we perform most of these robustness checks for all outcome variables and we (briefly) refer to them again in the next sections.

Measurement of Reconciliation Rhetoric. We consider alternative ways to measure reconciliation in local newspapers in OA Section C.2. There, we show that the results are robust to alternative definitions of keywords’ frequencies (re-scaling of the +1 transformation, inverse hyperbolic sine, in OA Section C.1) and alternative ways of constructing the two bags of *Patriotic* and *Divisive* keywords (OA Section C.2). Among other exercises, we allow for any possible recombination of the bags: We generate 500 different random subsets of the bags where each keyword is included with a probability 0.5; we then estimate the treatment effect for each Monte-Carlo draw. OA Figure C2 displays the obtained sampling distribution; it confirms that the estimated effect of BON screening is positive and statistically significant no matter how the bags are constructed.

Measurement of BON Screenings. We use various exercises to confirm that our results do not rely on any specific coding choice in the construction of the treatment variable (i.e. BON screening). Given that the measurement of screenings is based on information retrieved from newspapers, we

first check that the results are not driven by anomalous variations in the coverage of the newspapers' archive (OA Sections C.3.1 and C.3.2). Then, we look at alternative values of the threshold (set to two screening records in the baseline analysis) retained for coding a county as treated by the movie (OA Section B.3). Finally, we use information on screenings from Ang (2021) and replicate our estimations with the 3 alternative measures of the treatment variable (OA Section B.2).

World War I. The descriptive statistics suggest that the outbreak of the First World War might have bolstered attitudes toward reconciliation in the country. To rule out the potential confounding effect of this war-induced surge in patriotism, we perform two robustness exercises, described in details in OA Section B.4. First, we re-estimate the baseline specifications on the sub-period strictly *predating* the US participation to the First World War, considering two distinguishable breakpoints that shaped the US participation to the War: i) when the US entered in the War on April 6, 1917; and ii) the battle of Cambrai (FR) on November 30, 1917 when the American troops (11th Engineers) first participated in active combat. The results of these robustness checks are reported in OA Tables B15 and B17. Second, we re-estimate the baseline regressions controlling for a measure of salience of WWI in local newspapers (OA Table B19). This robustness check enables us to control for the confounding effect of WWI without dropping observations from the estimation sample. The results of these two robustness checks indicate that the treatment effect is robust to controlling for the potential confounding effect of WWI.

Alternative Instrumental Variables. MDM was released eight months before BON. As shown above, the transposed spatio-temporal diffusion of MDM is a good predictor for the diffusion of BON. In principle, it is possible that certain persistent shocks such as an income boom across some dynamic cities, might drive both the screening of MDM and the screening of BON eight months later. To rule this out, we replicate the analysis using the spatio-temporal diffusion of two different movies as instruments. These films, *Traffic in Souls* and *What Happened to Mary*, are thematically unrelated to reconciliation and discrimination and were released 2-3 years before BON. The RF and 2SLS regression results, reported in OA Section B.5, are robust to using these alternative movies as instruments. Finally, instead of relying on previous movies, we consider as a last alternative an instrument that is based on logistical constraints. Indeed, Ang (2020) uses the presence of theaters in 1914 as an instrument for the spatial diffusion of BON. We transpose his cross-sectional approach to our empirical setting. Using his data on theaters' presence (Ang 2022), we define as an instrument the interaction between an indicator coding for the presence of theaters in 1914 and a dummy taking on the value of 1 after the national release of BON in February 1915. The estimation results are displayed in OA Section B.6. Overall, all the 2SLS and reduced-form results based on our instrument, MDM, are confirmed when using Ang's instrument for theaters' presence. This exercise offers a reassuring cross-validation of the two instrumental variable approaches that were developed independently in Ang's (2020) and in our paper.

Placebo tests and falsified instrumental variable. In OA Section B.7, we perform two placebo tests in support of the exclusion restriction assumption of the instrumental variable strategy. These

falsification exercises leverage on the variations in the space and time of the screenings of the two movies (MDM and BON); the goal is to show that the instrument (MDM) impacted attitudes towards reconciliation only through the treatment (BON). The first exercise rests on cross-county mismatches between the instrument and the treatment. Concretely, MDM screening is a strong, but not perfect, predictor of BON screening; several counties that were exposed to MDM did not screen BON (see Section B.). Hence, we can test whether MDM, as a falsified treatment, impacted attitudes in all counties or, instead, only in counties that also screened BON. Our second falsification exercise exploits the differences in the national release dates of MDM (July 1914) and BON (February 1915). The idea is to show that MDM impacted attitudes toward reconciliation *only after* the release of BON, with no effect being detected *before*. To some extent, this exercise resembles our event-study analysis (e.g. Figure 3) that already shows, in the data, the absence of any change in attitudes before treatment. However, the event-study is based on the screening of BON (true treatment) whereas this exercise is based on the screening of MDM (falsified treatment). Overall, these placebo tests confirm that the treatment effect is linked to the content of BON and does not come from the direct exposure to MDM—a film that circulated nationally and that could potentially have created a national sense of unity regardless of its content.

Alternative Empirical Specifications. In OA Section B.8, we enrich the empirical model by including flexible controls, using the set of observable characteristics that appear to be unbalanced between treated and untreated counties (for the balancing tests, see OA Table A1). Turning to statistical inference, we explore an alternative clustering structure for the standard errors in OA Section B.9, allowing for state-level clusters or spatial clusters (using the 2SLS statistical package of Colella et al. 2020). In OA Section C.3.3, we move to a word-based approach by changing the unit of observation, from the county \times month level to the keyword \times county \times month level. The main advantage of this fine-grained setting is that we can control for county-month fixed effects, arguably a powerful way to account for all events affecting a given county at a specific point in time, such as local elections, income shocks, protests or strikes.

IV. Reconciliation & Patriotism: Evidence from War Casualties

In this section, we examine how the diffusion of the movie renewed commitment to the national cause. We measure patriotism by looking at individuals' decisions to volunteer for the United States Navy. This analysis complements the previous examination of changes in opinion by measuring how reconciliation narratives translated into actual changes in behavior.

A. Measurement of Patriotism through Navy Enlistment

Existing datasets on army volunteering (see, for instance, Fouka 2020; and Caprettini, Schmidt-Fischbach, and Voth 2020) provide information on the geographical origin of volunteers but not on the date of enlistment. This is a problematic limitation in the data given that our empirical strategy relies on within-county time-series variations in movie exposure. We must therefore construct

a new dataset with information on the geographical and temporal dimensions of enlistment. We use data on casualties (deaths) suffered by the US Navy personnel in the First World War – an *exhaustive*, and so far unexploited, dataset collected by the Bureau of Navigation of the Navy Department (1920).³⁸ Casualties were measured among individuals who enrolled in the Navy in the years surrounding the US’s April 1917 entry into the war, between January 1913 and November 1918.³⁹

The dataset lists 7,569 casualties, the vast majority of which occurred in 1917 and 1918 (851 and 5,847, respectively). For each deceased Navy sailor, we note his enlistment date t and county of origin c by assigning to him the county of his next of kin’s address (parents, spouse, etc.). We then build the outcome variable $\text{Navy Enlistments}_{ct}$ as an indicator taking value one if we observe at least one enlistment in the corresponding county-month. Strictly speaking, this variable reflects only the enlistment of sailors who died during the war. However, when estimating equation (1), we interpret it as a proxy for enlistment in the Navy at large. This view is reasonable given the inclusion of time and county fixed effects in our empirical design.⁴⁰ Because effort in battle (and its effect on mortality rate) could also correlate with national sentiment and patriotism, as a robustness analysis, we replicate our approach including only sailors who perished because of infectious diseases.

A limitation of our data is that there is no distinction between individuals who volunteered and those who were drafted. This only matters for the period following the introduction of the draft with the Selective Service Act of May 1917. However, conscription was adopted to raise manpower mostly for the Army, while voluntary recruits continued to represent the overwhelming majority in the Navy.⁴¹ It is therefore likely that the local enrollment rate is a valid proxy of patriotism even after April 1917. Nonetheless, for the sake of completeness, we consider two versions of the estimation sample: one covers January 1913-August 1918 (the full period for which enrollment data are available) and a more conservative one excludes all months after April 1917. OA Figure A17 maps the spatial distribution across the territory of $\text{Navy Enlistments}_{ct}$ for in-sample counties. We see that variations are substantial and not confined to the coastal areas, two desirable features for identifying the treatment effect. Additional descriptive statistics are displayed in OA Section A.7.

³⁸Data were digitized by G. Smith and are available at <https://www.naval-history.net/>.

³⁹Data on Army enlistment could have been another valid source of information, but unfortunately materials on the Army contain only the list of soldiers who lost their lives in WWI, lacking any information on enlistment dates (the original data was lost in a fire in 1973 ([source](#))).

⁴⁰OA Section A.7.5 proposes a validation of our data approach. Our approach basically rests on the empirical assumption that the likelihood of dying in service at a given point in time, conditional on an individual’s military experience (i.e., date of enlistment), is not influenced by county-specific time-varying factors. Note that about 1.4% of all the individuals recruited died during the sample period. The total number of US Navy personnel active during WWI, according to figures from the New York State Archives was 551,736 (see <http://www.archives.nysed.gov/education/total-navy-personnel-state-world-war-i-c-1920>).

⁴¹According to the figures presented by the *Second Report of the Provost Marshal General to the Secretary of War on the Operations of the Selective Service System to December 20, 1918* the Navy forces included 437,527 enlisted man and 24,702 commissioned ones.

B. Reconciliation and Patriotism: Empirical Results

Panel A of Table 4 reports the estimation results of Equation (1) with $\text{Navy Enlistments}_{ct}$ as the dependent variable. These specifications replicate the structure of Table 3 with OLS in Column (1), reduced form in Column (2) and 2SLS in Column (3). In Columns (4) to (6), we redo the analysis for the subsample of observations preceding April 1917, preceding the Selective Service Act of May 1917. Across all specifications, the treatment effect is consistently positive and precisely estimated. The magnitude of the 2SLS coefficient in Column (3) indicates that exposure to BON increased the likelihood of observing volunteers in the corresponding county-month by around 7 percentage points (sample mean 3 pp). Focusing on the more conservative sample until March 1917, Column (6) yields an effect that is even larger relative to the sample mean: 3 percentage points for a sample mean around 1 pp. Panel B reports estimation results when state \times month fixed-effects are included. The magnitude of coefficients is fairly stable across these different specifications. Finally, we perform an event study analysis and estimate 36 monthly leads and lags of the treatment effect. The coefficients are displayed in Figure CI. We see that the time-series pattern is comparable, but not identical, to that observed for the text-based measure of reconciliation. Here, also, there is reassuringly no evidence of a pre-treatment trend; however, the movie now exerts its effect only after one year. This extra delay in the response could be due to the behavioral nature of the decision to enlist in the Navy. It is likely to be more sticky and slow-moving than the underlying opinions that govern the text-based measure of reconciliation.

Sensitivity Analysis. The robustness analysis is similar to that conducted with the previous outcome variable. For the sake of brevity, we briefly list its main elements: (i) alternative measures of BON screening (OA Section B.3); (ii) controlling for World War I (OA Section B.4); (iii) alternative instruments (OA Section B.5); (iv) Placebo tests (OA Section B.7); (v) alternative empirical specifications (OA Section B.8); (vi) alternative clustering structure (OA Section B.9); (vii) alternative estimation sample (OA Section D.1). Finally, in OA Section D.2, we focus on the sub-sample of enlisted men who died of infectious diseases with the idea of controlling for (potentially endogenous) exposure to combat fatalities. For the Navy, this subsample is particularly large because the Spanish flu pandemic heavily affected the troops.

V. Reconciliation & Cultural Convergence in Naming Patterns

A key factor in successful nation-building is a common identity with shared symbols and cultural elements (see Anderson 1983, among others). We study this dimension of post-conflict reconciliation by showing how the *Lost Cause* narrative contributed to cultural convergence between former enemies. We focus on parents' decision to give their child a first name associated with the regional culture of the former enemy. More precisely, we test whether the movie increased the popularity of "Unionist-sounding" names among babies born in former Confederate states and *vice-versa*.

We think naming patterns are relevant because first names are widely considered to be important markers of cultural identity. Moreover, the choice of a first name is available to all parents,

Table 4: *The Birth of a Nation* and Enlistments

	Navy Enlistments					
	Jan 1913 - Aug 1918			Jan 1913 - Mar 1917		
	(1)	(2)	(3)	(4)	(5)	(6)
	OLS	RF	2SLS	OLS	RF	2SLS
Panel A: Equation 1						
Birth of a Nation	0.041 (0.005)		0.076 (0.012)	0.016 (0.004)		0.031 (0.010)
Million Dollar Mystery		0.029 (0.005)			0.009 (0.003)	
1st Stage F-Stat	-	-	329	-	-	281
Panel B: State x Month FE						
Birth of a Nation	0.036 (0.005)		0.060 (0.013)	0.017 (0.005)		0.027 (0.011)
Million Dollar Mystery		0.019 (0.005)			0.007 (0.003)	
1st Stage F-Stat	-	-	218	-	-	180
Dep. Var. Mean	0.03	0.03	0.03	0.01	0.01	0.01
Dep. Var. Std. Dev.	0.18	0.18	0.18	0.10	0.10	0.10
Observations	62,968	62,968	62,968	47,226	47,226	47,226

NOTE: The table reports OLS (Columns 1 and 4), reduced form (Columns 2 and 5), and 2SLS (Columns 3 and 6) estimates. The dependent variable is an indicator function taking value 1 if at least one person was enlisted in county c and month-year t . See Section A. for further details. The unit of observation is the county (c) in the month-year (t). The sample includes all months between January 1913 and November 1918 in Columns (1) to (3), and all months between January 1913 and March 1917 in Columns (4) to (6). Birth of a Nation is an indicator variable taking a value of 1 after the movie was screened in the county and 0 otherwise (see Sections C. for details). Million Dollar Mystery is an indicator variable taking a value of 1 after the movie was screened in the county and 0 otherwise, transposed 231 days later (see Section B. for further details). All regressions control for county and month-year fixed effects. Panel B also considers the introduction of fixed effects at the state-period (month) level. The reported standard deviation and number of observations refers to estimates in Panel A. Standard errors are clustered at the county level.

without material constraints (Lieberson 1992). A large body of literature in economics has looked at naming patterns to measure parents' racial, social, cultural and even political attitudes (e.g., Fryer and Levitt 2004; Fouka 2019, 2020; Abramitzky et al. 2020; Bazzi, Fiszbein, and Gebresilasse 2020; and Algan et al. 2022.⁴²

⁴²Fryer and Levitt (2004) provide additional evidence on the cultural component of first names by showing that the surge in distinctively Black names in the US since the seventies can be associated to a rise in Black cultural identity. In their study of two major waves of immigration in the United States, Abramitzky et al. (2020) emphasize the attractiveness of first names as a measure of assimilation. They argue that first names are more likely to reflect preferences and less likely to reflect constraints imposed by the host society than alternative measures, such as intermarriage, which could reflect both the demand and supply determinants of assimilation opportunities. Mazumder (2019) finds that immigrants' military service in the US army during World War I increased their rate of cultural assimilation, with potentially positive

A. Empirical Design and the Enemy-Sounding Name Index

We use first names to proxy the prevailing sentiments of the former Civil War enemies towards each other over time. We identify the former enemies as two groups, S and N , which correspond to the former Confederate and Unionist states.⁴³ Drawing on Fryer and Levitt (2004), and more recently Fouka (2019, 2020) and Abramitzky et al. (2020), we compute an index of name distinctiveness that measures how popular a given name is within the former enemy’s population, relative to the population at large. More precisely, for a given baby i , born in group $g(i) \in \{S, N\}$ between 1910 and 1920, we build an index of how "enemy-sounding" her name $n(i)$ is, as follows:

$$ENI_i = \frac{\text{Name}_{n(i),g_{-1}(i)}}{\text{Name}_{n(i),g_{-1}(i)} + \text{Name}_{n(i),g(i)}} \times 100 \quad (3)$$

where Name represents the name frequencies taken separately for the child’s own group $g(i)$ and the former enemy’s group $g_{-1}(i)$. These (pre-sample) frequencies are computed for white individuals born in the US before 1910 to US-born parents in territory g or g_{-1} (thus limiting the cultural influence of recent migrants).⁴⁴ We construct ENI_i for the subsample of individuals born between 1910 and 1920 and covered in the 1% sample of the Integrated Public Use Microdata Series (IPUMS) of the 1920 and 1930 Censuses. Given that censuses report only the county of residence, we must assume that counties of birth and residence are identical.⁴⁵

The Enemy-Sounding Name Index, ENI , gauges how much a given name evokes the former enemy’s regional identity. Names with a value of zero are only used by people born in the region of origin $g(i)$ of the individual i . A value of 100, in contrast, means that the name is encountered only in the territory of the former enemy $g_{-1}(i)$. Below, we also consider a binary version of the ENI which takes a value of 1 when $ENI_i > 50$ and zero otherwise. In this case, the binary index has a straightforward interpretation as it indicates names that are *more* popular in the former enemy’s territory than in the region of origin. In OA Section A.7.6 we illustrate empirically the logic of the ENI . In particular, we show that in the set of 5631 first names observed in the data, the enemy-sounding names (high ENI) tend to be the less popular. We also report the top 20 most confederate-sounding and unionist-sounding names. As a way of putting the ENI in historical perspective, we scrutinize the names of US presidents elected between 1861 (Abraham Lincoln) and 1913 (Thomas Woodrow Wilson). Out of these twelve presidents—the vast majority originating from the North—ten hold a name with a low ENI that is culturally distinctive of their region of origin.⁴⁶

economic returns. Particularly relevant to our study is the finding by Fouka (2019) that German immigrants and their descendants responded to discrimination in the US during WWI by increasing their assimilation efforts, including by changing the “Americanness” of their names.

⁴³ We define Unionist states as all states and former US territories that did not belong to the Confederacy. Note that regressions with alternative definitions of this group (provided in the online appendix) show that the results do not rely on this choice. The list of former Confederate States comprises Alabama, Arizona, Arkansas, Florida, Georgia, Louisiana, Mississippi, New Mexico, North Carolina, South Carolina, Tennessee, Texas, Virginia and West Virginia.

⁴⁴ Frequencies are retrieved from the 1880 10%, 1900 5%, 1920 1% and 1930 1% Integrated Public Use Microdata Series (IPUMS) samples, which are publicly available datasets based on census data.

⁴⁵ Data, from Ruggles et al. (2022), can be downloaded via the IPUMS USA extract (at this link <https://usa.ipums.org/usa/>).

⁴⁶ Anecdotally, the relevance of this index is also illustrated by the choice of character names in the movie *The Birth of a*

We then estimate the impact of the screening of *The Birth of a Nation* on the ENI of babies born over the 1910-1920 period. To this end, the baseline econometric equation (1) has to be slightly modified in order to accommodate individual-level data:

$$\text{ENI}_i \equiv \beta \times \text{BON}_{c(i),y(i)} + \alpha_c + \alpha_g + \alpha_{y,s} + \epsilon_i. \quad (4)$$

where the unit of observation is the baby i from county $c(i)$, observed in census $s(i)$ and born in year $y(i) \in [1910 - 1920]$. The treatment variable has to be adjusted accordingly and now varies at the county-year level: BON_{cy} codes for the post-screening period and is equal to 1 in all years following the screening and 0 otherwise. The variables α_c , α_g and $\alpha_{y,s}$ respectively stand for county, gender and (year of birth \times census year) fixed effects. Our analysis departs from that presented in the previous section in two main respects. Firstly, the outcome of interest varies at the individual level rather than the county level. Secondly, the time dimension is now collapsed to the year level given that censuses do not report individuals' month of birth.

In Equation (4), a positive β captures the extent to which a baby born in a Unionist county has a Confederate-sounding name or vice versa. A convergence in naming patterns might be interpreted as an indication of fading stigmas attached to names that were historically distinctive of the former enemy's culture. However, rather than a change in cultural norms, convergence in naming patterns could also be driven by migration. This would be the case if the post-screening period is systematically associated with an increase in the inflow of migrants from the states of the former enemy (who bring with them a distinctive set of names for their children).⁴⁷ While interesting and also related to reconciliation, this alternative channel seems, in our view, less plausible. Below, we perform several empirical exercises to control for this migration channel.

B. Convergence in Naming Patterns: Results

The baseline estimation results of equation (4) are displayed in Panel A of Table 5. Following the logic of the previous tables, the first three specifications correspond to OLS (Column 1), reduced form (Column 2) and 2SLS (Column 3). The last three columns replicate the same set of regressions with the binarized version of the ENI. In these cases, the empirical model has to be interpreted as a linear probability model.

In all columns, the coefficient of interest is positive and statistically significant at conventional thresholds. These results show that screenings of BON influenced naming decisions for babies by increasing the prevalence of enemy-sounding names. The point estimate in Column (6) implies that airing the movie increased the likelihood that a baby receives a popular enemy-sounding name by 4.9 percentage points (sample mean: 36 pp). As discussed above, this evidence of a convergence in naming patterns is consistent with our hypothesis that the large-scale diffusion of *the Lost Cause*

Nation. The two main characters are named *Austin* Stoneman (the abolitionist leader from the North) and *Ben* Cameron (savior of the South and "proud" founder of the Ku Klux Klan). The corresponding ENI values for the two names are below the value of 50 ($\text{ENI}_{\text{Austin}}=40.27$ and $\text{ENI}_{\text{Ben}}=25.95$) and this seems to reflect a desire to further typify these two movie characters.

⁴⁷The Great Migration might have, for instance, profoundly changed naming patterns in the geographical areas involved.

narrative fostered cultural reconciliation between the groups. Results appear to be similar when we replicate the analysis with State-Year fixed effects (Panel B of Table 5). The inclusion of this additional set of fixed effects demands a lot from the data given the reduced number of counties observed in a given year-state.

Table 5: *The Birth of a Nation* and Naming Patterns

	Enemy Name Index					
	Continuous			Dummy		
	(1) OLS	(2) RF	(3) 2SLS	(4) OLS	(5) RF	(6) 2SLS
Panel A: Equation (4)						
Birth of a Nation	0.628 (0.228)		1.731 (0.476)	0.017 (0.006)		0.049 (0.013)
Million Dollar Mystery		0.864 (0.237)			0.024 (0.006)	
1st Stage F-Stat	-	-	90	-	-	90
Panel B: State x Year FE						
Birth of a Nation	0.418 (0.222)		1.589 (0.565)	0.009 (0.006)		0.040 (0.016)
Million Dollar Mystery		0.720 (0.235)			0.018 (0.007)	
1st Stage F-Stat	-	-	79	-	-	79
Dep. Var. Mean	44.16	44.16	44.16	0.36	0.36	0.36
Dep. Var. Std. Dev.	16.81	16.81	16.81	0.48	0.48	0.48
Observations	91,612	91,612	91,612	91,612	91,612	91,612

NOTE: The table reports OLS (Columns 1 and 4), reduced form (Columns 2 and 5) and 2SLS (Columns 3 and 6) estimates. The dependent variable is the Enemy-Sounding Name Index (ENI) of individual i in Columns (1) to (3), and the binarized version of the ENI in Columns (4) to (6) (see Section A. for further details). The unit of observation is the individual i from county $c(i)$, observed in census $s(i)$ and born in year $y(i) \in [1910 - 1920]$. The sample includes all white native-born individuals born in year $y \in [1910-1920]$ and recorded in the 1920 and 1930 Censuses. Birth of a Nation is an indicator variable that takes a value of 1 after the movie was screened in the county and 0 otherwise (see Sections C. for details). Million Dollar Mystery is an indicator variable that takes a value 1 after the movie was screened in the county and 0 otherwise, transposed 231 days later (see Section B. for further details). All regressions control for county, gender and (year of birth \times census year) fixed effects. Results presented in Panel B also include state-year FEs. Standard errors are clustered at the county level.

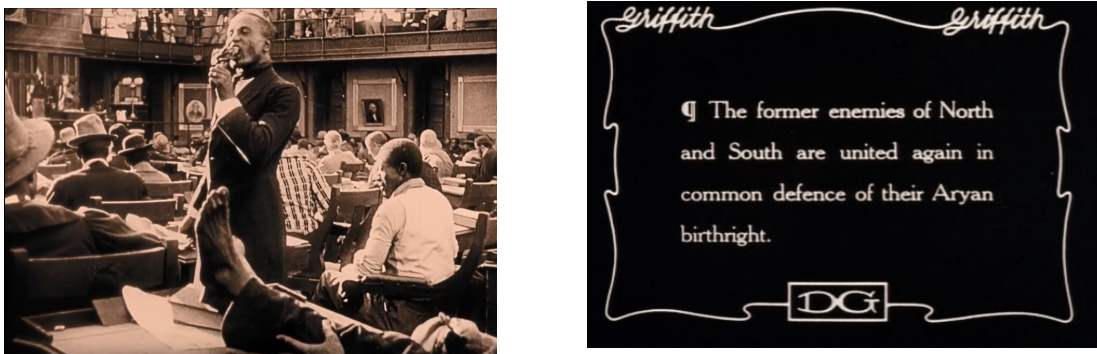
Sensitivity Analysis. In the OA Section B, we conduct a battery of robustness tests that is similar to that performed with the previous outcome variables. In addition, in OA Section D, we add empirical exercises that specifically account for the name-related nature of the ENI: (i) we consider alternative definitions of the ENI and who the former enemies are; (ii) we remove from the estimation sample all individuals holding a name of a BON character; (iii) we impose a more demanding

fixed effect structure by including first-name or family-name fixed effects; and (iv) we rule out the possibility that migration patterns or differences in family composition or pre-existing trends in naming patterns could explain our results.⁴⁸ Finally, we run a placebo test, focusing on newborns from African-American families and expecting to find no effect. The estimation results confirm that BON screening is not associated with a significant change in naming patterns among Black individuals from counties located in the former Confederacy or Union.

VI. Movie-Induced Racial Discrimination

In Search of a Common Enemy. In his book *The Lost Cause Regained*, Pollard (1868, p. 129) – one of the founding fathers of the *Lost Cause* ideology – redefined the new war that the South needed to fight as the “war of ideas”, this time in an alliance with the North: its aim was no longer to defend slavery, but rather to defend white supremacy, the “true hope of the South.” In the words of Hale (2010), Pollard put forward a reconfiguration of the national conflict from sectional to racial.⁴⁹ The very same call for reunion against the common threat of African-Americans’ enfranchisement is emphasized in the *Birth of a Nation*, where one of the key scripts of the movie reads “The former enemies of North and South are united again in common defense of their Aryan birthright” (see Figure 4).

Figure 4: The Common Threat: The Emancipation of African Americans



NOTE: The emancipation and enfranchisement of African Americans is presented as a common threat for the white population in the North and the South. *Left Picture:* A scene from the movie depicting a state Parliament dominated by Black representatives. *Right Picture:* A script from the movie inviting reconciliation against the common threat.

⁴⁸We address the latter point by first replicating our baseline analysis using only individuals from the 1920 Census, whose year of birth is closer to the census year, which presumably decreases the chance that they resided in a county other than their county of birth. We then replicate our main results using only individuals from former Confederate states for whom the head of the family was also born in the former Confederacy, and do the same for the former Union. We verify the robustness of our estimates when including a set of family characteristics fixed effects. To verify that the treatment effect does not capture pre-existing trends in naming patterns that affect counties where the movies are more likely to be screened, we fictitiously anticipate the release of BON and MDM. Overall, the results remain very similar and consistent with our baseline estimates presented in Table 5.

⁴⁹From Pollard (1868, p. 166): “Blood is thicker than water, and Northern whites will sympathize with Southern whites in their struggle to shake off the incubus of Negro rule.”

At first sight, it is peculiar for a movie that is intended to create a new founding myth for a nation to dedicate such a central space toward a racial minority, which had just embarked on its emancipation struggle. One possibility is that the white supremacist ideology of the *Lost Cause* simply reflects the spirit of the times. In this sense, reconciliation and white supremacy could have been just two separated items on the *Lost Cause* agenda, impacting attitudes as two independent semantic elements. An alternative interpretation is that the definition of such a threat, common to North and South, worked as an ideological glue for the wounded nation, in a common-enemy type of narrative. Similar rhetorical constructions are, in fact, very common across founding myths of numerous modern nations, such as Turkey and Indonesia, which "formed and consolidated their identities in opposition to others, neighbors, antagonists, enemies, and former despots" (Evrigenis 2007). In many cases, this imagined common threat was constructed against minority groups within the country, for example Jews and Gypsies in Nazi Germany, or minorities during the revolution of the Young Turks at the beginning of the twentieth century, or in the dissolution of former Yugoslavia.⁵⁰ The functioning of such a rhetorical mechanism has been hypothesized and documented in a host of different disciplines. Classical work in sociology, for instance, suggests that intergroup conflict increases intragroup cohesion and cooperation (Coser 1964 and Simmel 1908; among others).⁵¹ These insights resonate with a broad literature in evolutionary biology suggesting that external threats can magnify parochial altruism (Henrich and Boyd 2005; Richerson and Boyd 2005; Bowles 2006; Choi and Bowles 2007). De Jaegher (2021) surveys the common enemy effect within game theory and the experimental economics literature. In cognitive psychology, balance theory argues that when two individuals share negative attitudes toward a third person, experiencing negative attitudes versus each other induces cognitive dissonance (see Hummon and Doreian 2003, for a review). This destabilizing dissonance is solved when the two individuals become friends, as with the motto *the enemy of my enemy is my friend*.

The Movie and Racial Discrimination. In support of the common-enemy interpretation of the narrative's effects, we now highlight how the movie contributed to the construction of this imaginary threat—common to North and South—by looking at changes in racial discrimination across the country. The most complete analysis of the impact of the *Birth of a Nation* on race hatred is undertaken in the companion paper by Ang (2020), who analyzes the effect of the movie on lynchings, race riots and KKK support. He finds that counties exposed to the movie were about four times more likely to experience a lynching and a race riot during the month of the movie's arrival. Looking at the long-run, he documents that counties having screened *BON* are 60% more likely to have a KKK Klavern by 1930. We complement these results by showing that the movie did not only engender an increase in extreme acts of violence but also impacted white supremacy and

⁵⁰Other examples of common-enemy narrative have been observed in the context of the consolidation of the French Republic after 1870, the Italian Risorgimento, and the gradual building of Switzerland and the building of modern Lebanon. Roman historians, from Posidonius to Sallust, saw the fear of the common threat posed by Carthage as the force that prevented a civil war between nobles and plebeians.

⁵¹Under the label of the conflict cohesion hypothesis, Coser (1964) suggests that the presence of a common enemy unites members of a group. Simmel noted this tendency when analyzing the Catholic Church (1908). Empirical studies have demonstrated that during a conflict individuals show stronger attachment to their group and evaluate their group more positively (see, for instance, Sherif 1966, and Bornstein 2003).

racial discrimination on the labor market more generally. This is particularly important because, while lynchings and KKK activities were prevalent mostly in the South, we show below that the movie concurred with the spread of racism throughout the entire country (see section VII.). In a previous version of the paper (Esposito et al. 2021), we also perform a fully-fledged mediation analysis with which we quantify how much the movie’s impact on racism contributed to reconciliation: There, our estimates suggest that 55% of the total effect of the movie on reconciliation was indirectly mediated through the rise in discrimination and racism.

We use our historical archive of local newspapers to build two time-varying measures of racial discrimination at the county level. The first outcome variable, Supremacism_{ct} , is a proxy for racial nationalism that captures the presence of race and whiteness in the public discourse on national identity: It is an indicator variable taking a value of one if in the corresponding county-month newspaper pages containing the keyword “white Americans” are observed. The second outcome variable, $\text{Discrimination}_{ct}$, is a proxy for racial discrimination on the labor market based on job ads retrieved from local newspapers. Two examples of such discriminatory job ads are displayed in Figure 5, both coming from newspapers located in a former Unionist state. To build this variable, we start by recovering all newspapers pages containing the keyword “White Only.” This keyword is quite common in the 1910s newspapers and we must rule out all pages unrelated to job market discrimination that contain it. Given the large number of pages (approx. 250,000), visually inspecting each page is not a viable option. We opt for a more efficient approach where we restrict our query to the subset of pages (approx. 42,000) that, beside “White Only”, also contain the words “help” and “wanted”. This additional requirement reduces measurement errors (false positives) because the latter two keywords are systematically associated with job ads. We code $\text{Discrimination}_{ct}$ as an indicator taking a value of one if newspaper pages containing the three keywords “White Only”, “help” and “wanted” are observed in the corresponding county-month.

Figure 5: Racial Discrimination on the Labor Market in Former Union States



NOTE: Advertisements documenting racial discrimination in the labor market. Source: *Left Picture: Evening public ledger, Pennsylvania, June 1919. Right Picture: The Sun and the New York herald, New York, September 1920.* Newspapers pages retrieved through the Library of Congress, <https://chroniclingamerica.loc.gov/>.

Table 6 reports OLS, reduced form, and 2SLS estimation results of Equation (1) with Supremacism_{ct} and $\text{Discrimination}_{ct}$ as dependent variables. With the former variable, we include percentile fixed effects associated with the frequency of pages that contain the (singleton) word *Americans* in the corresponding county-month (as this term is frequently used and may appear in very different semantic contexts). With the latter variable, we include percentile fixed effects associated with the frequency of pages with job ads over the total number of published pages: This takes into account

the tightness of the labor market by controlling for the frequency of job ads at the county-month level. Panel A reports the baseline estimation results; Panel B displays the estimates obtained with state-month fixed effects. We see that, in all specifications, the treatment effect is positive and significant at standard statistical levels. Quantitatively, estimates presented in Columns (3) and (6) show that the screening of BON increased references to both “white Americans” (sample mean 11pp) and racial discrimination in job ads (sample mean 12pp) by 9 percentage points. Figure CI presents, for both outcome variables, the estimated coefficients of the 36 monthly leads and lags of the treatment effect. The pattern is similar to that observed with the previous outcome variables.

Sensitivity Analysis. In the OA Section B, we conduct the same battery of robustness tests as those already implemented with the previous outcome variables (see Section D. for a description). We add two specific exercises where we consider alternative estimation samples (Section F.1), alternative measures of white supremacy and racial discrimination (Section F.2), and alternative ways to control for job ad supply and labor market tightness (Section F.3).

VII. A Nationwide Reconciliation

In this section, we show that the push for national reconciliation advocated by the movie, with its associated instrumental message of racial discrimination, reached even areas of the country that had historically never practiced any outright forms of segregation. Importantly, we show that in these places, the message of racial discrimination transmitted by the film took root in more subtle, but potentially equally disruptive, ways.

Specifically, we replicate our baseline analysis for each outcome variable, comparing the treatment effect of the movie between former Confederate and Unionist states.⁵² Figure 6 reports the estimated effects of BON screening recovered from 2SLS estimations (see OA Section B.10 for OLS and reduced form results). To permit comparison, we standardize all dependent variables with a zero mean and unitary standard deviation. Coefficients in black correspond to the estimated effects of the movie for the full sample; those in dark and light gray report the effects when estimated separately for the former Unionist and Confederate states respectively (as per Equation (5)). For each coefficient, the scale reads as the standard deviation of the outcome variable of interest; note that the coefficients related to $\text{Reconciliation}_{ct}$ are reported on a different range of values.

Results indicate that *The Birth of a Nation* fostered reconciliation in the public debate in both former Confederate and Unionist states. Changes in behaviors, meanwhile, measured in terms of Navy enlistment and naming choices, were slightly larger in the former Union states. Importantly, white supremacy and racial discrimination on the labor market (as measured by job ads) permeated former Confederate and Unionist states with equal force.

⁵²We augment the baseline model (1) with group-specific treatment effects

$$\text{Outcome}_{ct} = \beta \times \text{BON}_{ct} \times \text{Unionist}_c + \gamma \times \text{BON}_{ct} \times \text{Confederate}_c + \alpha_c + \alpha_t + \epsilon_{ct} \quad (5)$$

where the binary variables Unionist_{ct} and Confederate_{ct} indicate whether the county belongs to a former Unionist or Confederate state, respectively. The lists of former Unionist and Confederate states are displayed in footnote 43.

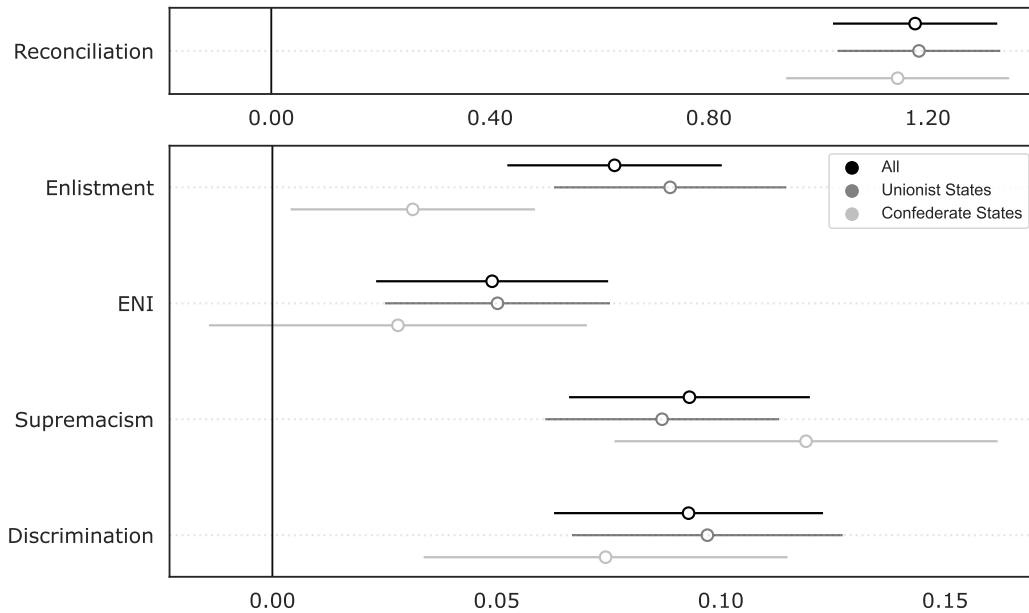
Table 6: *The Birth of a Nation* and Discrimination Against African-Americans

	Supremacism			Discrimination		
	(1) OLS	(2) RF	(3) 2SLS	(4) OLS	(5) RF	(6) 2SLS
Panel A: Equation 1						
Birth of a Nation	0.036 (0.005)		0.093 (0.014)	0.037 (0.005)		0.093 (0.015)
Million Dollar Mystery		0.035 (0.005)			0.035 (0.006)	
1st Stage F-Stat	-	-	218	-	-	223
Panel B: State x Month FE						
Birth of a Nation	0.037 (0.006)		0.102 (0.018)	0.031 (0.006)		0.070 (0.020)
Million Dollar Mystery		0.031 (0.006)			0.021 (0.006)	
1st Stage F-Stat	-	-	125	-	-	126
Dep. Var. Mean	0.11	0.11	0.11	0.12	0.12	0.12
Dep. Var. Std. Dev.	0.31	0.31	0.31	0.32	0.32	0.32
Observations	89,325	89,325	89,325	89,325	89,325	89,325

NOTE: The table reports OLS (Columns 1 and 4), reduced form (Columns 2 and 5) and 2SLS (Columns 3 and 6) estimates. The dependent variable is an indicator variable for the presence of white supremacy in the public discourse ($\text{Supremacism}_{c,t}$) in Columns (1) to (3), and an indicator variable for racial discrimination in the labor market ($\text{Discrimination}_{c,t}$) in Columns (4) to (6). See Section VI. for further details. The unit of observation is the county (c) in the month-year (t). Birth of a Nation is an indicator variable that takes a value of 1 after the movie was screened in the county and 0 otherwise (see Sections C. for details). Million Dollar Mystery is an indicator variable that takes a value of 1 after the movie was screened in the county and 0 otherwise, transposed 231 days later (see Section B. for further details). All regressions control for county and month-year. Results in Columns (1) to (3) include percentile fixed effects based on the frequency of pages that contain the word *Americans* in the corresponding county-month. Results in Columns (3) to (6) include frequency of job ads percentile fixed effects. Results presented in Panel B also include fixed effects at the state-period (month) level. The reported standard deviation and number of observation refer to estimates in Panel A. Standard errors are clustered at the county level.

Our findings on naming choices resonate with the work of David Blight (2009) and other scholars, suggesting that while the North won the war on the battlefield, the South won the war over collective memory (see, among others, Goldfield 2013). The estimation results show, admittedly with some statistical imprecision, that the Enemy Name Index changed more dramatically in the former Unionist states. As names are a close proxy of cultural shifts, these findings are consistent

Figure 6: A Nationwide Phenomenon



NOTE: The figure summarizes regression estimates of the effects of exposure to BON on our outcome variables. The variable measuring Reconciliation Rhetoric is standardized to have a zero mean and unitary standard deviation. See the text for further details.

with the view that the movie advanced the cause of the South in the "culture war," refreshing an idealized imagery of the plantation South.

VIII. Conclusion

This paper provides evidence on the powerful role of reconciliation narratives in the aftermath of a civil conflict by looking at the dissemination of tenets of the *Lost Cause* narrative through the movie *The Birth of a Nation* (1915). The quantitative analysis reveals that the movie contributed to the reconciliation between North and South. According to our interpretation of the results, reconciliation was fostered by substituting the North/South cleavage with a Black/white cleavage. Specifically, the *Lost Cause* narrative forged the myth of a threat common to all white Americans from the North and the South: Black Americans and their fight for enfranchisement.

Several caveats apply to our endeavor. First, our empirical approach allows us to assess only effects that relate to the influence of the movie *The Birth of a Nation*. Yet the *Lost Cause* narrative was also popularized and disseminated by a host of other cultural channels, such as literary books and political campaigns. Its overall impact may therefore be larger than that captured in our empirical framework. Second, by focusing on exogenous variation in exposure to the narrative, our analysis cannot shed light on the fundamental drivers of the emergence of the narrative, which we leave to further research. Third, we cannot discern whether the observed changes in opinions and attitudes were driven by persuasion or reactivation of dormant beliefs. Last, within our empirical setting, we can only estimate the overall impact of the movie on reconciliation, without the possibility of

disentangling the role played by different tenets of the narrative, such as the patriotic call of the movie or the common enemy rhetorical construction.

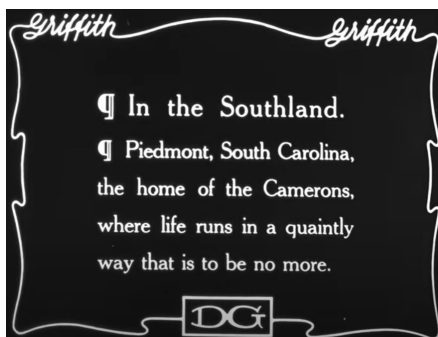
Our findings offer a new interpretation of the role of the *Lost Cause* in molding internal cleavages that remain at the core of the political debate today. More broadly, our paper raises questions about the ability for genuine national reconciliation when a foundational narrative is based on perpetuating racism and discriminating against some minority groups. We leave to future research the study of factors leading to truly inclusive reconciliation.

Appendix A

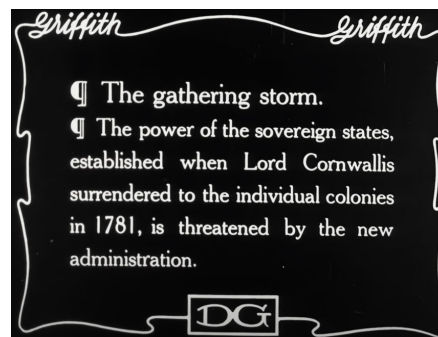
AI The Narrative of the Birth of a Nation

The movie *The Birth of a Nation* purports to tell the “true” story of the Civil War and the Reconstruction. The movie revolves around two families, the Camerons from South Carolina and the Stonemans from Pennsylvania. The story is divided into two parts. In the first part, the movie sets the historical context of the Civil War, its beginning, the destruction brought upon both the North and the South, the peace treaty, and Lincoln’s assassination. In the second part, the film follows the Reconstruction and the purported injustices suffered by the whites at the hands of the Black population. In the finale, the Ku Klux Klan rises up to restore social order. Figures AI, AII, and AIII show some frames from the first part of the movie, the second part and the finale, respectively.

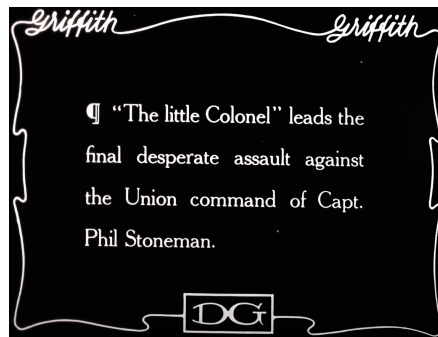
Figure AI: Part One: the Civil War



(a) The “Old South”



(b) The causes of the war



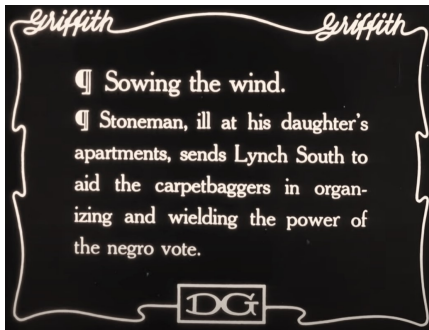
(c) Soldiers’ valor



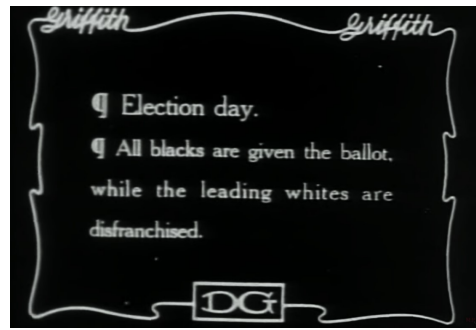
(d) Lincoln’s assassination

Notes: In the first scenes of the movie we see the Stoneman brothers travel to Piedmont, South Carolina to visit the Camerons. South Carolina, “where life runs in a quaintly way that is to be no more”, represents the Old South. Piedmont is a place of peace and cohesion, where Black slaves are loyal and devoted servants of well-meaning masters (a). All this is about to be swept away by war, caused by the unwillingness of Northern states to respect the sovereignty and freedom of Southern states (b), “The power of the sovereign states [...] is threatened by the new administration”. In fact, the film does not depict the end of slavery as the cause of the Civil War, but puts the blame on Northern abolitionists. The war is then fought with valor by both sides. Frame (c), for example, describes the heroic actions of the Little Colonel (one of the Colemans) who gets wounded while fighting, when on the other side one of the Stonemans is present. The peace treaty is eventually signed, but when everything seems headed toward a peaceful postwar period, Lincoln (d) is assassinated at Ford’s Theatre.

Figure AII: Part Two: the Reconstruction



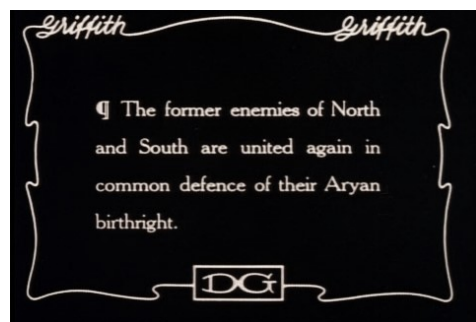
(a) Lynch is sent to the South



(b) whites cannot vote



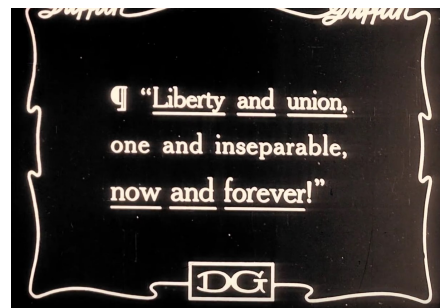
(c) The KKK captures Gus



(d) Fighting the common enemy

Notes: In the movie, Lincoln's death leaves power in the hands of Northern abolitionists who favor the Black population at the expense of whites. This effort is represented by the figure of Silas Lynch (a), a Northern "mixed-race" who oversees the Reconstruction policies. Whites are deprived of power (b), and are forced to suffer injustice and violence, culminating in the death of a young white woman who was chased by a Black man (Gus). The Ku Klux Klan is then presented as the only hope of restoring a social order (c). In one of the last scenes we see members of the Coleman family fighting side by side with two Union veterans against Lynch's Black militia (d).

Figure AIII: The Happy Ending: Reconciliation of white Americans



Notes: The movie ends with the defeat of Lynch, the KKK restoring white supremacy and the reconciliation of the North and the South, a message reinforced by the double marriage of two members of the Coleman family (Margaret and Ben) with two members of the Stoneman family (Phil and Elsie).

Appendix B

BI First Stage Estimates

This section reports first stage estimates of the relationship between BON_{ct} and MDM_{ct} . Table BI displays the first stage regressions using samples and empirical specifications for the main five exercises of the manuscript, relative to Table 3 (Panel A and B), Table 4 (Panel A), Table 5 (panel A), and Column (3) and Column (6) of Table 6 (Panel A) respectively.

Table BI: BON and MDM: First Stage Estimates

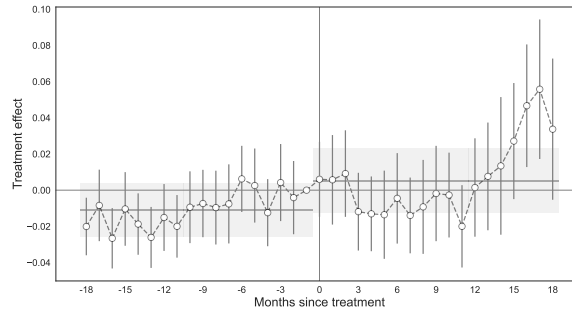
	(1)	(2)	(3)	(4)	(5)
	Reconciliation	Enlistment	ENI	Supremacism	Discrimination
Million Dollar Mystery	0.375 (0.025)	0.376 (0.021)	0.499 (0.053)	0.375 (0.025)	0.380 (0.025)
Observations	89,325	62,968	91,612	89,325	89,325

NOTE: The table reports first stage estimates of the relationship between BON_{ct} and MDM_{ct} . The explanatory variable is Million Dollar Mystery, an indicator variable that takes a value of 1 after the movie was screened in the county and 0 otherwise, transposed 231 days later. The dependent variable is Birth of a Nation, an indicator variable that takes a value of 1 after the movie was screened in the county and 0 otherwise. Results displayed in Column (1) are obtained using the sample and the set of controls used in Panel A of Table 3. Results displayed in Column (2) are obtained using the sample and the set of controls used in Panel A of Table 4. Results displayed in Column (3) are obtained using the sample and the set of controls used in Panel A of Table 5. Results displayed in Columns (4) and (5) are obtained using the sample and the set of controls used in Columns (1) and (3) of Panel A in Table 6. Standard errors clustered at the county level.

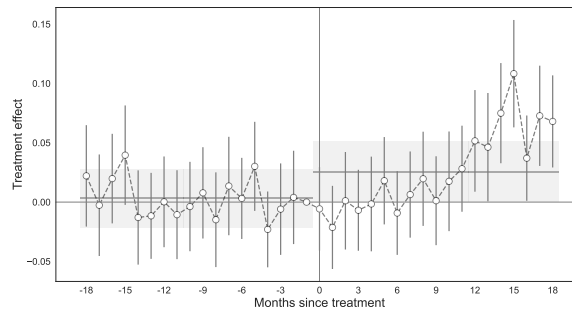
Appendix C

CI Leads and Lags Graphs

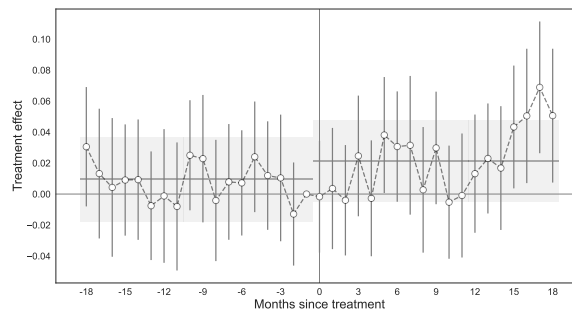
Figure CI: Leads and Lags



(a) Navy Enlistments



(b) Supremacism



(c) Discrimination

NOTE: The figures plot estimates of the effect on the outcome variable of 18 leads and 18 lags (monthly increments) of the variable BON_{ct} . The gray solid lines show the average effect for the placebo estimates and the average treatment effect. *Panel (a)*: The dependent variable is an indicator function taking value 1 if at least one person was enlisted in county c in month-year t . *Panel (b)*: The dependent variable is an indicator function taking value 1 if at least one page with the keywords "white Americans" was observed in county c and month-year t . *Panel (c)*: The dependent variable is an indicator function taking value 1 if at least one ad with the keywords "White Only", "help", and "wanted" was observed in county c and month-year t . Additional details related to the data construction are contained in Section IV, V, and VI. Coefficients are estimated following De Chaisemartin and D'Haultfoeuille (2020).

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