Shocking Racial Attitudes:
Black G.I.s in Europe[*]

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8th November 2017

Abstract

Can attitudes towards minorities, an important cultural trait, be changed? We show that the presence of African American soldiers in the UK during World War II reduced anti-minority prejudice, a result of the positive interactions which took place between soldiers and the local population. The change has been persistent: in locations in which more African American soldiers were posted there are fewer members of the UK's leading far-right party, less implicit bias against blacks and fewer individuals professing racial prejudice, all measured around 2010. We show that persistence has been higher in rural areas and areas with less subsequent in-migration.

1. Introduction

Are prejudicial attitudes towards minority groups a constant of the human condition? They are certainly widespread, and a recent empirical literature has shown that anti-minority prejudice persists over the very long run, a consequence of intergenerational transmission of preferences (Voigtländer and Voth, 2012; Acharya, Blackwell, and Sen, 2016). Less is known about what it takes to change such attitudes, and whether any such changes in attitudes might themselves persist. This is important to understanding whether the consequences of prejudice—which include social conflict, hate crime, labour and goods market discrimination—are permanent or temporary features of society.

In this paper we show that the temporary presence of African American G.I.s[1] in the United Kingdom during World War II persistently reduced anti-minority prejudice amongst the British population. As the base of the U.S. military's European operation, the U.K. played host to over one and a half million U.S. troops during World War II. Around 150,000 of these troops were black, serving in segregated units with non-combat support duties such as transport and supply.[2] Both black and white G.I.s came into contact with the local population whilst off base: "Got any gum chum?" reportedly became a popular refrain amongst British children and troops of all types were frequently to be found in pubs, dance halls and restaurants (Millgate, 2010). Many Britons thereby saw and interacted with non-whites for the very first time. Despite pervasive racist attitudes before the war, we show evidence from surveys that these interactions were positive experiences for both the local population and for black G.I.s.

We test whether these interactions caused persistent changes in attitudes using a newly constructed dataset of U.S. military bases in the U.K. The dataset is based on station lists produced by the Office of the Adjutant General which list the units present at each military base at monthly intervals. Using this dataset, we are able to measure the racial composition of troops at around 2,000 bases.

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1. The term 'G.I.' took on its present meaning referring to military personnel during the 1940s.

2. The U.S. Army remained racially segregated until 1948. Until this point, only a very small number of black units had combat roles, most famously the aerial units which trained at Tuskegee, and the 761st Tank Battalion, the 'Black Panthers'.

Combining our new dataset with present-day measures of anti-minority preferences, we show that individuals in areas of the U.K. where more black troops were posted are more tolerant towards minorities sixty years after the last troops left. Firstly, we show that such areas contain fewer members of the British National Party, a far-right political party with racist policy positions. Next, we show that there is less implicit anti-black bias in these areas, as measured by Implicit Association Test (IAT) scores from Project Implicit, a website that allows interested parties to test their implicit anti-black bias. Finally, we show that those living in locations where black G.I.s were posted report warmer feelings towards black people, also using data from Project Implicit.

We explore heterogeneous treatment effects and show that persistence has occurred primarily in rural areas and areas which have not seen subsequent waves of non-white migration. This suggests that local persistence reflects intergenerational transmission combined with a lack of geographic mobility and lack of opportunities to further update beliefs.

We address two potential challenges to our identification strategy. First, an alternative explanation for our findings is that black troops were posted in areas that were already more tolerant towards non-whites, and that this tolerance has persisted until today. In fact, U.S. military policy was to place troops on the basis of military needs (Rash, 1942), and there is no evidence of any exercise to ascertain local attitudes before allocating troops. Consistent with this we demonstrate that the racial composition of troops is orthogonal to a raft of pre-existing economic, social, political, and geographic controls. Importantly, black troops are no more or less likely to be posted in areas containing a British Union of Fascists branch or areas with an existing non-white population. Second, one could also be concerned that black units were actively reallocated away from areas where they were subject to racial abuse. In fact, those race-based conflicts which did occur were between black and white G.I.s, not between black G.I.s and the local population (Smith, 1987, Chp. 6). The evidence is that the racial composition of troops at bases is orthogonal to pre-existing conditions, and that the relationship between presence of black G.I.s and tolerance is causal.

Our findings contribute to a large literature on the persistence of cultural norms, within which individual preferences are seen as endogenous to social and fam-

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ily environments. In the model of preference formation provided by Bisin and Verdier (2001), parents take costly investments in their children's preferences, resulting in 'vertical' transmission of values, but children are also socialised by the wider society in which they grow up, resulting in 'horizontal' transmission. Several recent empirical papers have now documented very long-run persistence in preferences, including attitudes towards minorities. Voigtländer and Voth (2012) show that variation in antisemitic attitudes in German towns and cities persisted over a time span of almost 600 years: individuals in locations which saw persecution of Jews during the middle ages were more likely to engage in antisemitic behaviour immediately prior to and during World War II. Acharya, Blackwell, and Sen (2016) show that whites living in U.S. counties with a history of slavery harbour colder feelings towards African Americans, amongst other outcomes. This is a result of institutions and norms preserved by whites in order to entrench control over African Americans after the Civil War. In contrast, our setting shows that a short 'treatment' period can result in changes in attitudes which persist through time, without institutional support or incentives sustaining them.

Our results also add to a large social science literature on the contact hypothesis (Allport, 1954). This posits that contact with minorities can reduce prejudice by causing the majority group to understand the 'essential similarity' of individuals belonging to minority groups.[3] Consistent with this hypothesis, Boisjoly et al. (2006) and Carell, Hoekstra, and West (2016) find that randomly assigning non-white roommates to white students at higher education establishments has positive effects on white students' attitudes and behaviour towards non-whites. We add to these studies by showing that changes in attitudes resulting from the treatment can persist over long time periods. In comparison to assignment of roommates at higher education establishments, our natural experiment affected a much broader cross-section of the population. Finally, whilst random roommate assignment mechanically leads to interactions, our experiment can be thought of as an 'intention-to-treat' analysis, where proximity

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3. This hypothesis has been a major object of study in social psychology. See Pettigrew and Tropp (2006) for a review of articles, most of which either are small-scale field or laboratory experiments or show correlations between contact and attitudes without demonstrating a causal relationship.

provides opportunities for interaction, akin to situational proximity of minorities resulting from migration.

By considering effects of the presence of black troops on support for the British National Party, we also contribute to a growing literature on historical determinants of support for far-right parties. Vlachos (2017) shows that conscription of former-French citizens into the Wehrmacht during World War II permanently increased support for radical far-right parties, a result of political alienation. Ochsner and Roesel (2016) examine the effects of an inflow of Nazi supporters into areas of Upper Austria, showing persistent effects on support for far-right parties. These and our findings are consistent with evidence from Avdeenko and Siedler (2017), who show a high level of intergenerational correlation in attitudes towards migration and support for far-right parties.

Finally we are, to the best of our knowledge, the first to show effects of an historical event on implicit attitudes as measured by a computerised Implicit Association Test (IAT). Implicit attitudes are described as "traces of past experience [that] affect some performance, even though the influential earlier experience is not remembered in the usual sense—that is, it is unavailable to self-report or introspection" (Greenwald and Banaji, 1995, p. 4f.). Implicit attitudes against minority-groups are increasingly used in the economics literature to measure bias (e.g. Lowes et al., 2015), and have been shown to be predictive of behaviour in a number of domains, including in hiring decisions (see Uhlmann et al., 2009, for a review). However little has been shown so far about their determinants, malleability and persistence. Our research shows that implicit attitudes can be shaped by historical events, suggesting they are subject to the same kinds of forces of transmission as stated and revealed preferences.

The paper proceeds as follows: Section 2 provides further historical background, Section 3 provides evidence on the contact which occurred between black troops and the local population. Section 4 describes the data, identification strategy and other necessary preliminaries for the data analysis. Section 5 documents the effect of historical inter-group contact on support for the British National Party, and Section 6 provides evidence from other outcome measures. Section 7 concludes.

2. Historical Overview

The United States entered World War II in December 1941 following a declaration of war from Germany and its immediate reciprocation by the U.S. Congress. Headquarters for the U.S. military's European operation were established in London the next month and the first combat troops soon arrived via ports in Northern Ireland. The first aerial bombardments of Germany were carried out in June out of bases in Norfolk, part of the Eastern Base Section.[4]

In addition to hosting the European headquarters and providing a base for aerial operations the U.K. also functioned as a staging and training post for the ground troops who would later liberate France and eventually Germany. These troops began arriving in the U.K. in May 1942 in preparation for a mid-1943 land offensive. This planned operation, codenamed 'Bolero', was later cancelled and as a result troop numbers declined from a peak of 230,000 to around 100,000 as troops were reallocated to North Africa or the Pacific. The build-up of troops began again in May 1943 once plans for a 1944 offensive were settled. By November, around 160,000 troops were arriving per month. Troop numbers reached their peak in June 1944 with one and a half million G.I.s stationed in the U.K. Figure 1 shows the numbers of troops in U.K. for each month between 1942 and 1945.

Troops were stationed throughout the country, in rural and urban areas alike. The influx of troops into a small country put huge strain on available accommodation; troops were stationed wherever space could be found.[5] Troops were mainly accommodated in newly constructed camps or ex-RAF or British Army quarters. After 1943, the supply of such accommodation was exhausted and some troops were billeted in private homes. To the best of our knowledge black troops were never accommodated this way.

Most American ground troops left England in the course of 'Operation Overlord', the airborne and amphibious assault on occupied Europe beginning on 6th June 1944. On the first day of the operation alone 150,000 troops landed in

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4. The Eastern Base Section, one of four areas created in order to decentralize operations, was predominantly used by the Army Air Force (Waddell, 2010, p. 142). See Appendix Figure A1 for a map of base sections.

5. Scotland was deemed unsuitable for military facilities, presumably because of its distance from mainland Europe: only very few troops were ever stationed there (Lee, 1966, p. 623).

Northern France via beaches in Normandy. By the time the operation ended in August 1944, just 700,000 G.I.s were left in Britain, down from the June peak of one and a half million. Units continued to cross to Europe, but troop numbers in the U.K. did not decrease much further until the end of the war: the U.K. continued to serve as the headquarters of operations in Europe, as a base for Army Air Force units, as the point of entry for American troops bound for continental Europe and as the main location of military hospitals in Europe. However, by November 1945, almost all American units had left the U.K.

2.1. Black G.I.s

Over 900,000 African Americans served in the U.S. military during World War II, more than half of them outside of the U.S. (Moore, 2013). As in previous wars, black soldiers served in racially segregated units, normally under command of white officers. With few exceptions, black troops were limited to non-combat 'labour' or 'service' roles, most often supply and quartermaster services, transport, food preparation and sanitation.[6] U.S. Army Enlistment Records, which provide a record of all individuals who served in the Army during World War II, reveal that the black G.I.s were diverse with regards to their demographics. Appendix Figure A2 shows that around 50% of African Americans serving in the Army had no high school education, a relatively moderate positive selection with respect to the young black male population as a whole, where around 70% of 18 to 30 year-olds had no high school education.[7] Black G.I.s were drawn from both northern and southern states: Appendix Figure A3 shows a map of the states of birth of African Americans who served in the military during World War II.

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6. Racism was institutionalised in the military. General Patton's views expressed in a letter to his wife, "A colored soldier cannot think fast enough to fight in armor." (Sasser, 2014, p. 104), seem to be representative of military leaders' attitudes at the time.

7. Data on the population of black males is provided by the 1940 Census. The slight positive selection on education reflects actions of local draft boards and army requirements on literacy/education. Until 1941, draft boards had discretion to decide whether a potential recruit had the mental capacity to serve; in this period, 'mental deficiency' was the most frequent cause for a pre-inductee to be rejected for service by a draft board. In 1941, a fourth-grade level literacy requirement was introduced, followed by the Army General Classification Test, introduced in 1943. Although the later test purportedly measured generalised intelligence, it has been argued that it in reality measured educational attainment, which was on average lower amongst the black population (Murray, 1971).
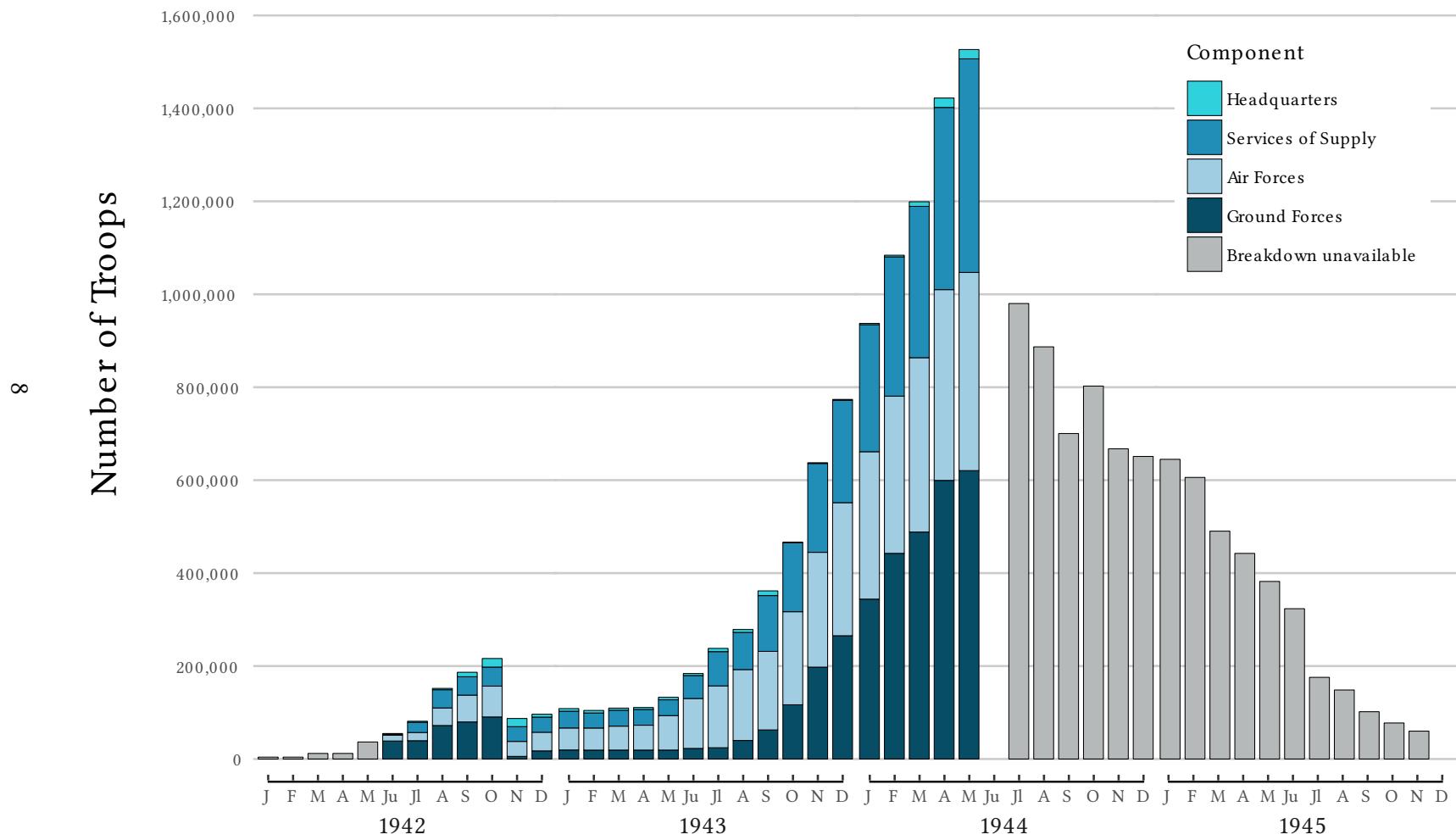
Figure 1. Build up of U.S. Army strength in the U.K. from January 1942 to November 1945 and, where available, a breakdown according to type. Data for June 1944 are unavailable. Sources: Ruppenthal (1978, p. 232) and Pogue (1954, p. 541).

Many black G.I.s served abroad; around ten percent of G.I.s who served in the U.K. were African American.[8] The British government initially requested that the U.S. military refrain from sending black troops to Britain. Ostensibly this was to avoid causing conflict between white G.I.s and British citizens, who might show "more effusiveness to the coloured people than the Americans would readily understand"[9], but a desire to minimize the non-white presence in the U.K. and concerns about sexual activity no doubt also played a role. The matter was taken up by the Foreign Secretary Anthony Eden, who claimed that the British climate was 'badly suited to negroes', and likely also by Churchill himself (David Reynolds, 2006). Nonetheless, the request was refused, both for practical reasons—black troops made up a considerable share of the support units which were of military necessity—and out of U.S. political concerns. Suggestions were made to limit black troops to port areas, where the U.K.'s small existing black population was concentrated, but these were rejected. The policy instead was to "place them [black troops] where needed" (Rash, 1942).[10]

The U.S. army's colour bar was maintained; interaction between black and white soldiers was minimised, with accommodation, dining and training facilities all segregated. A 'pass system' was introduced in order to keep black and white troops apart during their leisure time, with black and white units allowed off base on different days of the week or assigned different venues to visit.

The U.K. government was at pains to take no overt actions to enforce segregation, refusing for example to instruct police officers to recommend segregation to local bar and restaurant owners. There are however a few isolated examples of local authorities attempting to limit contact between black G.I.s and British women (David Reynolds, 2006, p. 123). Nonetheless, evidence suggests that frequent contact between soldiers and local populations took place: troops visited local bars, restaurants and dance halls during their leisure time.[11] There

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8. These appear to have been slightly positively selected in terms of education compared to the universe of black G.I.s, see again Appendix Figure A2.

9. E. Bridges to J. Martin, 21 July 1942, in Franklin D. Roosevelt Library, Hyde Park, New York, U.S.A., Harry Hopkins papers, box 136.

10. Units arriving in Britain were first assigned to one of several armies by the European Theater Headquarters, and would then be assigned to a base by their army's headquarters.

11. Officially black and white units had the same quota for leisure time, although some black soldiers complained about white officers restricting their passes (Smith, 1987, p. 134).

are also frequent reports of younger British women visiting black troops on base (Smith, 1987, p. 187 ff).

3. Evidence on Contact

In most areas where black G.I.s were stationed, locals would have been seeing and interacting with black people for the first time.[12] Despite evidence of wide-spread racial prejudice before the war[13], existing evidence suggests that the British responded positively to black G.I.s, whilst attitudes towards white soldiers were more mixed. Writing in a biweekly newspaper, George Orwell remarked that "the general consensus of opinion seems to be that the only American soldiers with decent manners are the Negroes" (Orwell, 1943). This attitude is also on display in words attributed to an unknown Englishman in 1943, "I don't mind the Yanks, but I don't care much for the white fellows they've brought with them" (Olson, 2010, p. 287) and in a British woman writing to a friend "Everybody here adores the Negro troops, all the girls go to their dances, but nobody likes the white Americans. They swagger about as if they were the only people fighting this war" (D. Reynolds, 1995, p. 303).

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12. There is no administrative information on the size of the black population the U.K. before the introduction of an ethnicity question in the 1991 census. General Eisenhower wrote to General Lee in 1942: "There is practically no coloured population in the British Isles." (September 5 1942, ETOUSA AG 291.2-B, available online at https://archive.org/stream/IndoctrinationOfPersonnelArrivingInTheUK/IndoctrinationOfPersonnelArrivingInTheUK_djvu.txt). The permanent Asian and black population of the British Isles was estimated in 1939 at around 7,000 individuals (Cabinet Office "Report of the Working Party on Coloured People Seeking Employment in the United Kingdom", 17/12/1953 in CAB124/1191, via Little (1998)). Existing evidence suggests that this population was concentrated around port cities such as London, Liverpool, South Shields and Cardiff (Spencer, 1997). In a later section, we use surnames and places of birth from the full count 1911 census to estimate the geographic distribution of non-white migrants in the U.K.

13. The best source on racial attitudes in Britain before World War II is Little (1998), who provides a narrative of changes in attitudes to non-whites from the 17th century onwards. In a unique study, Lapiere (1928) surreptitiously questioned 315 individuals in London, Birmingham, North Wales and Liverpool, asking each of them a variant of the question "Would you let children associate with those of good coloured people?". Based on their responses, respondents were classified as being 'without prejudice' (4 percent), 'doubtful cases' (15 percent) or 'with prejudice' (81 percent), without much variation according to social class. In addition, twenty hotels were contacted and asked "Does the management permit either African or Indian guests?". Only four hotels responded affirmatively, although the author points out that at one such London hotel, admission was limited to Indian nobility. Lapiere's results from England compare unfavourably to a similar study he carried out in France, where the majority of individuals questioned reported no colour prejudice.

Below we add to this anecdotal evidence using surveys of U.S. troops stationed in the U.K. and qualitative responses to a questionnaire of U.K. citizens carried out in 1944.

3.1. U.S. Military Surveys

Two surveys carried out by a research branch of the U.S. War Department provide evidence on troops' contact with and attitudes towards the English. These surveys are amongst over one hundred carried out during the war in order to provide army command with information about the attitudes of soldiers (Stouffer et al., 1949). Sampling for each survey took place in two stages; in the first stage, army units were selected from data on troop locations. Sampling in this stage is described as 'not strictly random', since the War Department could reduce costs by sampling multiple units at the same base. However, the aim was for the sample to be representative of the population of units in terms of branch and type of unit. In the second stage of sampling, men were sampled from their units by random selection from a duty roster.

The surveys useful for our purposes are "Attitudes Towards The British" (S-122) and "Attitudes Toward Army Life" (S-92). The first of these, carried out in April 1944, surveyed 3,261 individuals with the aim of understanding soldiers' attitudes towards the British, and provides evidence on the amount and mode of contact between troops and the British population[14]. The survey asks how many local people of each of a number of categories—families, men in the armed forces, girls in the armed forces, civilian girls, civilians (older men and women)—the respondent has got to know 'fairly well', in each case being asked to select between none, one or two, several, or a very large number. 86 percent of troops reply that they know at least some families or civilians fairly well. The most common way of meeting English[15] people is described as 'a chance meeting' (67 percent), with lower numbers being introduced through a friend (18 percent) or through a service organisation or some other way (14 percent). The most common meeting places were eating places or pubs (33 percent), around town (33 percent) and at dances (17 percent). The number of civilians known to soldiers increases with time in the U.K. (see Appendix Fig-

14. Although the survey provides some demographic data (education level and marital status), race was not recorded.
15. English is likely a misnomer for British.

ure A4), consistent with interactions between troops and civilians taking place on an impromptu basis.

In Survey S-92, carried out in November 1943, troops stationed in Britain were asked "How has your opinion of the English people changed from what it was before you came to England?" and "How do you think the English people's opinion of Americans has been changed by having American soldiers in England?". Unlike the December survey, this survey reports whether respondents are black (422) or white (2,257). We visualise the responses to these questions separately for black and white troops in Figures 2 and 3. The median white G.I. has reduced his opinion of the English since being stationed and believes that the English have lower opinions of Americans as a result of the presence of G.I.s. Strikingly, the pattern for black G.I.s is very different: the majority of black G.I.s have positively updated their view of the English whilst being stationed and simultaneously believe that the British have positively updated their opinion of the Americans.[16] We interpret this as evidence of 'high-quality' interactions between black G.I.s and the local population, leading both black G.I.s and the local population to update their beliefs about each other.[17]

3.2. Mass Observation

We provide more qualitative evidence on British attitudes to black troops, and the changes caused by contact with them, using data from Mass Observation. This was a U.K. based survey organisation founded in 1937 aiming to create an 'anthropology of ourselves' by regularly collecting written testimony from a panel of volunteer respondents around the country (Madge and Harrisson, 1937). This panel was not designed to be representative of the population, and the occupational listings of participants shows that the panel consists largely of middle- and upper-class professionals. The panellists were asked to keep personal diaries which they sent to Mass Observation on a monthly basis. In addition, they responded to monthly 'directives' from Mass Observation which

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16. Regressions reported in Appendix Table A1 show that the difference in responses given by white and black troops are statistically significant and robust to controlling for the base at which individuals are stationed, their branch of the army, state of birth, rank and education levels.

17. In doing so, we assume some reflection; that is, when a soldier is asked how he thinks that English opinions of Americans have changed, his response reflects how English opinions of individuals like him have changed.
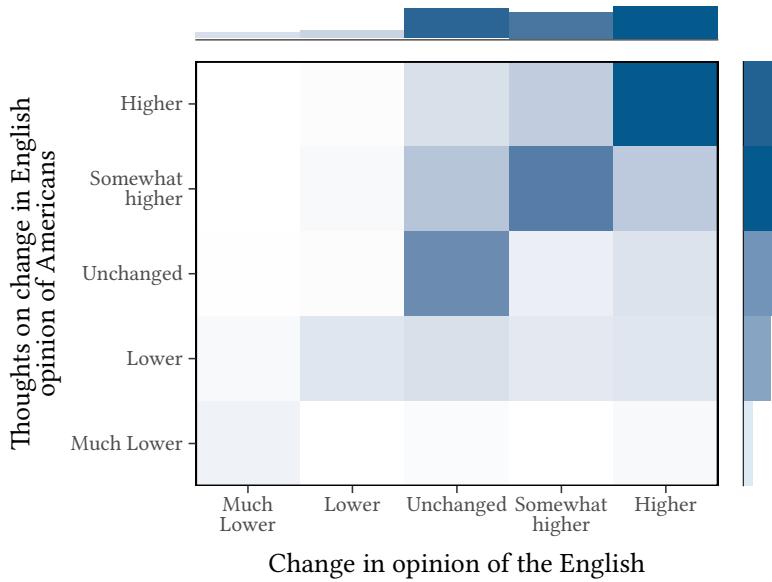
Figure 2. Density plot of individual black G.I.s' responses to the questions 'Has your opinion of the English people changed from what it was before you came to England?' (horizontal axis) and 'Do you think English people's opinion of Americans has been changed by having American soldiers in England' (vertical axis). Darker cells indicate more mass. The sample is 442 black G.I.s posted in Britain in November 1943.
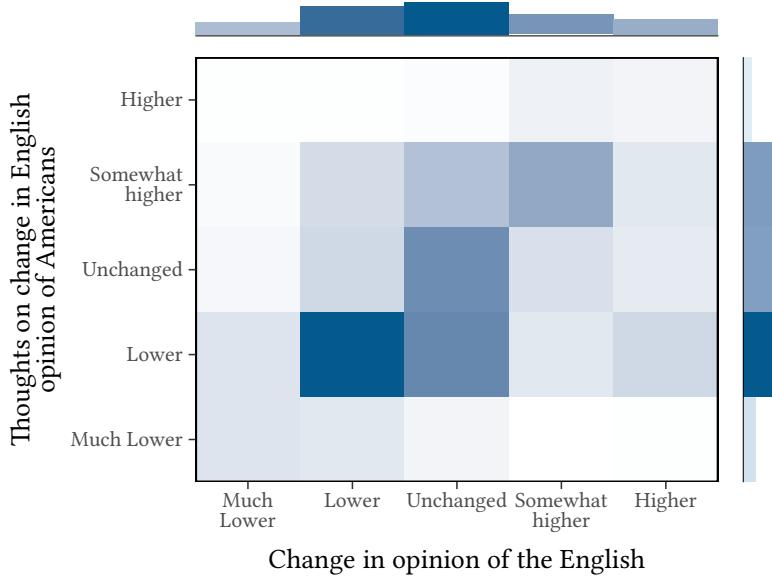
*Figure 3.* Density plot of individual white G.I.s' responses to the questions 'Has your opinion of the English people changed from what it was before you came to England?' (horizontal axis) and 'Do you think English people's opinion of Americans has been changed by having American soldiers in England' (vertical axis). Darker cells indicate more mass. The sample is 2,257 white G.I.s posted in Britain in November 1943.

aimed to collect information on opinions about a wide variety of topics. In June 1943, the panel was asked 'What is your personal attitude towards coloured people, and is there any difference in your attitude towards members of different coloured races? Have wartime events or experiences had any effect on your attitudes in this respect?'. The question was listed as 'Priority B', with the instruction that respondents should answer it if they have time to do so.[18] We collected and digitised all responses to the question[19], of which thirty three make explicit mention of African American soldiers. These responses are reproduced in full in Appendix D.

We manually classify these responses along two dimensions – sentiment towards black troops (positive or negative) and whether the respondent has interacted with black troops. Eight responses mention or imply contact with African American soldiers, of which six (75%) show positive sentiment towards them, whilst a narrow majority of respondents who make no mention of contact show negative sentiment. This might be a result of selection into contact rather than changes in attitudes caused by such contact—however, six responses explicitly report positive updating of attitudes or beliefs based on the presence of black troops, with only two implying negative updating. Examples of positive updating are "My little contact with the American Negroes made me more sympathetic to them. They liked being over here, because they were treated better here by us than by the white Americans in their own country" and "Have wartime events and experiences had any effect on my attitude[?] The answer is yes. The presence of many more American negroes in this country may make me take less interest them through accepting them as normal and familiar". These kinds of responses seem to reflect exactly the kinds of changes in attitudes through contact that Allport's contact hypothesis postulates.

4. Estimation Framework

Having provided suggestive evidence of changes in contemporary attitudes caused by the presence of black G.I.s, we now test for persistent effects of their

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18. In this month, Priority A questions dealt with BBC news bulletins and attitudes towards dentists and dentistry.

19. The Mass Observation archive is in the care of the University of Sussex. We accessed photos of the archive in September 2015 via Mass Observation Online, http://www.massobservation.amdigital.co.uk/

presence. Concretely, we use two independent data sets with high geographical resolution to test whether proximity to black G.I.s persistently affected local racial attitudes. The first of these provides data on membership of the British National Party, a far-right xenophobic party, across all of England and Wales' 180,000 census output areas ('neighbourhoods'), the lowest level geography on which the national statistics agency collects data. The second is an extract from the data generated by 'Project Implicit', a website on which individuals can carry out a test for their implicit racial attitudes. As well as carrying out the test, individuals are prompted to provide self-reported racial attitudes and demographic information including their postcode.

We describe the datasets in more detail later, but first lay down the shared estimation strategy that we apply to all outcome measures.

4.1. Troop Data

Our empirical exercise exploits a new dataset of U.S. army units in the U.K.[20] The dataset is based on the station lists produced by the U.S. Army Adjutant General's Office (AGO) on a monthly basis throughout the war. These station lists, which list all units stationed in the United Kingdom and their location at a snapshot in time, were produced by the (AGO) out of daily 'morning reports' produced by each military unit. These daily morning reports were punched onto IBM cards by Mobile Records Units and then transported to the Adjutant General's Office, who consolidated them in order to create station lists, which were distributed amongst military commanders.

Most station lists for the period June 1943-1953 survive and are housed at the U.S. National Archives in Washington D.C. We were kindly provided with digitisations of sixteen station lists by Captain Philip Grinton and we digitised a further eleven ourselves, resulting in twenty-seven digitised station lists. These lists cover months from June 1943 to December 1945 and are listed in Appendix Table A2. Appendix Figure A5 shows an extract from one of these lists.

Each line in a station list represents a unit, which is identified with an abbreviation of its name (e.g. 1944 QM TRK CO for the 1944th Quartermaster Truck Company), and is listed along with the coordinates of the base at which the

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20. Full descriptions and sources for all datasets used in the paper are given in Appendix B.

unit was posted at[21], the nearest town or village, and a symbol to indicate if the unit is a segregated unit with African American troops.

Using these lists, we are able to create a dataset of the units posted at twenty-seven points in time at 1,937 military bases/camps (unique according to their coordinates). These bases were located widely across England and Wales, with the notable exception of the South East of England. This was a consequence of the plan for the invasion of occupied France: U.S. ships departed from the west of England, the British Navy from the east, and vessels landed on French beaches in the same formation. Appendix Figure A6 shows a map of all bases/-camps in the dataset.

4.2. Identification

Our aim is to estimate the effects of the local presence of black units on racial attitudes. To do so we use variation across space in both the time black troops were posted for and their numbers.[22]

Recall that the vast majority of black units were 'support units', providing services such as transport and sanitation. In our preferred specification, we control for the presence of all support units, both black and white. Again, we do so taking into account both the number of units posted and the time they were present for. This ensures we are not simply just capturing variation in the local presence of support units, but rather exploiting variation across bases in the racial composition of support units.[23]

We begin by identifying support units based on their names; the list of unit names indicating support status is shown in Appendix Table A4. This list cov-

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21. Map coordinates are provided in a coordinate system defined on the Cassini projection, for example WL5715 for a base in Watford. The first two digits of the coordinates indicate an 100 by 100km square, the subsequent digits provide the northing and easting from the bottom left of that square, to an accuracy of 1 kilometer. We reproject coordinates to the British National Grid using a Cassini projection with false easting 500000, false northing 100000, central meridian -1.19276, scale factor 1.0 and latitude of origin 50.617708.

22. If interactions between troops and local population happened spontaneously, as the evidence in Section 3 suggested, the probability of locals coming into contact with troops increases in the number of troops stationed nearby and the length of time they were stationed for.

23. In an alternative specification, unreported, we instead exploit variation in the intensity of presence of black units given the intensity of presence of *all* military units, without any substantive changes to results. However, given that the vast majority of black units were carrying out support roles, we want to make sure that our results are not being driven by differences in the types of locations that support and combat troops were posted to.

ers 91% of units described by the station lists as being a segregated black unit.[24] Then we count the number of black support units posted at each base in each month we have data for, $BlackSupportUnits_{b,m}$ where b is a base and m a month in which we observe the allocation of troops. Next, we sum across all such months to produce a base-level measure, $BlackUnitMonths_b$:

$$BlackUnitMonths_b = \sum_m BlackSupportUnits_{b,m}$$

We create an analogous measure for the presence of support troops:

$$SupportUnitMonths_b = \sum_m SupportUnits_{b,m}$$

Our identification assumption is that the presence of black troops at a base (measured by $BlackUnitMonths_b$), is exogenous to pre-existing racial attitudes in the population around that base, controlling for the overall presence of support troops (measured by $SupportUnitMonths_b$). Our estimation results would be biased if, when deciding which support units to allocate to which base, black units were strategically stationed in areas with particular racial attitudes. There is no evidence for this being the case. As discussed in the introduction, there were some early suggestions to limit black troops to port areas (where Britain's small existing black population was concentrated), but these were rapidly dismissed, as indicated by a 1942 internal memo from the Services of Supply Headquarters, "The policy has been defined to place them [black units] where needed"; that is, military constraints determined the allocation of troops to bases.

We now show that, after controlling for the degree of presence of support units, the degree of presence of black units at a base is uncorrelated with a large number of pre-existing economic, political and geographic characteristics around

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24. Units described in the records as being black but not classified as support units include 'Detachment of Patients' (i.e. those receiving care at a military hospital), 'Detachment of Prisoners', and the few combat black units which served in the U.K.: the 320th Anti-Aircraft Barrage Balloon, the 333rd Field Artillery Battalion, the 969th Artillery Battalion, the 452nd Anti-Aircraft Artillery Battalion, the 578th Field Artillery Battalion, the 614th Tank Destroyer Battalion, the 761 Tank Battalion, and the 999 Field Artillery Battalion. We ignore these units in our analysis.

that base. For each of these characteristics, we estimate the following regression equation:

$$BlackUnitMonths_b = \alpha + \beta X_b + \gamma \cdot SupportUnitMonths_b + e_b$$

where b is a military base, X_b is the variable of interest and e_b the error term. In order to account for potential correlation in the error term between observations, we cluster standard errors at the modern local authority level, which divides England and Wales into 348 administrative regions. Results are shown in Table 1, which each line corresponds to a regression on a separate pre-existing characteristic; full descriptions of the variables are provided in Appendix C. Depending on the data source, the characteristics vary either at the parish level, the local-government district level, the constituency level or, for some geographical measures, are directly measured at the coordinates of the base.

The first group of variables shown in Table 1 measure economic conditions around the base; they include the parish-level population density as measured in the 1931 census, the parish-level rate of population growth between 1921 and 1931, sectoral composition of employment at the local government district level, unemployment rate at the local government district level and a binary indicator as to whether the base was inside an urban area.

The second group of variables measure political and societal features. Firstly, we use the full count of the 1911 England and Wales census to estimate the number of non-white migrants in each parish as per 1911.[25] Our most direct measure for pre-existing racial attitudes is constituency level data on the presence of a branch of the British Union of Fascists (BUF). The BUF was formed in 1932 by Oswald Mosley, a British politician who had served as a Member of Parliament for both the Conservative and Labour parties. Xenophobia was 'a mainstay of the rhetoric of the BUF' (Redvaldsen, 2016).[26] Internal Labour

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25. The construction of this variable, which uses place of births and names to infer non-white migrant status, is outlined in Appendix C. A map of its distribution is shown in Appendix Figure A8. There is no administrative information on the size or distribution of the non-white population before the introduction of an ethnicity question in the 1991 census. 1911 is the last year for which full count census data has been released.

26. The focus was clearly antisemitic, although there is evidence of more general racism; a party speech by William Joyce in 1934 talked about removing foreigners "be they Hebrew or any other form of alien", whilst a party pamphlet contained the text "Under Fascism, no

Table 1: Effect of covariates on the presence of black troops

	$\hat{\beta}$	p-value $H_0 : \beta = 0$
Economic:		
Population density in parish, 1931	−0.006	0.84
Rate of population growth in parish 1921-1931	0.029	0.25
Agricultural employment in local government district, 1931	−0.018	0.51
Professional employment in local government district, 1931	−0.039	0.17
Unemployment rate in local government district, 1931	0.044	0.12
Urban local government district, 1931	0.049	0.08
Social and political:		
Non-white migrants in parish, 1911	0.000	1.00
Conservative vote share in constituency, 1935	−0.027	0.35
British Union of Facists branch in constituency, 1934	−0.007	0.85
Geographic:		
Distance to coast	−0.034	0.24
Distance to nearest city, 1939	0.006	0.86
Distance to nearest large city, 1939	−0.015	0.62
Distance to nearest urban district, 1931	−0.010	0.80
Distance to railway station, 1939	0.046	0.32
Distance to major road, 1939	−0.006	0.85

Notes: Each row reports beta coefficients from a regression of the form $BlackUnitMonths_b = \alpha + \beta X_i + \gamma \cdot SupportUnitMonths_b + e_b$, where X_b is a control variable and e_b is an error term. The sample is all bases hosting at least one support unit at one point in time.

Party research in 1934 aimed to ascertain whether a branch had been formed in each of England and Wales' constituencies, data which we collect and code.[27] Finally in this group, we collect data on the share of the electorate voting for the Conservative party in the last pre-war election, that in 1935.

The third and final group of variables are various measures of geographic isolation. We calculate the distance from each base to the nearest local government district with urban status in 1931, to the nearest town/city with a 1939 population over 100,000 (of which there are 55), and to the nearest city with a 1939 population over 300,000 (of which there are 8). We collect data on the location railway stations in 1939 in order to calculate the distance from the base to the nearest railway station, and digitise a 1946 road map in order to calculate the distance from each base to the nearest major road.

Apart from one variable, the indicator for being inside an urban local government district (significant at the 10% level), we find no statistically significant correlations between pre-existing characteristics around bases and the presence of black troops there. Furthermore, there is no evidence that black units were moved between locations more frequenty than white units: Appendix Table A3 shows that support units were moved between locations more frequently than combat units, but after controlling for support status, black units were not moved between between bases any more than white. Finally, Appendix Figure A7 shows that black troops made up around 10% of the total troop base throughout the period we consider. Treatment effects therefore do not reflect exposure duration to troops in general.

The empirical evidence is thus consistent with the documentary evidence in showing that troop placements were made on the basis of *military* requirements, orthogonal to local conditions. As such any correlation between the presence of black troops and contemporary anti-minority attitudes reflects a causal effect.

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alien shall enter this country to take the jobs of Britons, and aliens who are already here who have abused the hospitality of this nation will be sent back whence they came", ("Fascism explained: Ten points of fascist policy", accessed as LP/FA3/34/542 at the People's History Museum/University of Central Lancashire).

27. Data is held and was accessed as LP/FAS/34 at the People's History Museum/University of Central Lancashire.

4.3. Treatment Definition

Our hypothesis is that, in areas around military bases with black troops, in-teractions led to changes in local attitudes, and that these attitudes have since persisted, a result of intergenerational transmission. The question remains of how to match contemporary populations to historic bases. In our main specifi-cations, we consider a contemporary location to be 'treated' by a given military base if the location and the military base share a common postcode district.[28] That is, we consider any base in the same postcode district as a contemporary location to have contributed to historical contact. Our treatment is defined on the postcode district level as follows:

$$BlackUnitMonths_j = \sum_b \sum_m \mathbb{1}[b \in j] \cdot BlackUnits_{b,m}$$

where j indexes postcode districts, $\mathbb{1}[b \in j]$ is an indicator function for whether base b is inside postcode j and $BlackUnits_{b,m}$ is the number of black support units posted at base b in month m. We create an analogous measure for the presence of support troops:

$$SupportUnitMonths_j = \sum_b \sum_m \mathbb{1}[b \in j] \cdot SupportUnits_{b,m}$$

These measures capture the intensity of presence of black and support troops around a given contemporary location. Because we want to exploit variation in the number of support units around a given location which were black, our population of interest consists of individuals living in postcode districts where at least some support units were located. To illustrate the variation that we ex-

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28. Postcode districts cover very small areas in cities but larger areas in more rural areas (65% of the variance in log-area is explained by log-population density), with a median area of 27 square kilometres. We use postcode districts, with their varying sizes, to define our treatment since this captures the logic that contact between troops and individuals a fixed distance apart was more likely in less densely populated areas. Our results are not sensitive to this choice: Appendix Table A5 shows regressions where treatment is defined at the local government district level instead).

ploit, Figure 4 shows how the ratio of *BlackUnitMonths*$_j$ to *SupportUnitMonths*$_j$ varies across postcode districts.[29]

5. Long-Term Effects on British National Party Membership

We now estimate the effects of proximity to black troops on contemporary attitudes towards minorities. We begin by measuring local attitudes using data on local membership of the British National Party (BNP), a far-right political party with extreme positions on race.[30]

The British National Party was founded in 1982 as a splinter group from the National Front, an openly racist organization with links to European neo-Nazis. The party's founder was jailed for conspiracy to incite racial hatred in 1986, and a senior official described the party as '100 per cent racist' in 1995 (BBC, 2001). Police officers and prison officials are banned by their employers from joining the party, and in 2009 a government minister attempted to introduce a similar ban for teachers, citing a desire to 'keep racism ...out of our schools' (The Guardian, 2009).

Attempting to increase its electoral relevance, the party began to outwardly reject claims of racism in 1999, but its ideology is still widely considered to be just that (see e.g. The Spectator, 2009). Most tellingly, non-white members were banned from the party until this was deemed illegal by a court in 2010. Even whilst espousing a 'modernization' agenda, Nick Griffin, the party's leader from 1999 to 2014, continued to call for the 'repatriation' of non-white Britons, who a party manual referred to as 'racial foreigners'. Further evidence of the party's racist ideology is provided by the BNP's website, extracts from which from 2007 are displayed in Appendix A.

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29. Appendix Figure A9 and Appendix Figure A10 show maps of the two variables separately. Appendix Figure A11 and Appendix Figure A12 show how *BlackUnitMonths*$_j$ varies across space for each station list separately.

30. This variable measures preferences at the tail of the distribution, but the evidence suggests that this correlated with preferences more generally. Biggs and Knauss (2011) show that, on the constituency level, BNP membership is related to the share of the population voting for the BNP in the 2005 national election, a less extreme measure. Table A6 shows, again at the constituency-level, that BNP membership is correlated with unease about the cultural effects of migration, even once controlling for the unemployment rate and non-white population share in the constituency.
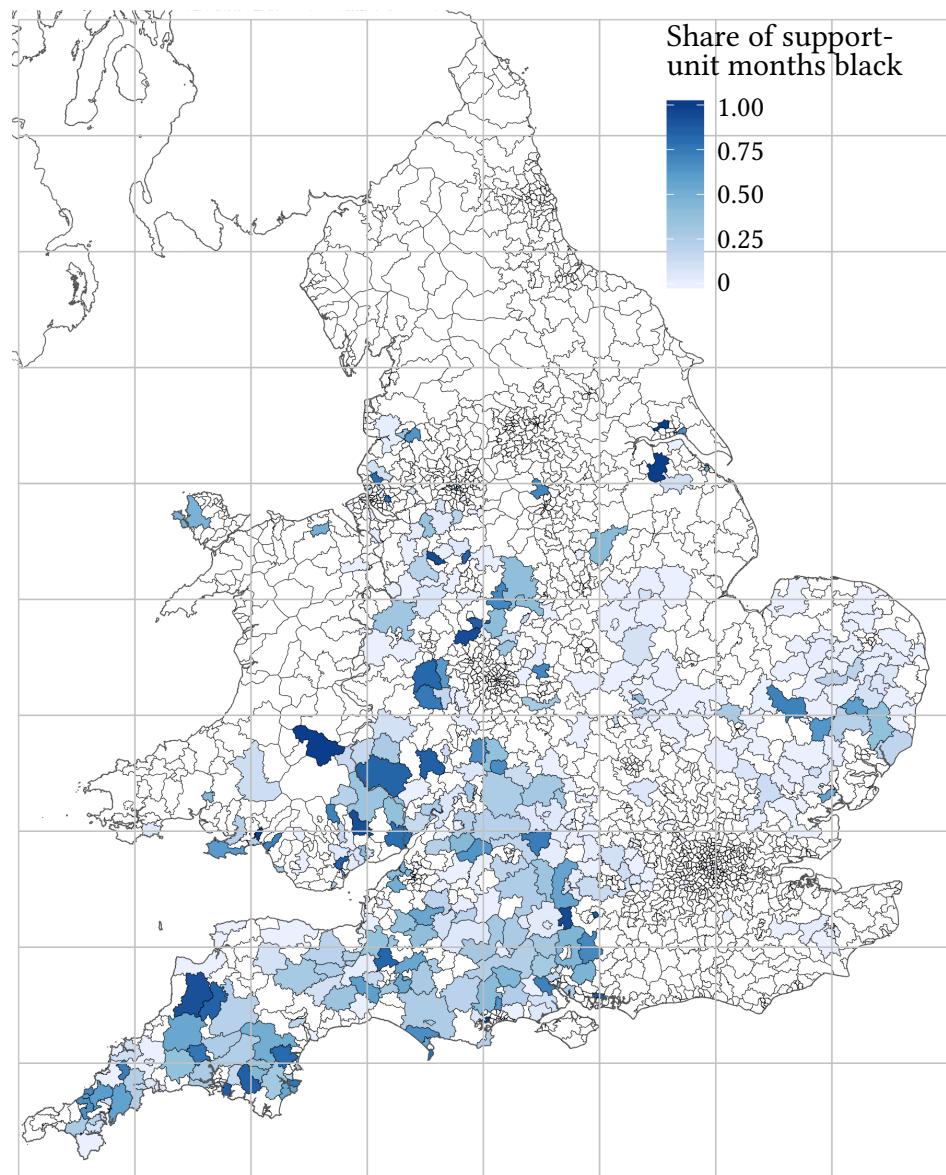
Figure 4. Figure shows variation across English and Welsh postcode districts in the share of support-unit months which are due to black units. Also shown are grid-cells used to generate grid-cell fixed effects

In addition, we provide suggestive evidence of the opinions of British National Party members using a survey carried out by YouGov on behalf of Goodwin and Evans (2012), who kindly shared their data. YouGov contacted 2,951 members of its national panel who, according to their data, had indicated being supporters of the British National Party, the United Kingdom Independence Party or the English Defence League. The response rate was 73%, including 54 members and 58 former members of the BNP. The opinions of these individuals on race/migration are reported in Figure 5. A large majority believes that immigrants are the main cause of crime and of disease, and 47 percent believe in innate differences in intelligence between black and white Britons. Majorities also believe in the unconditional repatriation of foreigners and reject the concept of non-white Britishness. Although we can not guarantee that the respondents to the survey are a true random sample of BNP members, the evidence suggests that members have extreme views on race.

Our regressions make use of data from Biggs and Knauss (2011), who geolocate members of the party using a membership list published online in 2008.[31] The list was confirmed by the party to be genuine and is understood to provide a complete listing of members of the party in November/December 2007, although the BNP has claimed that the list contains a number of ex- and prospective members too. Membership of the British National Party was not contingent on the presence of a local branch; at the time the membership list was published, individuals were able to join the party by completing a paper or online form. Since joining the party entailed some cost[32], membership data provides a revealed preference measure of racial attitudes.

The membership list comprises information on 13,009 individuals, including a home address with a valid U.K. postcode in 97% of cases.[33] Biggs and Knauss (2011) aggregate the data to the 2001 'output area' level (the lowest level geography on which the Office of National Statistics aggregates demographic and social data) and report the number of members within each area. The authors

31. Due to legal constraints in Germany, where most of the analysis was carried out, we were not able to process this information directly from the original, leaked membership list.

32. Membership for pensioners, students and the unemployed cost £15 a year, a standard membership cost £30 a year and a 'gold' membership £60.

33. There are over one million unique postcodes throughout the U.K., with each postcode covering on average 15 households.
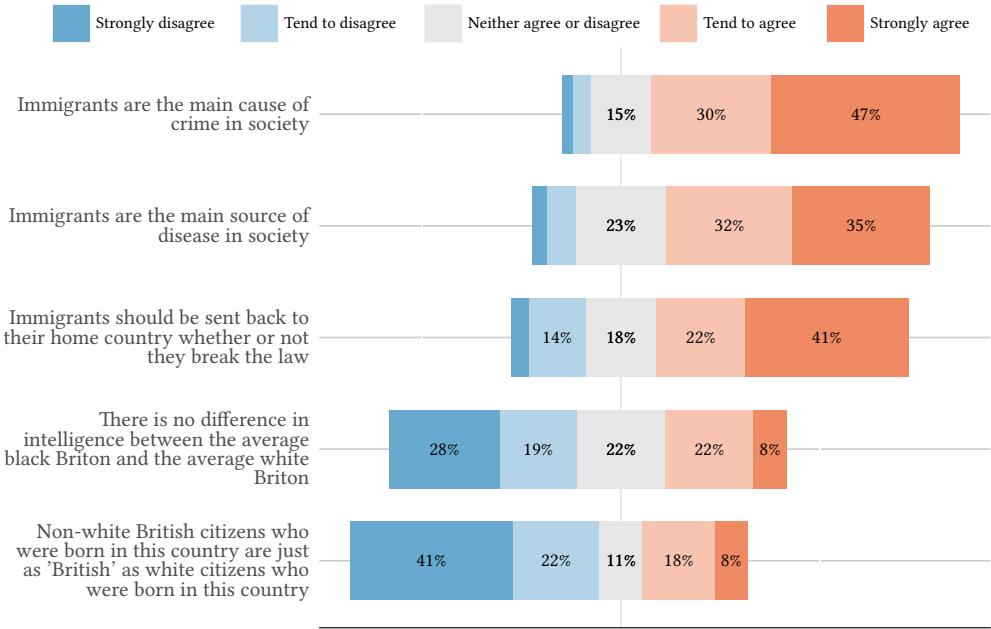
Figure 5. Opinions of 112 members and former members of the BNP. Source: (Goodwin and Evans, 2012).

kindly shared their dataset with us. We match the data to the most recent neighourhood definitions, resulting in data on the universe of the census output areas across England and Wales, which we refer to as neighbourhoods. Of the 184,109 neighbourhoods in England and Wales (median population: 303), 12,513 (6.7%) include at least one BNP member. The maximum number of members per neighbourhood is 11, a neighbourhood in Barnsley, in the north of England. The neighbourhoods containing BNP members are displayed in Appendix Figure A13, which also shows the UK geographies with active BNP branches in 2008.[34] The figure reveals that membership of the BNP is geographically diverse, and members live in areas both with and without local branches.

5.1. Estimation and Results

Our dependent variable is the number of BNP members per 100,000 white residents in a neighbourhood.[35] We limit our sample to neighbourhoods inside

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34. Data on the existence of BNP branches comes from the BNP newspaper, the 'Voice of Freedom', Issue 100. Last accessed August 2017 at `https://www.scribd.com/document/25905300/Voice-of-Freedom-101`.

35. As described above, the data on BNP membership is provided at the neighbourhood level. We run our main regression at the neighbourhood level too, without further aggregation, since

England and Wales since negligible numbers of troops were posted in Scotland and because Northern Ireland contains only a negligible number of BNP members. In constructing our dependent variable we divide by the number of white residents in the neighbourhood to avoid a mechanical correlation between the outcome measure and the size of non-white population.[36] Further, as described in Section 4, we limit our sample to neighbourhoods in postcode districts where support units were posted, so as to exploit variation in the racial makeup of support troops posted around any given location in our estimation.

We thus estimate regression equations of the form:

$$
\begin{aligned}
\textit{BNP members per 100,000 whites}_i = \alpha &+ \beta_1 \textit{BlackUnitMonths}_j \\
&+ \beta_2 \textit{SupportUnitMonths}_j + X_i + u_i
\end{aligned}
\tag{1}
$$

where i is a neighbourhood, j stands for that neighbourhood's postcode district, $\textit{BlackUnitMonths}_j$ and $\textit{SupportUnitMonths}_j$ are constructed as per Section 4, X_i is a vector of controls and u_i is the error term. In order to account for correlation in the error term between observations, we cluster standard errors at the modern local authority level, which divides England and Wales into 348 administrative regions. We carry out randomization inference as an alternative method for accouting for this correlation in Section 5.3. Our key parameter of interest is β_1, the estimated effect of the presence of black troops, conditional on the presence of support troops, on BNP membership.

Results of estimating Equation 1 are displayed in Table 2, with each column representing a separate regression with a different set of control variables. To ease the interpretation of coefficients, both the explanatory and dependent variables are standardised to have zero mean and a standard deviation of one. The regres-

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this allows us to accurately match each unit to larger historical geographies. This simplifies the generation of control variables, since neighbourhoods almost always fit completely inside historic boundaries, something which would not be the case for larger geographic units. Appendix Table A7 reports results from regressions at the postcode district level, albeit without a full set of controls. These are in-line with our main specification. In addition, Section 5.3 reports estimation results from alternate model specifications.

36. Recall that membership of the party was limited to whites at the time the membership list was published, although given the party's policy platform it seems unlikely that many non-whites would choose to join the party.

Table 2: Effect on BNP membership

	Dependent variable:				
	BNP members per 100,000 whites (std.)				
	(1)	(2)	(3)	(4)	(5)
Black unit-months (std.)	-0.022***	-0.023***	-0.022***	-0.023***	-0.029*
	(0.008)	(0.008)	(0.008)	(0.009)	(0.015)
Support unit-months	✓	✓	✓	✓	✓
Grid-cell fixed effects		✓	✓	✓	✓
Economic controls			✓	✓	✓
Geographic controls				✓	✓
Socio-political controls					✓
Clusters	234	234	234	234	172
Observations	48,732	48,732	48,665	48,665	26,498

Notes: Each column reports coefficients and standard errors (in brackets) from an OLS regression where both the dependent variable and main independent variable have been standardised to have mean zero and standard deviation one. The unit of observation is the neighbourhood (2011 census output area). The outcome variable is BNP members per 100,000 white inhabitants. Black unit-months, the reported independent variable, is our measure of the presence of black troops in the neighbourhood's postcode district. Support-unit months is the measure of presence of support troops in the neighbourhood's postcode district. Economic controls are: population density (in the 1931 parish), change in population (in the parish between 1921 to 1931), the share of employment due to the agricultural sector (in the 1931 local government district), the share of employment due to the professional sector (in the 1931 local government district) and a dummy variable for urban status (1931 local government district). Geographic controls are distances to the coast, to the nearest large city, to the nearest city, to the nearest urban district, to the nearest railway station and to the nearest major road. Social- political controls are the estimated number of non-white migrants in the parish (1911), the share of the votes in the 1935 constituency going to the Conservative party, and a binary indicator for the presence of a British Union of Fascist branch in the constituency, measured in 1934. Standard errors are clustered at the local authority district level and reported in brackets. One, two and three stars indicate significance at the 10%, 5% and 1% levels respectively.

sion shown in Column 1 includes no additional controls. We introduce further controls in a piecewise fashion, starting with Column 2. First we include grid-cell fixed effects, generated by imposing an arbitrary eight by ten cells grid on the map of England and Wales and matching neighbourhood to these cells (the cells are shown in Figure 4). Estimation in this and subsequent columns exploits *within grid-cell variation* in the presence of black troops, comparing neighbourhoods which are relatively close to one another but which vary in terms of the number of black units posted. This is a more flexible way to capture unobserved variables with regional variation than latitude/longitude controls.

For the remaining columns, we match contemporary neighbourhoods to their historic geographies: 1931 parishes, 1931 local government districts and 1935 constituencies, using boundary data provided by the Vision of Britain Project. In most cases, neighbourhoods are completely contained within these geographies; if not, they are matched to the geography which contains the neighbourhood's population weighted centroid. Based on these historic geographies, we add controls for pre-existing economic conditions in Column 3, for geography in Column 4 and for sociopolitical variables in Column 5. These are the same set of controls we used to demonstrate exogeneity of the treatment measure in Section 4.2.

In the baseline specification, Column 1, a one standard deviation increase in the presence of black troops, as measured by $BlackUnitMonths_j$ reduces the number of BNP members as a share of white citizens by 0.02 of a standard deviation. The effect is reasonably small, as might be expected given the length of time that has passed since the treatment, but is highly statistically significant. Comparing coefficients across the columns shows that adding grid-cell fixed effects, economic controls or geographic controls makes only a marginal difference to the estimated coefficient (this follows from the exogeneity of the treatment established in Section 4.2). The estimate shown in Column 5, which includes sociopolitical controls, is estimated with less precision because we do not have data on the existence or otherwise of a British Union of Fascist or the share of Conservative party votes for all constituencies. However, the coeffi-
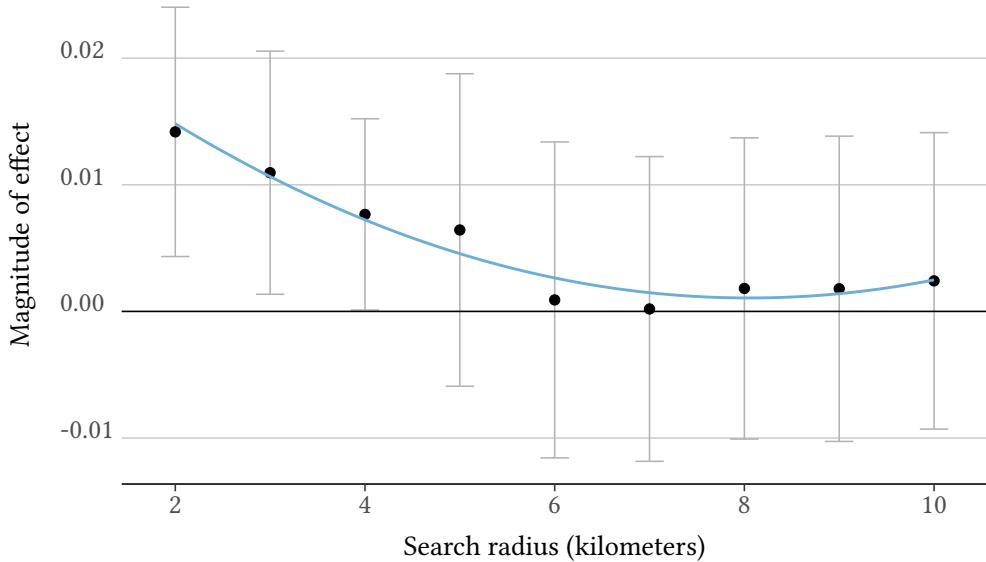
Figure 6. Geographic decay. Point estimates and 95% confidence intervals are displayed for eight regressions, varying the radius around a location at which bases are counted as contributing to potential contact, i.e. varying k in Equation 2.

cient is still statistically significant at the 10% level and is in fact larger than that of the previous columns.[37]

5.2. Geographic decay

In this section, we investigate what level of proximity is required between a base at which black troops were posted and a contemporary location in order for the presence of troops to have had an persistent effect on attitudes. To do so, we assume that a military base affected a neighbourhood if the neighbourhood is within a given distance of the base, k. For various values of k, we generate a treatment variable which measures the presence of black units in a k-kilometre radius around the neighbourhood:

$$BlackUnitMonths_{i,k} = \sum_{b} \sum_{m} \mathbb{1}[d(i,b) \leq k] \cdot BlackUnits_{b,m}$$

37. An alternative explanation for the results reported in Table 2 is that the presence of black troops caused individuals with anti-minority preferences to migrate away. However, the evidence is that the disruption to the housing market during war time made such moves unlikely. Appendix Figure A14 shows that the building of new houses all but ceased during the war period, and Appendix Figure A15 uses an online archive of local newspaper adverts to show that the supply of non-new properties also collapsed.

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where $d(i, b)$ is the Euclidean distance in kilometres between the population-weighted centroid of neighbourhood i and base b and $BlackUnits_{b,m}$ is the number of black support units posted at base b in month m. We create an analogous measure for the presence of support troops:

$$SupportUnitMonths_{i,k} = \sum_b \sum_m \mathbb{1}[d(i, b) \leq k] \cdot SupportUnits_{b,m}$$

We then use these new measures in regressions of the form:

$$BNP\ members\ per\ 100{,}000\ whites_{i,k} = \alpha + \beta_1 BlackUnitMonths_{i,k}$$
$$+ \beta_2 SupportUnitMonths_{i,k} + X_i + u_i$$

$$(2)$$

Note that the treatment measure now varies on the neighbourhood level, the level at which we observe our outcome measure. The results of these regressions, for distances between two and ten kilometres, are visualised in Figure 6; all variables are again standardised, so that the coefficients can be interpreted as beta coefficients. The magnitude of the point estimate decreases with distance, and at a radius of five kilometres or above, the effect is no longer statistically significant from zero. As such, the effect of the black G.I.s appears to be highly localised. This is consistent with our assumption that the closer a location was to a base, the more likely it was that contact took place between the population there and any black G.I.s on the base.

5.3. Robustness

In this section we examine the extent to which the results presented in Table 2 are robust to changes in specification or the sample.

Firstly, in Table 3, we examine robustness to alternative treatment indicators. We progressively add controls in the same fashion as in Table 2. In the regressions reported in Panel A, we use a binary indicator as our main independent variable; this takes the value of one if black units were ever posted in a neighbourhood's postcode district and zero otherwise. Across specifications, the estimated effect of having any black troops posted in a neighbourhood is nega-

Table 3: Effect on BNP membership, alternative treatment measures

	Dependent variable:			
	BNP members per 100,000 whites (std.)			
	(1)	(2)	(3)	(4)
	Baseline	+ Grid-cell F.E.s	+ Economic Controls	+ Geography Controls
Panel A: binary treatment				
Black units ever stationed	-0.056***	-0.033	-0.030	-0.037
	(0.021)	(0.020)	(0.020)	(0.020)
Panel B: months				
Months with black units (std.)	-0.027***	-0.019**	-0.018**	-0.019**
	(0.009)	(0.009)	(0.009)	(0.009)
Panel C: horserace				
Black units ever stationed	-0.047*	-0.030	-0.026	-0.030
	(0.025)	(0.024)	(0.024)	(0.024)
Months with black units (std.)	-0.003	0.008	0.007	0.008
	(0.014)	(0.011)	(0.012)	(0.012)
Black unit-months (std.)	-0.013	-0.025***	-0.025**	-0.025**
	(0.011)	(0.009)	(0.010)	(0.010)
Support unit-months	✓	✓	✓	✓
Grid-cell fixed effects		✓	✓	✓
Economic controls			✓	✓
Geographic controls				✓
Clusters	234	234	234	234
Observations	48,732	48,732	48,665	48,665

Notes: Each column within each panel reports coefficients and standard errors from an OLS regression. The unit of observation is the neighbourhood (2011 census output area). The outcome variable is BNP members per 100,000 white inhabitants in the neighbourhood (standardised to have mean zero and standard deviation one). The dependent variables vary by panel. In Panel A, the independent variable is a dummy for whether black units were ever stationed in the neighbourhood's postcode district. In Panel B, the independent variable is the number of months for which black units were posted (standardised to have mean zero and standard deviation one). Regressions shown in Panel C includes both of these variables, as well as our regular measure of presence of black troops, 'black unit-months' (std.). Control variables are as per Table 2. Standard errors are clustered at the local authority district level. One, two and three stars indicate significance at the 10%, 5% and 1% levels respectively.

tive. However, it is only statistically significant in Column 1, where we control only for the degree of presence of support units. Introducing grid-cell fixed effects, as per Column 2 reduces the size of the estimate and its relative precision. This is likely a result of there being little residual variation in the variable once controlling for grid-cell fixed-effects.

In Panel B, we count the number of months (maximum twenty-seven) in which any black units were present in a neighbourhood's postcode district for. This measure has more variation than that used in Panel A, and remains significant and negative across all specifications; the number of BNP members in each neighbourhood reduces with the number of months black units were posted.

Finally, in Panel C, we run a 'horserace', where we include both of these alternative measures as well as our preferred measure, unit-months. In the specifications with controls, Columns 2 to 4, the coefficient on our preferred measure is significant, whilst the other measures are not. The evidence suggests that both the number of black troops and their duration of stay matter for contemporary outcomes. Our preferred treatment measure, unit-months, increases in both of these.

In Table 4, we show that our results are robust to changes in the specification of the model. In Column 1, we run a logistic regression on a dependent variable that indicates whether there is at least one BNP members in a given neighbourhood. Multiple BNP members within a given household or spillover effects between neighbours might increase BNP membership within a given neighbourhood, without necessarily indicating stronger racial prejudice. If this is the case, the absolute value of members in an output area is no more informative of racial prejudice than a binary variable that indicates whether members are present or not. In Column 2, we estimate a negative binomial model, which explicitly accounts for the fact that BNP members per neighbourhood is a count variable. When estimating the negative binomial regression, we constrain $ln(Whites_i)$ to one to account for the fact that BNP membership in any neighbourhood is constrained by the number of whites individuals living there. In Column 3, we transform our dependent by taking its inverse hyperbolic sine (Burbidge, Magee, and Robb, 1988). The distribution of BNP members across neighbourhoods is highly skewed, and the inverse hyperbolic sine transformation makes the distribution more normal, reducing the influence of

Table 4: Effect on BNP membership, alternate models

	(1)	(2)	(3)	(4)
	Logit model	Negative binomial model	Dep. var. IHS transformed	Dep. var. IHS & Logit
Black unit-months (std.)	-0.0035***	-0.0038***	-0.012*	-0.045**
	(0.001)	(0.001)	(0.007)	(0.02)
Support unit-months	✓	✓	✓	✓
Grid-cell fixed effects	✓	✓	✓	✓
Economic controls	✓	✓	✓	✓
Geographic controls	✓	✓	✓	✓
Model	Logit	Neg. Bin.	OLS	Logit
Dep. var. transformation	Std.	Std.	IHS	IHS
Clusters	234	234	234	234
Observations	48,664	48,665	48,665	48,664

Notes: Coefficients from several regressions. The unit of observation is the neighbourhood (2011 census output area). Outcome is BNP members per 100,000 white inhabitants, except for Column 1 where it is a dummy whether the neighbourhood contains any BNP members. The independent variable is our measure for potential contact with black troops 'Black unit-months' (standardised to have mean zero and standard deviation one). We control for 'support unit-months' in each regression. Standard errors are clustered at the local authority district level. Standard errors in brackets. One, two and three stars indicate significance at the 10%, 5% and 1% levels respectively.

outliers. In Column 4, we both transform the independent variable and estimate a logit model. The coefficients are not comparable across specifications, but coefficients on *BlackUnitMonths* are negative and statistically significant in all regressions. This suggests that the results found in our main specification are not driven simply by model selection.

Table 5 reports results on selected samples. In all cases, we use the same set of controls as in Column 4 of Table 2, including geographic and economic controls. In Column 1 we drop from the sample any neighbourhoods within twenty kilometers of the coast. This excludes all locations in which the small pre-war black population of England and Wales was concentrated. Results remain highly significant. We exclude London from the sample in Column 2, and in Column 3 exclude all areas with an active BNP branch in 2007. Across all our specifications, the coefficient on *BlackUnitMonths* remains highly significant.

Further robustness checks are reported in the Appendix. In Appendix Table A8, we show our results are robust to weighting neighbourhoods by the size of the population. In Appendix Figure A16 we report results of regressions where we leave counties out of the sample one at a time, and show that the results are not driven by any particular county in the UK. Finally, in order to assuage concerns that spatial correlation might cause biased estimates of standard errors, Appendix Figure A17 reports the results of randomization inference. We randomly reassign the share of support unit-months due to black units, $BlackUnitMonths_b/SupportUnitMonths_b$, between bases in order to create a simulated assignment of $BlackUnitMonths_b$. We then estimate Equation 1 using the simulated $BlackUnitMonths_b$ and the real $SupportUnitMonths_b$. We repeat the exercise 8,000 times, generating a distribution of estimates of β_1, which is centred around zero. The estimate of β_1 with the real $BlackUnitMonths_b$ is larger in magnitude than all but 0.1% of the counterfactual estimates.

5.4. Heterogeneity in Persistence

In order to make some progress around understanding channels of persistence, we examine heterogeneous effects along two dimensions in Table 6. The analysis is in the style of Voigtländer and Voth (2012), who demonstrate that the persistence of anti-Semitism in Germany across a period of 600 years 'fails' in cities which are open to trade and migration.

Table 5: Effect on BNP membership, subsamples

	Dependent variable:		
	BNP members per 100,000 whites (std.)		
	(1)	(2)	(3)
	Inland	Not London	No BNP Branch
Black unit-months (std.)	-0.034***	-0.021**	-0.022***
	(0.009)	(0.009)	(0.008)
Support unit-months	✓	✓	✓
Grid-cell fixed effects	✓	✓	✓
Economic controls	✓	✓	✓
Geographic controls	✓	✓	✓
Clusters	179	226	220
Observations	27,048	47,937	46,092

Notes: Each column reports coefficients and standard errors from an OLS regression where the dependent variable and the main independent variable have been standardised to have mean zero and standard deviation of one. The unit of observation is the neighbourhood (2011 census output area). The outcome variable is BNP members per 100,000 white inhabitants in the neighbourhood. Black unit-months, the reported independent variable, is our measure for the presence of black troops in the neighbourhood's postcode district . Control variables are as per Table 2. The sample varies across columns. The sample for Column 1 is all neighbourhoods at least 20 kilometers away from the coast. The sample for Column 2 is all neighbourhoods apart from those inside Greater London. The sample for Column 3 excludes neighbourhoods in districts where a local branch of the British National Party is active. Standard errors are clustered at the local authority district level. One, two and three stars indicate significance at the 10%, 5% and 1% levels respectively.

We begin by splitting the sample by the rural-urban status of the neighbour-hood.[38] Column 1 reports the results of the specification of estimating Equation 1 with controls as per Column 4 of Table 2 on the sample of neighbour-hoods in rural areas. Column 2 does the same for urban areas. The results reveal that the effect of black troops on BNP membership is about double as large in rural areas than in urban areas, with standardised coefficients of −0.031 compared to −0.015. In fact, the effect in urban areas is not statistically significant at any conventional level, despite a larger sample size.

These results make sense given the low levels of internal migration in rural areas of the U.K. where, according to data from the UK household longitudinal study 'Understanding Society'[39] 25% of individuals were living within two miles (3.2 kilometres) and 47% within five miles (8 kilometres) of the place they grew up. Urban areas are however magnets for migration, both international and domestic. As such, in rural areas more of the population will be direct descendants of those living in the same area during World War II. Given this, a model of vertical transmission of attitudes from parents to children would predict more persistence in rural compared to urban areas, precisely what we find.

In Columns 3 and 4 we investigate heterogeneity according to non-white share. In areas with larger non-white populations, individuals have more opportunities to update their beliefs about non-whites, and we would therefore expect less persistence compared to areas which are still predominantly white. To test this hypothesis, the regression reported in Column 3 include onlys neighbour-hoods which are part of a local authority area with a bottom-quartile share of non-whites, in Column 4 we only include neighbourhoods which are part of a local authority area with a top-quartile share of non-whites. We indeed

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38. The Office of National Statistics classifies neighbourhoods as belonging to one of four urban categories or six rural categories based on the typical settlement of the households in the neighbourhood. Urban categories are major conurbation, minor conurbation, city and town, city and town in sparse setting. Rural categories are town and fringe, town and fringe in sparse settings, village, village in spare setting, hamlets and isolated dwelling.

39. University of Essex. Institute for Social and Economic Research. (2016). Understanding Society: Innovation Panel, Waves 1-8, 2008-2015. [data collection]. 7th Edition. UK Data Service. SN: 6849.

Table 6: Effect on BNP membership, heterogeneity

	(1) Rural	(2) Urban	(3) Bottom Quartile	(4) Top Quartile
	Dependent variable:			
	BNP members per 100,00 whites (std.)			
			Non-white share	
Black unit-months (std.)	-0.031***	-0.015	-0.037**	-0.022
	(0.008)	(0.01)	(0.02)	(0.03)
Support unit-months	✓	✓	✓	✓
Economic controls	✓	✓	✓	✓
Geographic controls	✓	✓	✓	✓
Clusters	196	204	63	61
Observations	15,659	33,006	13,233	10,415

Notes: Each column reports coefficients and standard errors from an OLS regression where the dependent variable and the main independent variable have been standardised to have mean zero and standard deviation of one. The unit of observation is the neighbourhood (2011 census output area). The outcome variable is BNP members per 100,000 white inhabitants in the neighbourhood. Black unit-months, the reported independent variable, is our measure for the presence of black troops in the neighbourhood's postcode district. Control variables are as per Table 2. The sample varies across columns. In Column 1 the sample is neighourhoods in rural areas, in Column 2 it is neighbourhoods in urban areas, in Column 3 it is neighbourhoods in local authority districts with a bottom quartile non-white share, in Column 4 it is neighbourhoods in local authority districts with a top quartile non-white share. Standard errors are clustered at the local authority district level. One, two and three stars indicate significance at the 10%, 5% and 1% levels respectively.

find that the effect of black G.I.s is almost twice as large in areas which are predominantly white.[40]

6. Additional Outcome Measures

In this section, we investigate the effect of black troops on two further measures of anti-minority prejudice. The outcome measure used so far, membership of the BNP party, is appealing both for being a 'revealed' preference measure and for being a variable that we can measure for the population of the U.K. However, it is also, as we have shown, a measure of *extreme* racial attitudes. Whilst extreme prejudicial attitudes probably have the most impact on minority individuals' welfare (leading, e.g. to hate crime and overt discrimination), it is also of interest whether the presence of black G.I.s led to changes in attitudes more widely construed. We make progress on this question by examining measured implicit anti-black bias and survey data.

6.1. Implicit Attitudes

First, we show that presence of black troops has had persistent effects on *implicit* anti-black attitudes. Implicit attitudes, "traces of past experience [that] affect some performance, even though the influential earlier experience is not remembered in the usual sense" (Greenwald and Banaji, 1995, p. 78), have been shown to be predictive for outcomes in a variety of domains when measured by a computerised test.[41]

We use data from Project Implicit, an American non-profit organization which hosts several country-specific websites allowing users to test their implicit attitudes using various Implicit Association Tests ('IATs'). IATs are widely used in psychology (see Greenwald, McGhee, and Schwartz, 1998, for a review), and increasingly in economics, as a way of measuring implicit attitudes (e.g. Lowes et al., 2015). The test, which is computer administered, can be applied to mea-

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40. In unreported results, we tested for effects of the local presence of black G.I.s on the size of the non-white population, and found no statistically significant relationship. Non-white migration to the U.K. has largely been to a handful of major cities.

41. For an overview see Uhlmann et al. (2009). Amongst these, Agerström and Rooth (2011) find that hiring managers' discrimination against obese job applicants is predicted by a test that measures implicit attitudes towards the overweight. In an incentivised experiment, Stanley et al. (2011) show that white subjects' implicit racial attitudes predict their judgement about the trustworthiness of randomly matched black partners, even conditional on their reported racial attitudes.

sure implicit associations on any topic, but the most common application has been to race. A consistent finding is of widespread implicit in-group bias, although there is considerable variation in race IAT scores between individuals. A full description of the test is give in Appendix E.

After completing an IAT on the Project Implicit homepage, subjects are asked to answer several questions regarding their attitudes towards religion, minorities, politics and supply their postcode and general demographics. Following an IRB exemption, we received a dataset containing all data collected by the U.K. race IAT website between 2004 and 2013 (Xu, Nosek, and Greenwald, 2014). The dataset contains 25,645 completed sessions with postcodes we could match to other geographies. We make no claims about the representativeness of the sample: the median age is 27 years, compared to 40 for the population, and roughly two thirds of the participants are male. Subjects are also better educated than the population as a whole. Nonetheless, the sample contains individuals from throughout the U.K. (347 of England and Wales' 348 local government districts are represented) and of a wide range of ages (7 to 83).[42]

In order to test whether contact with black G.I.s has had persistent impact on IAT scores, we follow the same basic empirical strategy as in Section 5, but now run individual-level regressions on the "D" score, the summary metric produced by the test. Higher scores indicate a stronger automatic association of positive words with white faces, i.e indicate implicit pro-white racial bias (Greenwald, McGhee, and Schwartz, 1998). In order to make coefficients comparable with those of earlier regression, we standardise the "D" score to have zero mean and a standard deviation of one. We limit the sample to those respondents who self-identify as white, report to be at least 16 years of age, and live in an area where support unit months were stationed. Results are presented in Table 7. In the whole sample the effect is insignificant, but the coefficient points to the presence of black troops lowering implicit bias against blacks. Once we limit the same to rural districts, estimated effect sizes are larger and statistically significant. In these areas, a one standard deviation increase in the

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42. Curiosity seems to be the main driver for participation in the test. The most common stated reasons for coming to the website are the recommendation of a friend and mention in news articles. Around 20% of tests in the dataset were conducted in the days after the BBC publicised the test on its news website in April 2005 under the headline "Are you racist? The test that claims to know" (BBC, 2005).

Table 7: Effect on implicit anti-black bias

	All			Rural		
Dependent variable: IAT score (std.)						
	(1)	(2)	(3)	(4)	(5)	(6)
Black unit-months (std.)	-0.0317*	-0.0270	-0.0294	-0.0655***	-0.0658**	-0.0702**
	(0.0164)	(0.0182)	(0.0185)	(0.0250)	(0.0255)	(0.0272)
Support unit-months	✓	✓	✓	✓	✓	✓
Demographic Controls		✓	✓		✓	✓
Grid fixed effects		✓	✓		✓	✓
Economic controls			✓			✓
Location controls			✓			✓
Clusters	220	220	220	156	156	156
Observations	5,468	5,430	5,420	1,435	1,427	1,425

Notes: Each column reports coefficients and standard errors from an OLS regression. The unit of observation is the individual. The dependent variable is the standardized measure of implicit anti-black attitudes from the IAT. The independent variable is our measure for contact with black troops, 'black unit-months' in the postcode district (standardised to have mean zero and standard deviation of one). Demographic controls are age, age squared and gender. Standard errors (in brackets) are clustered at the local authority district level. One, two and three stars indicate significance at the 10%, 5% and 1% levels respectively.

presence of black troops is associated with a 7% of a standard deviation reduction in implicit anti-black bias—around double the effect on membership of the British National Party.

6.2. Thermology

Using the same dataset as above, we now examine the effect of the presence of black troops on stated attitudes. After completing the IAT test, participants are asked a range of survey questions, including a number of 'thermology' questions of the form "Please rate how warm or cold you feel toward the following groups (0 = coldest feelings, 5 = neutral, 10 = warmest feelings)". We take as our dependent variable the thermology score towards "black people", which we again standardise, such that the coefficients reported can be interpreted as beta coefficients. We control for the thermology score towards "white people". Results are displayed in Table 8. We find the same pattern: a positive but insignificant relationship between warmness of feelings towards black people

Table 8: Warmness of feelings towards black people

| | *Dependent variable:* black thermology (std.) | | | | | |
| | All | | | Rural | | |
	(1)	(2)	(3)	(4)	(5)	(6)
Black unit-months (std.)	0.0126	0.0121	0.0111	0.0511*	0.0652**	0.0732**
	(0.0160)	(0.0170)	(0.0175)	(0.0267)	(0.0319)	(0.0309)
Support unit-months	✓	✓	✓	✓	✓	✓
Demographic Controls		✓	✓		✓	✓
Grid fixed effects		✓	✓		✓	✓
Economic controls			✓			✓
Location controls			✓			✓
Clusters	220	220	220	156	156	156
Observations	5,329	5,295	5,285	1,393	1,386	1,384

Notes: Each column reports coefficients and standard errors from an OLS regression where the dependent variable and the main independent variables have been standardised to have mean zero and standard deviation of one. The unit of observation is the individual. The dependent variable is the reported thermology score, indicating how warmly individuals feel on a scale from 0 to 10 towards black people. The independent variable is our measure for contact with black troops, 'black unit-months' in the postcode district. Demographic controls are age, age squared and gender. All regressions control for thermology scores towards white people. Standard errors (in brackets) are clustered at the local authority district level. One, two and three stars indicate significance at the 10%, 5% and 1% levels respectively.

and the historical presence of black troops when considering the whole sample, but a stronger and statistically significant relationship when the sample is limited to rural districts. The effect sizes are almost identical to those we find for the IAT results, with a one standard deviation increase in the presence of black troops increasing warmth towards black people by 7.3% of a standard deviation in the specification with all controls, Column 6.

The findings from both the thermology and the IAT scores therefore reinforce our findings from BNP membership. The fact that we observe effects of similar magnitude for thermology and IAT is furthermore indicative of implicit attitudes being subject to similar transmission mechanisms as their explicit counterparts, which could explain why implicit racial attitudes persist.

7. Conclusion

We have investigated the effect of the presence of black American troops in the United Kingdom during World War II on anti-minority prejudice. Large numbers of black G.I.s were posted in the U.K. at a time where the population was almost exclusively white. Documentary evidence suggests that the allocation of black troops to military bases in the U.K. took place without consideration of local racial attitudes, and we show that the allocation is orthogonal to a large set of economic, political and social variables. As such, variation across bases as to the number of black units posted allows us to identify causal effects of the local presence of troops.

We found that areas of the U.K. in which black soldiers were posted during World War II contain fewer members of the British National Party, a far-right party with racist policy positions, in 2007. The effect is particularly strong in rural areas—that is, areas where population movements are lower and which remain predominantly white. In addition, individuals in such areas exhibit less implicit anti-black bias, as measured by a computerised Implicit Association Test, and are more likely to report warmer feelings towards black people. Taken as a whole, our results provide support for the 'contact hypothesis' (Allport, 1954), which postulates that contact between groups can reduce animosity towards the minority group, and show that such effects can persist in geographies across time.

It is interesting to note that the contact which we describe meets many of the conditions that Allport postulated were necessary for intergroup contact to lead to improved relations: equal status, common goals, intergroup cooperation and personal interaction. Black G.I.s were in the United Kingdom for a relatively short period of time, were there to support the war effort, and did not compete for jobs or public goods with the local population. More work is required to understand how the *mode* of interaction between groups affects any changes in attitudes that contact might produce.

References

Acharya, Avidit, Matthew Blackwell, and Maya Sen. 2016. "The Political Legacy of American Slavery". *Journal of Politics* 78 (3): 621–641.

Agerström, Jens, and Dan-Olof Rooth. 2011. "The Role of Automatic Obesity Stereotypes in Real Hiring Discrimination". *Journal of Applied Psychology* 96 (4): 790–805.

Allport, Gordon W. 1954. *The Nature of Prejudice.* Cambridge, Mass.: Addison-Wesley.

Avdeenko, Alexandra, and Thomas Siedler. 2017. "Intergenerational Correlations of Extreme Right-Wing Party Preferences and Attitudes toward Immigration". *Scandinavian Journal of Economics* 119 (3): 768–800.

BBC. 2001. *BNP: Under the Skin.* http://news.bbc.co.uk/hi/english/static/in_depth/programmes/2001/bnp_special/roots/1984.stm.

———. 2005. *Are You Racist? The Test That Claims to Know.* http://news.bbc.co.uk/2/hi/uk_news/magazine/4447471.stm.

Biggs, Michael, and Steven Knauss. 2011. "Explaining Membership in the British National Party: A Multilevel Analysis of Contact and Threat." *European Sociological Review* 28 (5): 633–646.

Bisin, Alberto, and Thierry Verdier. 2001. "The Economics of Cultural Transmission and the Dynamics of Preferences". *Journal of Economic Theory* 97 (2): 298–319.

Boisjoly, Johanne, Greg J Duncan, Michael Kremer, Dan M Levy, and Jacque Eccles. 2006. "Empathy or Antipathy? The Impact of Diversity". *American Economic Review* 96 (5): 1890–1905.

Burbidge, John B., Lonnie Magee, and A. Leslie Robb. 1988. "Alternative Transformations to Handle Extreme Values of the Dependent Variable." *Journal of the American Statistical Association* 83 (401): 123–127.

Carell, Scott, Mark Hoekstra, and James West. 2016. "The Impact of College Diversity on Behavior Toward Minorities". *NBER working paper* 20940.

Goodwin, Matthew, and Jocelyn Evans. 2012. "From Voting to Violence? Far Right Extremism in Britain". *Hope Not Hate:* 1–36.

Greenwald, Anthony G, and Mahzarin R Banaji. 1995. "Implicit Social Cognition: Attitudes, Self-Esteem, and Stereotypes". *Psychological Review* 102 (1): 4–27.

Greenwald, Anthony G, Debbie E McGhee, and Jordan LK Schwartz. 1998. "Measuring Individual Differences in Implicit Cognition: The Implicit Association Test". *Journal of Personality and Social Psychology* 74 (6): 1464–1480.

Hanretty, Chris, and Nick Vivyan. 2015. "Estimating Constituency Opinion in Britain, Technical Report."

Holmans, Alan. 2005. *Housing Statistics of Housing in Britain.* Cambridge Centre for Housing and Planning Research.

Lapiere, Richard T. 1928. "Race Prejudice: France and England." *Social Forces* 7 (1): 102–111.

Lee, Ulysses. 1966. *The Employment of Negro Troops.* Vol. 8. Government Printing Office.

Little, Kenneth. 1998. *Negroes in Britain: A Study of Racial Relations in English Society.* Class, Race and Social structure. Routledge.

Lowes, Sara, Nathan Nunn, James A. Robinson, and Jonathan Weigel. 2015. "Understanding Ethnic Identity in Africa: Evidence from the Implicit Association Test (IAT)." *American Economic Review* 105 (5): 340–45.

Madge, Charles, and Tom Harnett Harrisson. 1937. *Mass Observation.* Frederick Muller Ltd.

Millgate, Helen D. 2010. *Got Any Gum Chum?: GIs in Wartime Britain, 1942-1945.* History Press Series. History Press Limited.

Moore, B.L. 2013. "African Americans in the Military." In *The Columbia Guide to African American History Since 1939,* edited by R.L. Harris and R. Terborg-Penn. Columbia guides to American history and cultures. Columbia University Press.

Murray, Paul T. 1971. "Blacks and the Draft: A History of Institutional Racism". *Journal of Black Studies* 2 (1): 57–75.

Ochsner, Christian, and Felix Roesel. 2016. "Migrating Extremists". *CESifo Working Paper* 5799 (March).

Olson, Lynne. 2010. *Citizens of London: The Americans Who Stood with Britain in Its Darkest, Finest Hour*. Random House Publishing Group.

Orwell, George. 1943. "As I Please". *Tribune* (December).

Pettigrew, Thomas F, and Linda R Tropp. 2006. "A Meta-Analytic Test of Intergroup Contact Theory". *Journal of Personality and Social Psychology* 90 (5): 751–783.

Pogue, Forrest C. 1954. *The Supreme Command*. United States Army in World War II: European theater of operations. Office of the Chief of Military History, Department of the Army.

Rash, F.L. 1942. *Internal Memo, Headquarters, Services of Supply, European Theatre of Operations.* National Archives reference: NAII; 290; 57/17/087; Box 43, File 218, 'Negro Troops', September.

Redvaldsen, David. 2016. "'Science must be the Basis'. Sir Oswald Mosley's Political Parties and their Policies on Health, Science and Scientific Racism 1931–1974." *Contemporary British History* 30 (3): 368–388.

Reynolds, D. 1995. *Rich Relations: the American Occupation of Britain, 1942-1945.* Random House.

Reynolds, David. 2006. *From World War to Cold War: Churchill, Roosevelt, and the International History of the 1940s.* OUP Oxford.

Ruppenthal, Roland G. 1978. *Logistical Support of the Armies: May 1941 – September 1944.* The European Theater of Operations: United States Army in World War 2 1. Department of the Army.

Sasser, Charles W. 2014. *Two Fronts, One War*. Frontline Books.

Smith, Graham. 1987. *When Jim Crow Met John Bull: Black American Soldiers in World War II Britain.* I.B. Tauris.

Spencer, Ian R.G. 1997. *British Immigration Policy Since 1939: The Making of Multi-racial Britain.* Routledge.

Stanley, Damian A, Peter Sokol-Hessner, Mahzarin R Banaji, and Elizabeth A Phelps. 2011. "Implicit Race Attitudes Predict Trustworthiness Judgments and Economic Trust Decisions". *Proceedings of the National Academy of Sciences* 108 (19): 7710–7715.

Stouffer, Samuel A, Edward A Suchman, Leland C DeVinney, Shirley A Star, and Robin M Williams Jr. 1949. "The American Soldier: Adjustment During Army Life". 1.

The Guardian. 2009. *Racism Inquiry May Bring Ban on BNP Membership for Teachers.* http://www.theguardian.com/education/2009/sep/30/ed-balls-orders-racism-inquiry.

The Spectator. 2009. *The Rise of British Racism May be Horribly Close.* http://www.spectator.co.uk/features/3648608/the-rise-of-british-racism-may-be-horribly-close/.

Uhlmann, Eric Luis, Anthony Greenwald, Andrew Poehlmann, and Mahzarin Banaji. 2009. "Understanding and Using the Implicit Association Test: III. Meta-Analysis of Predictive Validity". *Journal of Personality and Social Psychology* 97 (1): 17–41.

Vlachos, Stephanos. 2017. "Inglorious Wars and Political Radicalization." Unpublished.

Voigtländer, Nico, and Hans-Joachim Voth. 2012. "Persecution Perpetuated: The Medieval Origins of Anti-Semitic Violence in Nazi Germany". *Quarterly Journal of Economics* 127 (3): 1339–1392.

Waddell, Steve R. 2010. *United States Army Logistics: From the American Revolution to 9/11.* PSI reports. Praeger Security International.

Xu, Kaiyuan, Brian Nosek, and Anthony G Greenwald. 2014. "Psychology Data from the Race Implicit Association Test on the Project Implicit Demo Website". *Journal of Open Psychology Data* 2 (1).

Appendices

A. Policies of the British National Party

"The British National Party exists to secure a future for the indigenous peoples of these islands in the North Atlantic which have been our homeland for millennia. We use the term indigenous to describe the people whose ancestors were the earliest settlers here after the last great Ice Age and which have been complemented by the historic migrations from mainland Europe" (Mission statement posted on BNP website, 2007, accessed June 2016 via `http://archive.org`)

"IMMIGRATION - time to say ENOUGH! On current demographic trends, we, the native British people, will be an ethnic minority in our own country within sixty years" (BNP Manifesto, 2007, accessed June 2016 via `http://archive.org`)

"We don't 'hate' black people, we don't 'hate' Asians, we don't oppose any ethnic group for what God made them, they have a right to their own identity as much as we do, all we want to do is to preserve the ethnic and cultural identity of the British people" (BNP website, 2007, accessed June 2016 via `http://archive.org`)

B. Data Sources

U.S. Army station lists

U.S. Army Station Lists are housed in the National Archives in Washington D.C. as Record Group 407, HMS Entry Number NM 3 377 A. Catalog entry at http://research.archives.gov/description/6883370.

U.S. Army enlistment records

World War II Army Enlistment Records, created, 6/1/2002 - 9/30/2002, documenting the period ca. 1938 - 1946. National Archives and Records Administration. Office of Records Services - Washington, D.C. Modern Records Programs. Electronic and Special Media Records Services Division. (1998 -) Available online at https://aad.archives.gov/aad/series-description.jsp?s=3360.

Mass Observation directive responses

Mass Observation directive responses are downloaded from Mass Observation Online, http://www.amdigital.co.uk/m-products/product/mass-observation-online.

War Department surveys

The American Soldier in World War II: Attitudes Toward Army Life, Nov, 1943 [dataset] USAMS1943-S092, Version 1. Directed by Dr. Samuel A. Stouffer for the Research Branch, Information and Education Division, War Department [producer]. Cornell University, Ithaca, NY: Roper Center for Public Opinion Research, RoperExpress [distributor], accessed Aug-23-2017. Accessd online at

https://ropercenter.cornell.edu/CFIDE/cf/action/catalog/abstract.cfm?type=&start=
&id=&archno=USAMS1943-S092

The American Soldier in World War II: Attitudes Toward the British, Apr, 1944 [dataset]. [USAMS1944-S122]. Directed by Dr. Samuel A. Stouffer for the Research Branch, Information and Education Division, War Department [producer]. Cornell University, Ithaca, NY: Roper Center for Public Opinion Research, RoperExpress [distributor], accessed Nov-2-2017. Accessed online at

https://ropercenter.cornell.edu/CFIDE/cf/action/catalog/abstract.cfm?type=&start=
&id=&archno=USAMS1944-S122

BNP membership

Details on BNP Membership at the 2001 Output Area level was kindly provided to us by Biggs and Knauss (2011).

Survey of current and former BNP members

Extracted from a survey carried out by YouGov on behalf of Goodwin and Evans (2012), who kindly provided us with their data. YouGov is a polling organisation which maintains a panel of around 350,000 respondents. These were screened for individuals who had previously reported supporting, voting for or membership of the UK Independence Party, the British National Party, or the English Defence League, who were then contacted by YouGov and asked to take part in the survey.

Results from Implicit Association Tests

Data comes from Project Implicit, an American non-profit organization which hosts several country-specific websites allowing users to test their implicit attitudes using various Implicit Association Tests (Xu, Nosek, and Greenwald, 2014). Following an IRB exemption, we were provided with a dataset containing all data collected by the U.K. IAT website between 2004 and 2013.

2011 U.K. census summary

Office of National Statistics (ONS). Available online at `https://www.nomisweb.co.uk/census/2011`.

Full count England and Wales census, 1911

"England and Wales Census, 1911." [Database] FamilySearch. `http://FamilySearch.org`: 14 June 2016. From "1911 England and Wales census." Database and images. findmypast. `http://www.findmypast.com` : n.d. Citing PRO RG 14. The National Archives of the UK, Kew, Surrey.

Population of cities, 1939

Southall, H.R., Aucott, P., Dorling, D., Ell, P. (2004). Great Britain Historical

Database: Census Data: Age and Sex Statistics, 1851-1971. [data collection]. UK Data Service. SN: 4551, http://doi.org/10.5255/UKDA-SN-4551-1

Parish and local-government statistics, 1921 and 1931

Great Britain Historical GIS Project (2017) 'Great Britain Historical GIS'. University of Portsmouth. http://www.visionofbritain.org.uk/

Parish and local-government boundaries, 1921 and 1931 and constituency Boundaries, 1935

Great Britain Historical GIS Project (2017) 'Great Britain Historical GIS'. University of Portsmouth. http://www.visionofbritain.org.uk/

Electoral results, 1935

Field, W. (2007), British Electoral Data, 1885-1949. [data collection]. UK Data Service. SN: 5673. http://doi.org/10.5255/UKDA-SN-5673-1

Labour Party questionnaire on local fascist activities

Held and accessed as LP/FAS/34 at the People's History Museum/University of Central Lancashire.

Ordnance Survey planning maps, 1946

Available online from the National Library of Scotland at http://maps.nls.uk/view/91542574

Railway Network Inspire dataset

Published by Network Rail and available at https://data.gov.uk/dataset/railway-network-inspire. Accessed April 2016.

C. Construction of Control Variables

Estimated non-white population in parish, 1911

We first search the full-count release of the 1911 England and Wales census for individuals with birth places in Asia or Africa. In order to filter out births to British subjects on colonial service, we exclude all individuals with a surname that is listed on either `http://www.surnamesdb.com` or `http://www.houseofnames.com`, websites that provide genealogical information on traditional British surnames. Finally, we exclude all individuals with a first name that features in a list of the top 100 boys' and girls' baby names in the 1911 census published online at `http://www.weddingvendors.com/baby-names/popular/1911/`.

Population density in parish, 1931

Population density of the parish containing the base/output area.

Rate of population growth in parish, 1921-1931

Change in parish between 1921 and 1931.

Urban district, 1931

Dummy variable indicating whether the location in a local government district is an urban (as opposed to rural) district.

Agricultural/professional share, 1931

Share of population employed in agricultural/professional industries, measured at the local government district level.

Unemployment rate, 1931

Unemployment rate, measured at the local government district level.

Distance to coast

Distance to the coast, calculated using R.

Distance to nearest city, 1939

Distance to nearest city with a population of at least 100,000 in 1939, calculated using R.

Distance to nearest large city, 1939

Distance to nearest city with a population of at least 300,000 in 1939, calculated using R.

Distance to nearest urban district, 1931

Distance from base or centroid of output area to the nearest district with urban (as oppposed to rural) status, calculated using R.

Distance to railway station, 1939

Distance to the nearest railway station active in 1939. The Railway Network Inspire dataset provides details on all railway stations in the U.K. in 2016. In order to approximate the railway network in 1939, we supplement this with data from the Wikipedia page 'List of closed railway stations', available at https://en.wikipedia.org/wiki/List_of_closed_railway_stations_in_Britain. From this list, we collect geographic coordinates for all railway stations closed after 1939 and append these to the Inspire dataset. Distance to the nearest station from each neighbourhood and base is calculated using R.

Distance to major road, 1946

Calculated based on the basis of a map of the UK road network in 1946 at 1:625,000 scale from the Ordnance Survey Planning Maps series. First, we geo-reference and digitise the map using ArcGIS. Then we calculate, for each district and base, the distance to the nearest trunk or class I (A) road using R.

Conservative vote share, 1935

Share of voters voting for the Conservative candidate in the 1935 election, measured at the constituency level. Missing if no Conservative candidate stood for election in the constituency.

British Union of Fascists branch

Dummy variable indicating if a location is inside a constituency which contained a branch of the British Union of Fascists, according to internal Labour Party research carried out in June 1934. Missing if the local Labour party branch did not reply to the central party's questionnaire.

D. Mass Observation Directive Responses

"War time events and experiences have changed my outlook very little on this matter. From time to time I have seen coloured soldiers drunk and disorderly in the West End of London. That taught me not to begin to idealise the coloured people but to see that they were human beings, with weaknesses, like ourselves."

"Now for the second part of the question – have wartime events and experiences had any effect on my attitude. The answer is yes. The presence of many more American negroes in this country may make me take less interest them through accepting them as the normal and familiar, they seem a great deal more acceptable to the British public than the American whites."

"When negro American troops first came over here there seemed to be growing up a nasty situation. To read the New Statesmen one would have thought that the presence of negro troops, & the white U.S. forces attitudes towards them, had the makings of a grade A situation; a potential flaw in allied unity. But my experience in East Anglia, Cornwall & the north tells me that friction of any kind has been very rare (or else I just haven't heard about it). What is certain is that U.S. coloured troops have behaved so excellently over here that everybody has good words for them; they like the cheerful grins that come from behind the steering wheels of a convoy of U.S trucks; they like the well-behaved little swagger of negro troops off-duty. During the summer of 1942 there was that army order about keeping aloof from coloured troops to avoid the risk of rows with white U.S. troops. That, I'm glad to say was very unfavourably received by the troops – both non-combatants & royal engineers of the bomb-disposal company in which I was at the time. My girl in the Waafs down in Cornwall looks back with pleasure on the many lifts she'd had into town from the aerodrome by coloured US truck drivers. They would always stop for you, she says, often without being thumbed; would come round to the back of the truck to hoist the girls into the truck & would drop you obligingly at whatever point you wanted to reach. And they were always cheerful & friendly & good-mannered; never 'fresh' like some American soldiers (she said) were."

"I usually get on well with American negroes, who have nicer manners than white Americans."

"I don't think wartime has had any effect on my attitude, expect to make me feel more disgusted than ever with America for her attitude to the negro population. It seems to me quite incomprehensible for a country calling itself democratic and progressive."

"What I hear of USA soldiers & darkies mixing with white women made me furious. After all [negroes only in USA at all on [??] of this of our English fathers. Their place is in Africa."

"I was really shocked (literally) the other day to read of some white girls frequenting a negro military camp. I don't know how they could. Of course I think negroes should have full entry to all hotels etc'."

"Contact with U.S troops in this country has confirmed the fact their attitudes towards black people is revolting and quite undemocratic. It is every bit as justifiable as Jew baiting."

"The N. American negroes are good natured fellows, & several have distinguished themselves well above the average white, but I am horrified at the idea of a British girl marrying a black man. The wars have not changed my opinion on this artefact."

"War time experience of U.S. army negroes has been disheartening. Taking a cross-section, I can't deny I have found them culturally and mentally lower than, say, our Pioneer Corps chaps."

"I do not like the coloured Americans over here & do not think they should have been sent to this country. They are a cause of a great deal of trouble at dance-halls etc. The way girls run after them is a disgrace & in my opinion this little hussies should be spanked."

"White & dark American soldiers were both stationed near a town in which my unit was for some time. The darkies were more charming & less self-assertive. The colour-bar has been made against the wrong colour."

"Wartime has only strengthened my feeling. I hate to think of coloured Americans over here not being treated properly."

"One seldom comes in contact with the Negro African, and although one now sees many American coloured troops, one doesn't come to know them. I sup-

pose I am inclined to think of them as a rather inferior class of American, and I suppose that in the mass they are, despite outstanding figures like Paul Robeson and others'... I do not think that the war has had any effect whatsoever on my outlook on this question, and I have never spoken to a coloured person since its outbreak."

"More recently, knowledge of several American Negro troops has confirmed me in believing that they are in everyway as intelligent and cultured as their white colleagues."

"I do not consider the colour of a persons skin as a matter of any importance at all, and I doubt whether there [are] any innately inferior races. However I was concious of a slight shrinking when a negro soldier came and sat by me in a restaurant before. I have not noticed this before."

"But I have had little actual contact with coloured people. Perhaps I should act like those whom I now criticise. Certainly, it is repugnant to me when I see Leicester factory girls – ignorant & of low maturity through most of them may be – associating with coloured troops and it gives me rather a shock, or feeling of disgust, when I see a white woman with a coloured child of her own."

"Wartimes experiences or contact with coloured people have been nil, except that I have seen American coloured troops in the district but never spoken to them."

"I have no explicit feeling towards coloured races except perhaps a little against American Negroes. [] The slight feeling of revulsion with Negroes is due to American Negro troops."

"Perhaps my angle on the negroes is partly as it is because of my experience of black troops in this area, though that has merely confirmed previous impressions: it has been found necessary to move these troops constantly, and often at short notice, to avoid outbreaks of violence, while even so the number of rapes and assaults of all kinds has been enormous. []. Lynching becomes explicable."

"My little contact with the American Negroes made me more sympathetic to them. They liked being over here, because they were treated better here by us than by the white Americans in their own country."

"We have very few coloured people in this district. There are one or two American negroes stationed here that I have seen in the streets & a few odd children – negro fathers and white mothers."

"I haven't actually met any coloured people. [] I am furious with the Americans for having such a bad attitude to the negroes."

"The only alteration in my attitude caused by this war is the realisation that the American negro is surprisingly childish. I had been told this before but by coming into contact with the American Negro troops, I have no illusions left as to the negro being equal in mental powers to the white man."

"I have never had anything to do with any negroes. The American negroes who drive the lorries over here look very good tempered."

"I have never come into contact with any of the coloured American troops over here, but they seem well behaved and no worse than the average American soldier."

"Emotionally, the negro American soldier frightens me, I dislike them, I suspect them to whip out a knife and slit my through & definitely do not like to see them with white girls. [] The fact remains I have a considerable emotional prejudice against black men with whole women. The dislike of negroes is due, I think, to a hangover from childhood & would disappear with greater familiarity."

"There are American Negro troops in Belle Vue Manchester. They never seem to be around the city."

"The only wartime event which has had any effect on my attitudes is the tales I hear of US white & black troops, & the reception they have in England. It's a pity to antagonize the US whites by being more courteous to the blacks, but I suppose it's natural to English people who believe the blacks are persecuted in the States."

"African negroes I know nothing about & American only from books and recently from seeing their cheerful well conducted troops in the streets of Bristol. Their best can obviously be very good."
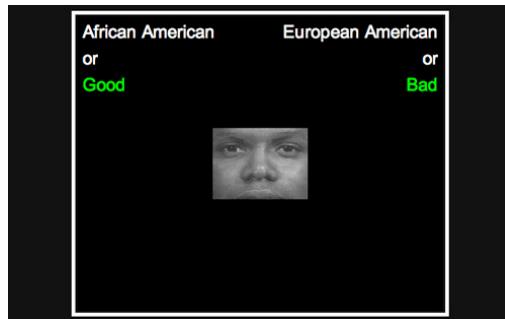
"War time events have not had any effect on me, as I have not had anything to do with the black American troops I have had no personal connection with

coloured people except two or three Indian students and these were friendly. It was a surprise to find that the first American troops I saw were coloured & not a welcome surprise."

"Yes certainly wartime events have considerably changed my attitudes towards coloured people. There are many coloured soldiers around here. Their 'cause is our cause'."

E. Description of Computerised Implicit Association Test

The race IAT consists of five steps. In each step subjects have to assign a 'stimulus' (a word or a picture of a face) to one of two groups by pressing keys on their keyboard. In step one, subjects sort pictures of black and white faces into the categories 'black' and 'white'. In step two, subject sort words into two categories, 'positive' or 'negative'. The words are all easy to categorise (e.g. "terrible" and "hurt" vs. "joy" and "peace"). In step three, the tasks are combined – for example asking participants to assign black faces and positive words to one category, white faces and negative words to the other. In step four participants again assign faces to categories. Step five is akin to step three, in that participants have to sort both faces and words, but this time the groupings are reversed (the test randomizes whether black faces are shown in step three or step five). So the participant might now have to assign black faces and *negative* words to one category, white faces and positive words to the other. If individuals require more cognitive effort to pair a) black faces and positive words and b) white faces and negative words than a) black faces and negative words and b) white faces and positive words, their response times will vary between blocks three and five. This is measured by the "D" score, the average difference in response times between step three and step five, normalised by the standard deviation of response times in all steps. Higher scores indicate a stronger automatic association of positive words with white faces, with a score over zero indicating implicit racial bias toward whites (Greenwald, McGhee, and Schwartz, 1998).

Screenshot from Project Implicit IAT.

F. Extra Figures and Tables
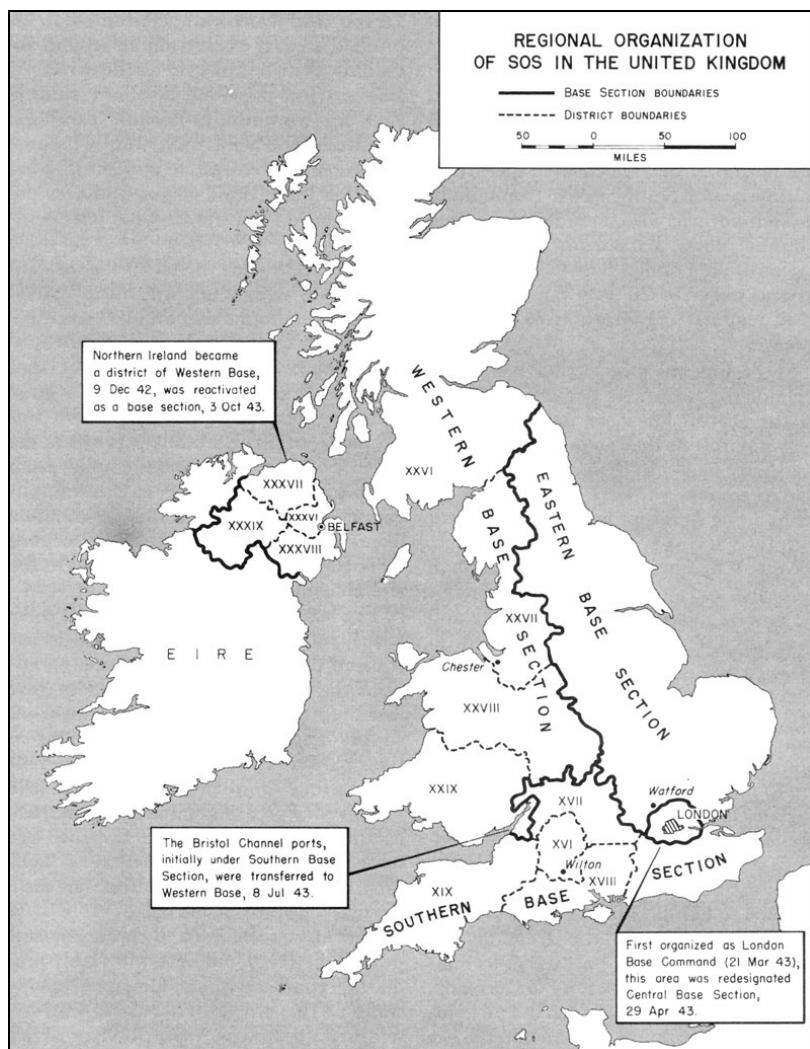
Figure A1. Base sections in the U.K., figure taken from Ruppenthal (1978, p. 85).
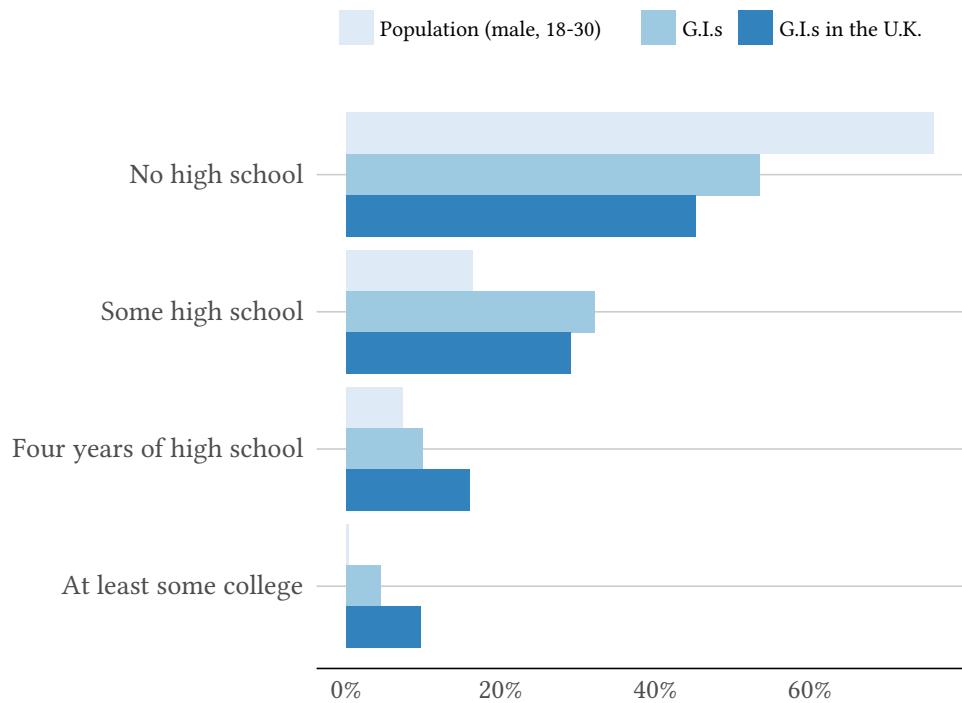
Figure A2. This figure compares the education levels of black males aged 18-30 in the U.S. population as per the 1940 census, G.I.s coded as black in the U.S. Army Enlistment Records to the black G.I.s sampled in the War Department's "Attitudes Towards Army Life" survey (S-92), carried out in the U.K. in November 1943.
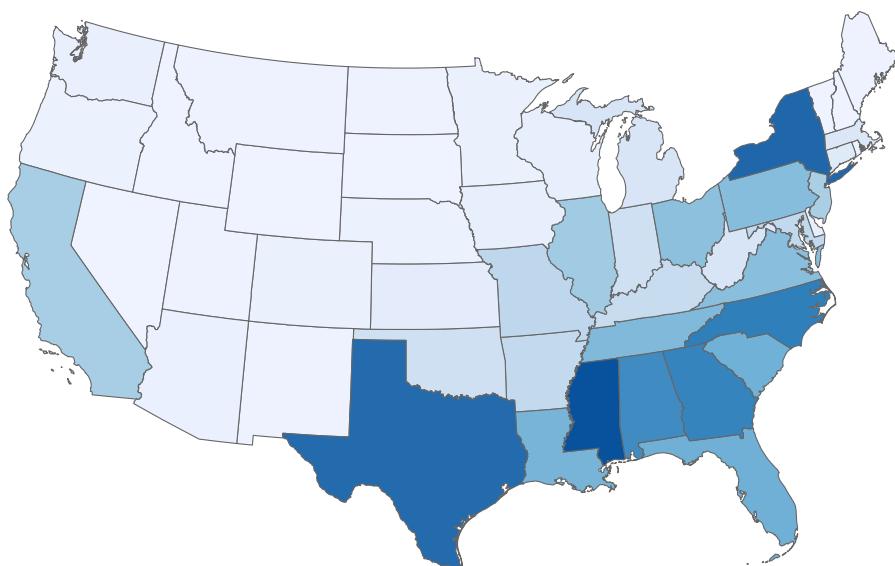
Figure A3. Figure depicts the state of births of enlisted African American G.I.s, according to U.S. Army Enlistment Records. Darker colours indicate more black G.I.s serving from a given state.
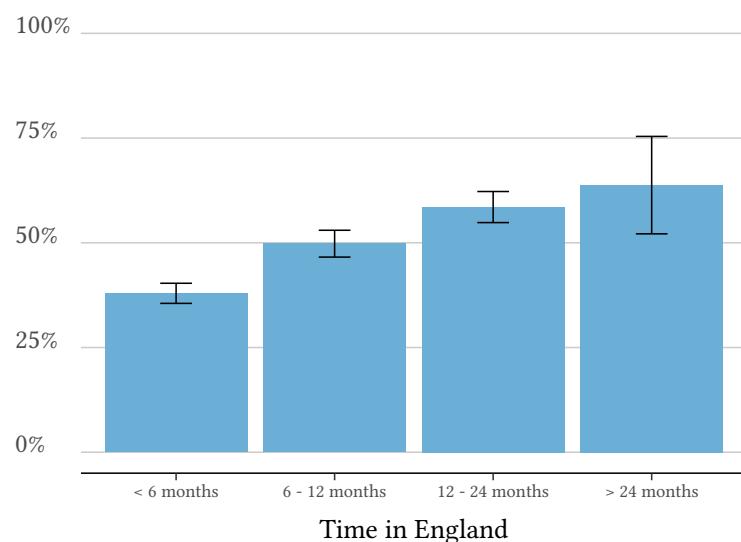
Figure A4. Proportion of soldiers knowing at least some English families or citizens, according to the amount of time spent in Britain. The sample is 3,261 individuals posted in Britain in April 1944. Source: "Attitudes Towards The British" (S-122).

SECRET

LINE NO	A ORGANIZATION NAME	B APO	C STATION	D MAP COORD	E ECH
S6	CDHSE OH DET 3	152	LANGPORT	VT8548	1
J2	BASE CEN O NO 3	640	SUTTON COLDFLD	VK5717	
S3	3 GEN DISP	413	LONDON	WQ7399	
S6	3 STA HOSP 250	298	TIDWORTH	VU6868	
L5	3 STA COMPL SQ	557	MOLESWORTH	WL5395	
K2	3 A CARGO RS SQ	133	WELFORD	VU8594	
L7	3 AIR DIVISION	558	ELVEDEN HALL	WM2798	
V5	3 C C R C GP	639	CHIPPINGONGAR	WM0022	
V5	3 RPL TNG SQ	639	CHIPPINGONGAR	WM0022	
L4	3 AAF CMB CAM U	634	HIGH WYCOMBE	WL2813	1
M4	3TRP CARR PSQ P	133	CHALGROVE	WL0817	1
L2	3 MOBL R R SQ H	636	NEATON	WG3819	1
V1	BAD 3 STA C SQ	635	LANGFORD LDG	VJ0975	1
V1	3 MOB TNG UNIT	557	POLEBROOK	WF5506	1
L5	3 GUN T TAR FLT	557	EAST WRETHAM	WG3709	1
S6	US MAP DEPOT 4	226	SWINDON	VP5904	1
S6	4 GP R STA TC	413	LONDON	WQ7298	1
S9	4 REPL BN	874	LICHFIELD	VK5830	1
L5	4 STA COMPL SQ	557	THURLEIGH	WL5177	1
L7	4 BOMB WG H PV	559	BURY ST EDMND	WM3813	2
L7	4 COMB BOMB WG	559	BURY ST EDMND	WM3183	2
L7	4 BOMB SQ H	559	MENDELSHAM	WM5584	2
M4	4TRP CARR PSQ P	133	CHALGROVE	WL0817	2
L6	4 FTR GP SE	558	DEBDEN	WM0152	2
V1	BAD 4 M ADM DIV	635	BAVERSTOCK	VJ4653	2
V1	BAD 4 SUP DIV	635	BAVERSTOCK	VJ4653	2
L2	4 MOBL R R SQ H	636	NEATON	WG3819	2
V1	BAD 4 STA C SQ	635	BAVERSTOCK	VJ4653	2
V1	4 MOB TNG UNIT	557	DUNK-SWELL	VT582	2
V5	4 GUN T TAR FLT	639	CHIPPINGONGAR	WM0022	3
S6	5 GP R STA TC	413	LONDON	WQ7399	3
S6	5 POST REG SEC	506	GLASGOW	QT0987	3
S6	5 HOSP TRAIN	121	MALVERN WELLS	VP2365	3
L6	5 STA COMPL SQ	558	HARDWICK	WG6509	3
V1	5 AIRDROME SQ	635	GREEN CASTLE	VJ2711	3
W1	5 AACS WING	413	LONDON	WQ7399	3
L2	5 AIR DEPOT GP	636	ABBOTS RIPTON	WL6896	3
L2	5 DEP REP SQ	636	ABBOTS RIPTON	WL6896	3
L2	5 DEP SUP SQ	636	ABBOTS RIPTON	WL6896	3
L2	5 MOBL R R SQ H	636	NEATON	WG3819	4
L6	5 SERVICE SQ	558	STEEPLEMORDEN	WL7461	4
V1	5 MOB TNG UNIT	557	KIMBOLTON	WL5688	4
J2	BASE CEN O NO 6	648	PRESTWICK	QS8649	4
S6	6 MED DEP CO	152	BURTON-TRENT	VK7044	4
S6	6 FIELD HOSP	350	CHILBOLTON	VU8460	4
S6	6 HOSP TRAIN	226	SWINDON	VP5904	4
L2	6 MED SUP PL A	636	THRAPSTON	WL4598	4
L7	6 STA COMPL SQ	559	BURY ST EDMND	WM3183	4
L2	6 MOBL R R SQ H	636	TROSTON	WM3592	4
W1	6 MOB TNG UNIT	557	NUTHAMPSTEAD	WL8353	5
S5	7 QM BN M	152	SUDBURY DERBY	VK6252	5
S6	7 PORT TC	506	GLASGOW	QT0987	5
S6	7 TRFC REG GP	413	LONDON	WQ7298	5
S6	7 MP C I DET	413	NEWMARKET	WM1083	5
S6	7 GEN HOSP	637	NORTH MIMMS	WL6724	5
L5	7 STA COMPL SQ	557	RIDGEWELL	WM1959	5
L7	7 BOMB SQ H	559	MENDELSHAM	WM5584	5
L4	7 PHOTO RCN GP	634	MOUNT FARM	VP9814	5
L2	7 MOBL R R SQ H	636	TROSTON	WM3592	5
L0	RAF HIST OFS	634	HIGH WYCOMBE	WL2813	6
L0	8 AF FIN DET AL	634	HIGH WYCOMBE	WL2813	6
S6	8 MP C I DET	413	LONDON	WQ7399	6
S6	8 HOSP TRAIN	511	TAUNTON	VT6646	6

PAGE NO. 2

ETOUSA STATION LIST

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Figure A5. Example station list. Photo taken in the National Archives in Washington D.C.
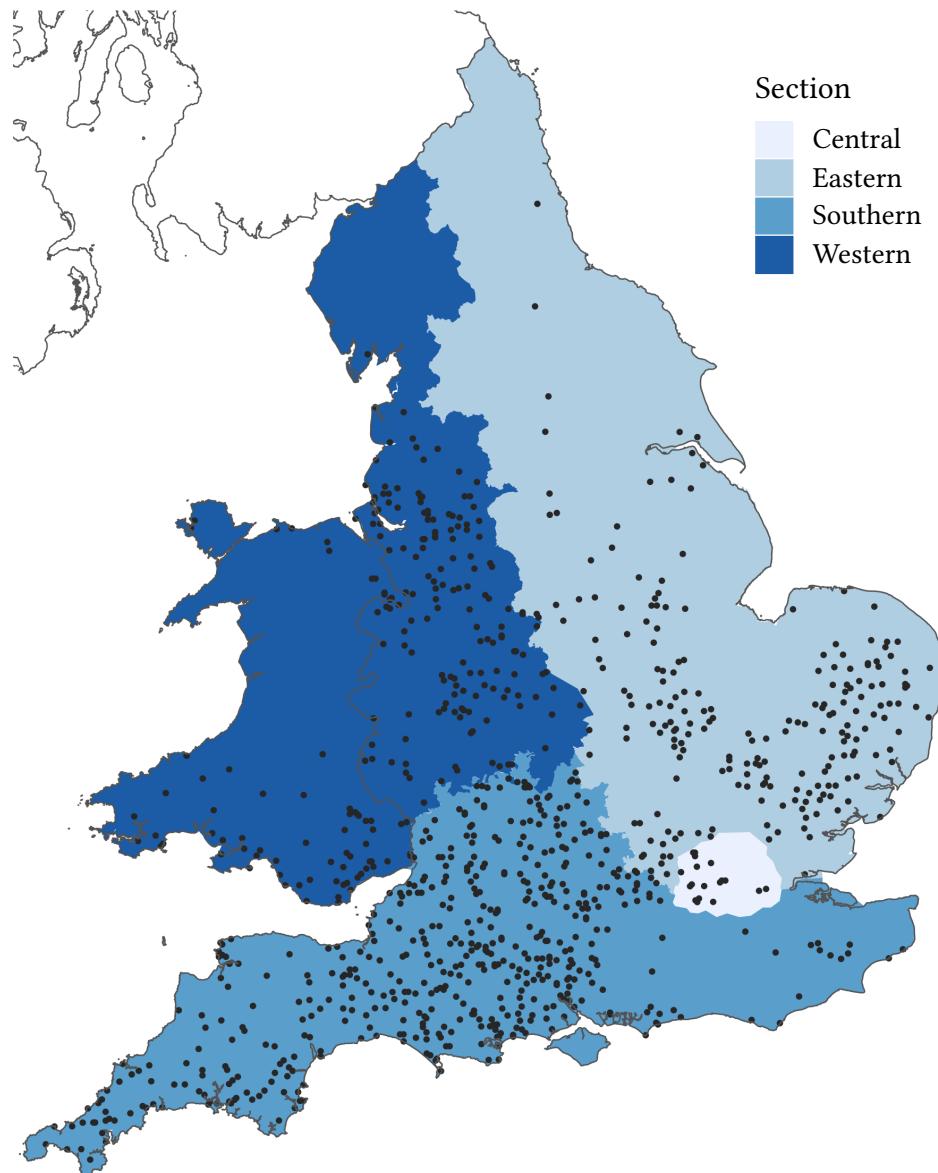
Figure A6. Troop locations across England and Wales. This map shows locations of all locations where, according to our data, U.S. troops were stationed at any point in time during World War II.
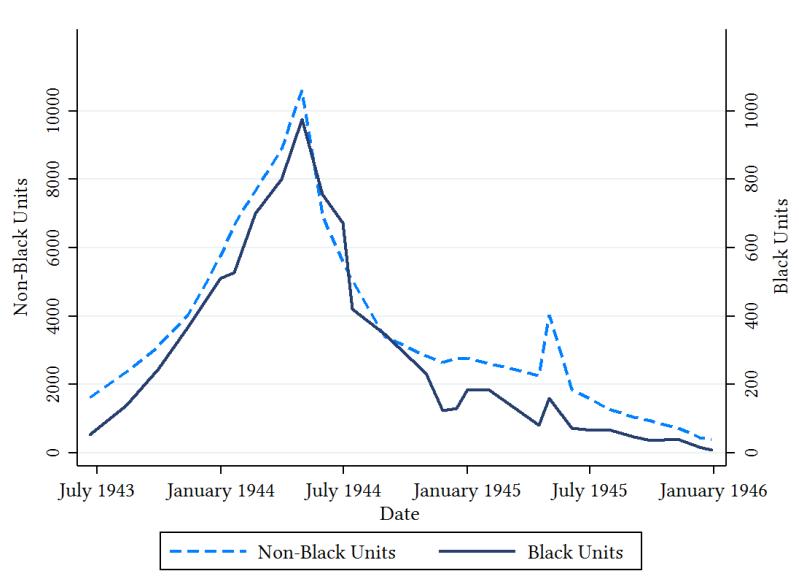
Figure A7. Absolute number of units posted over time, reported separately for black and non-black units.
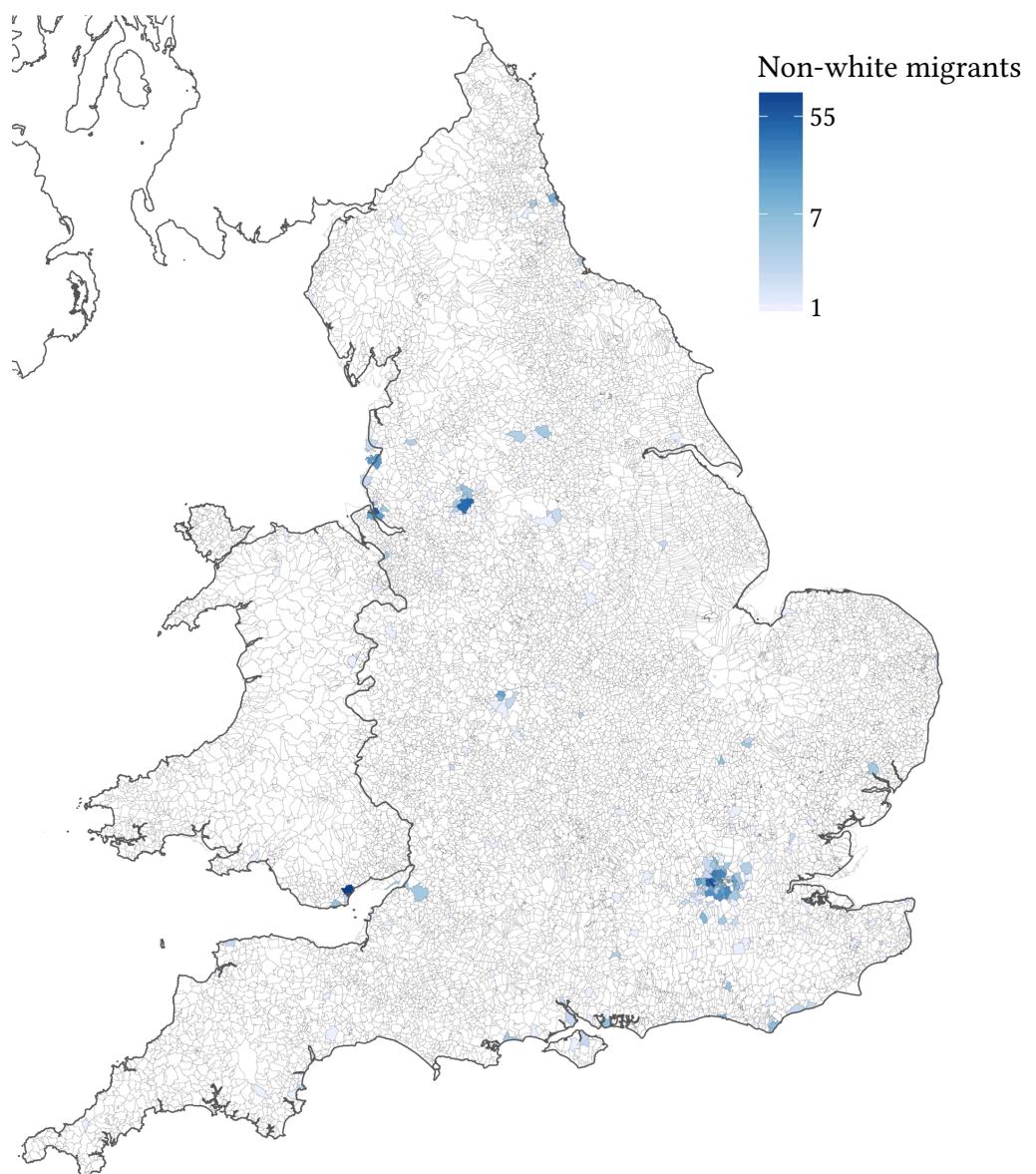
Figure A8. Figure shows the estimated distribution of non-white migrants across parishes in England and Wales, 1911.
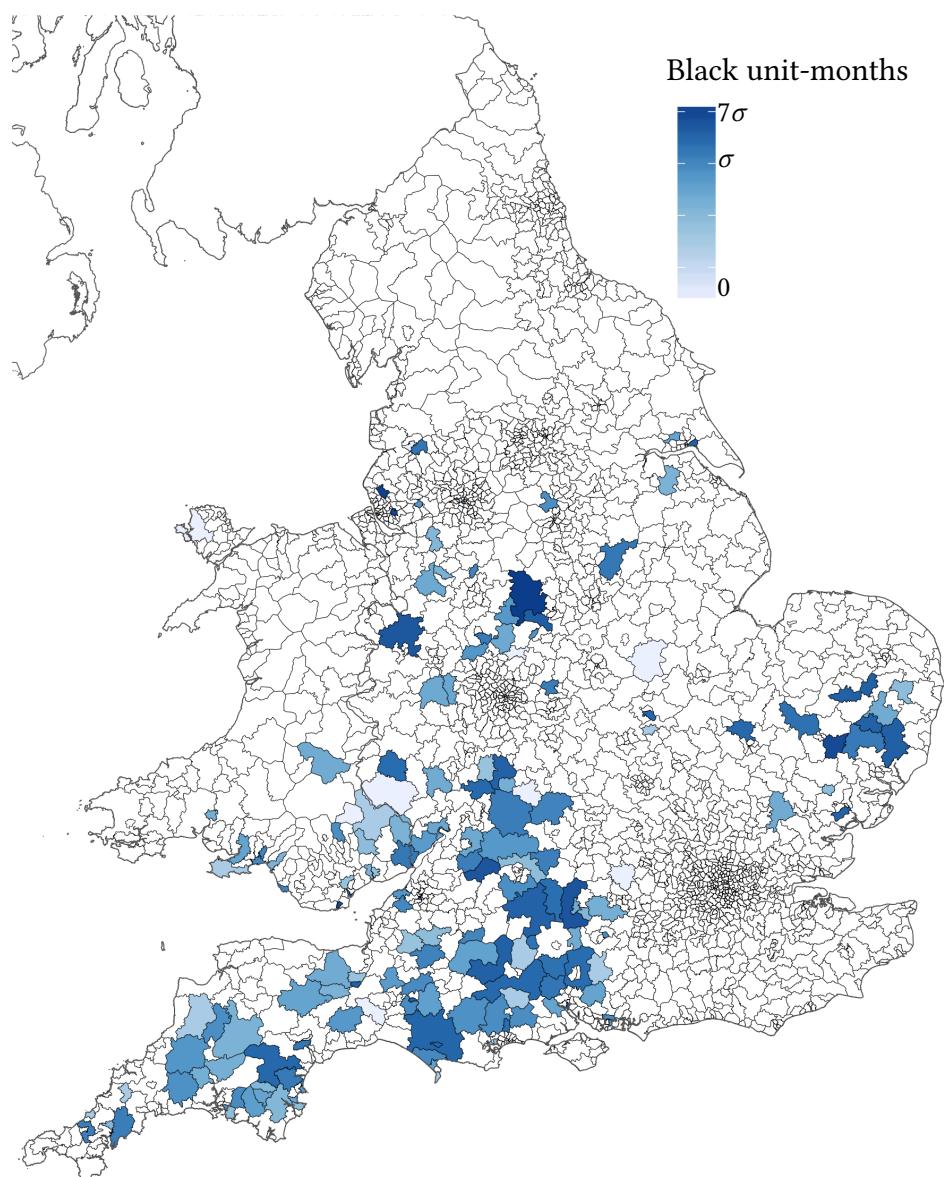
Figure A9. Distribution of *BlackUnitMonths$_j$* (standard deviation σ) across postcode districts.
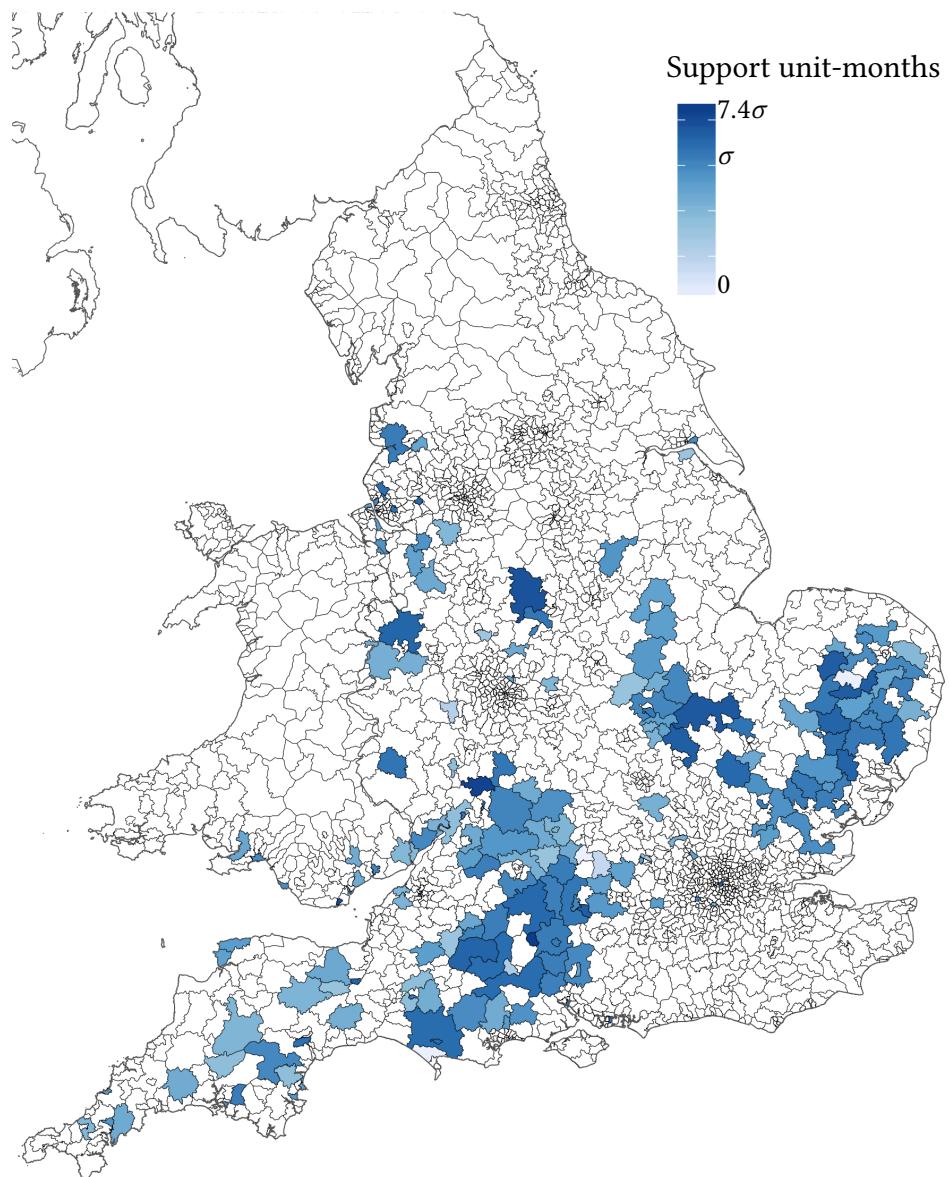
Figure A10. Distribution of *SupportUnitMonths*$_j$ (standard deviation σ) across postcode districts.
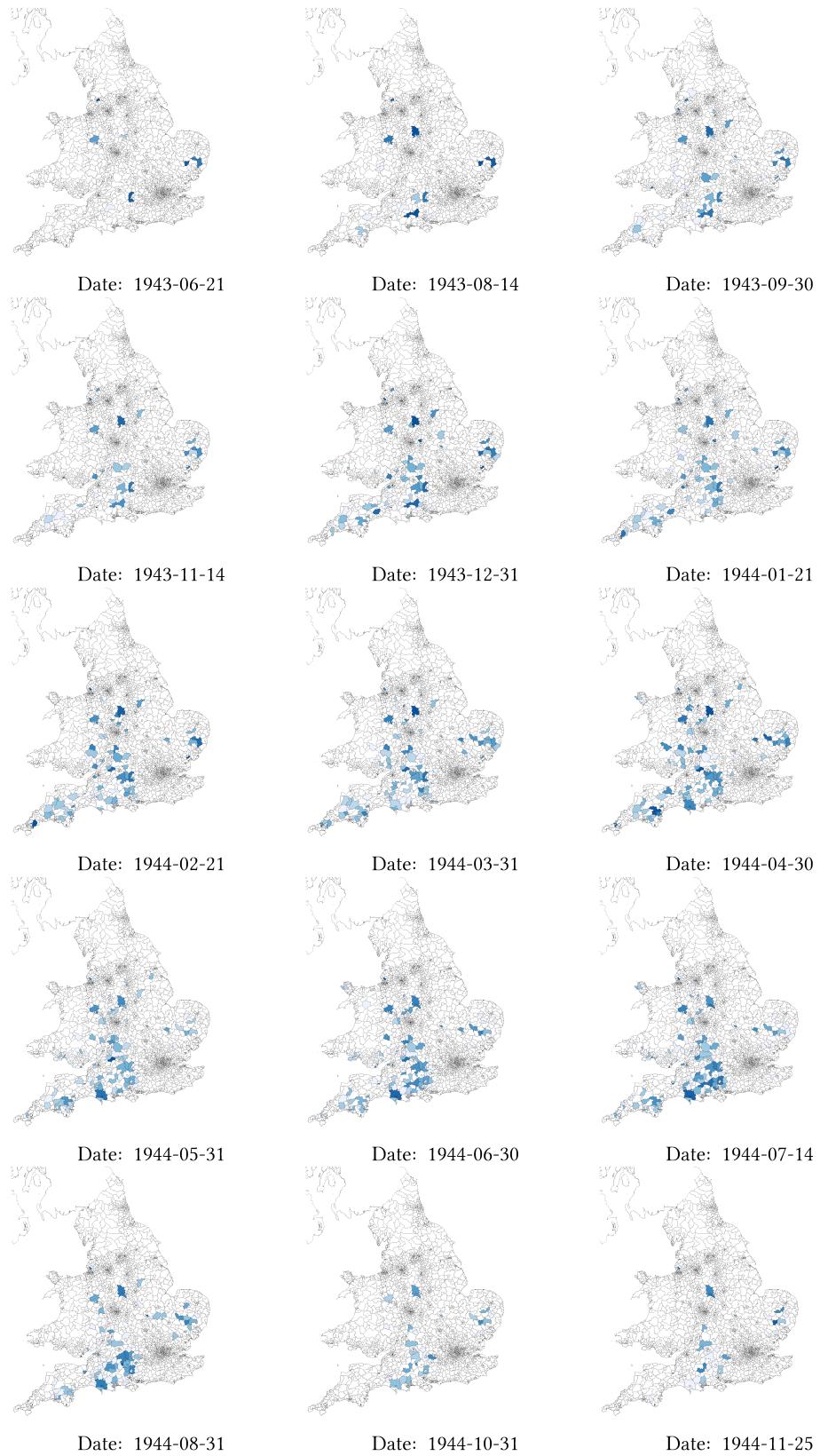
Figure A11. Distribution of *BlackUnitMonths_j* (standard deviation σ) across postcode districts for points in time between June 1943 and November 1944.

Date: 1944-12-16   Date: 1945-01-01   Date: 1945-02-02

Date: 1945-04-17   Date: 1945-05-02   Date: 1945-06-04

Date: 1945-07-05   Date: 1945-08-02   Date: 1945-09-04

Date: 1945-09-30   Date: 1945-11-08   Date: 1945-12-11

Date: 1945-12-29
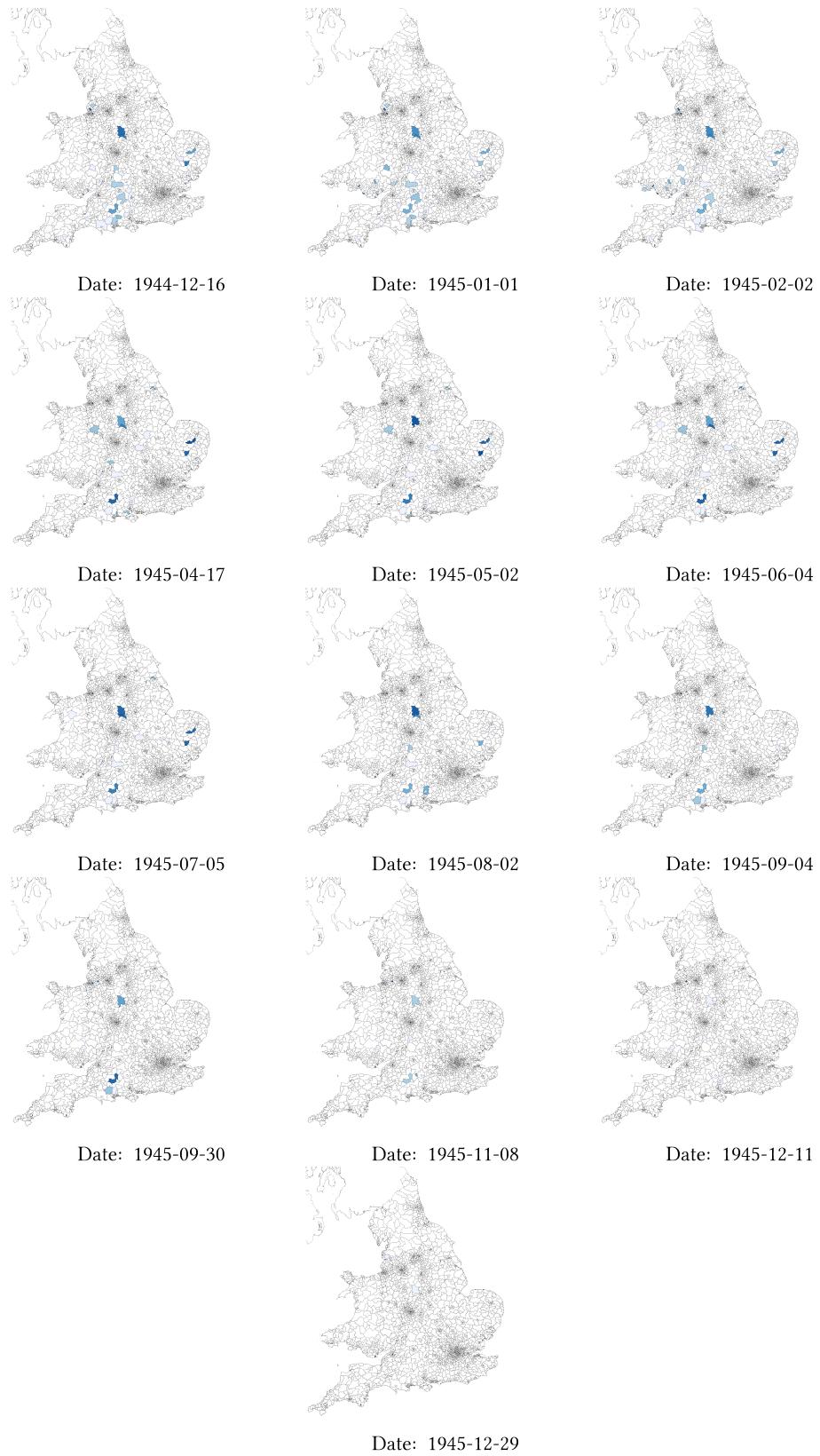
Figure A12. Distribution of *BlackUnitMonths$_j$* (standard deviation σ) across postcode districts for points in time between December 1944 and December 1945.
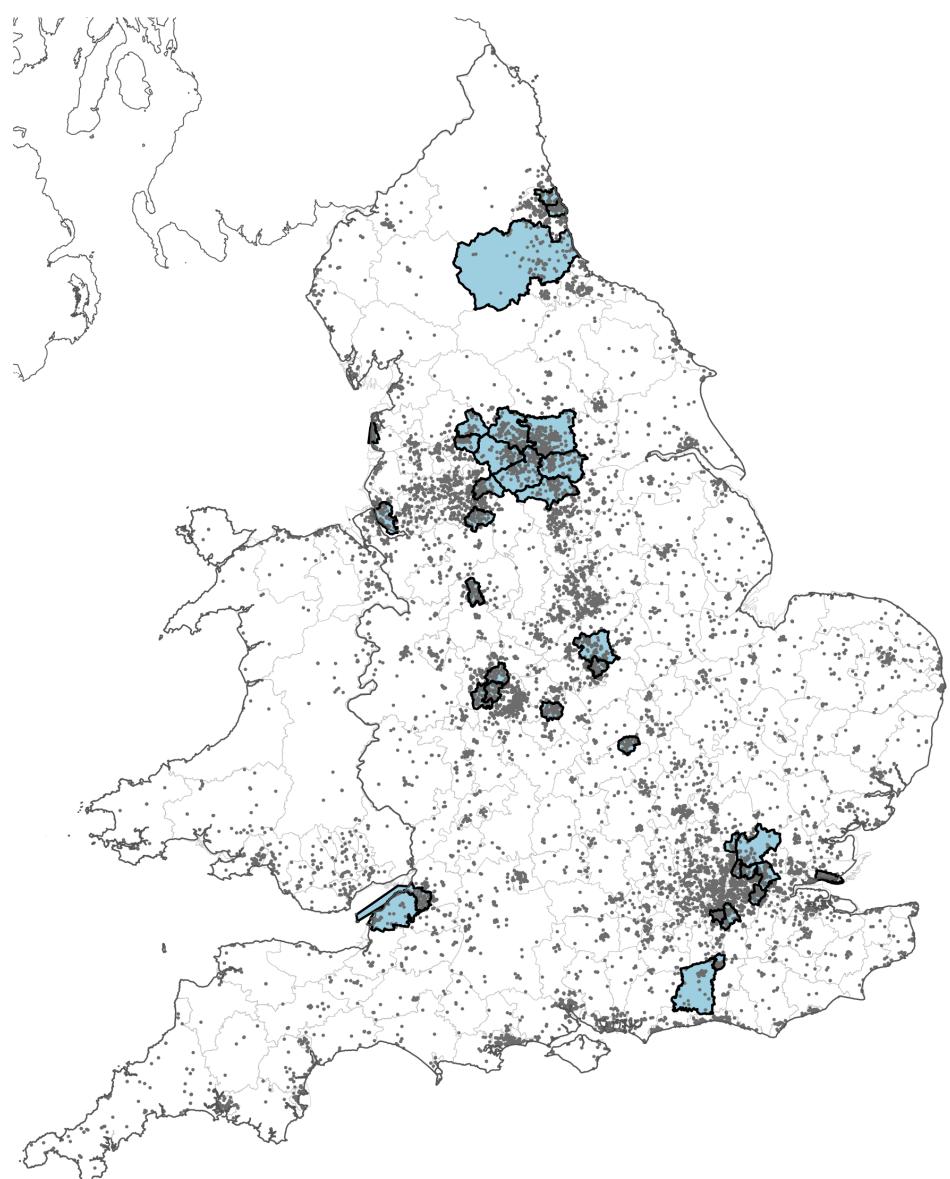
Figure A13. Locations of BNP members and BNP branches.
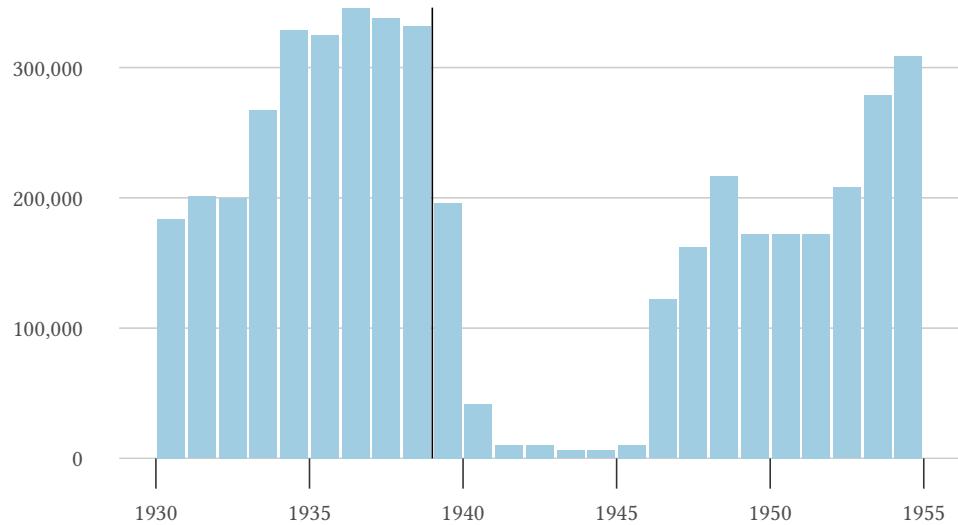
Figure A14. New houses built by year in the U.K. Source: Holmans (2005)
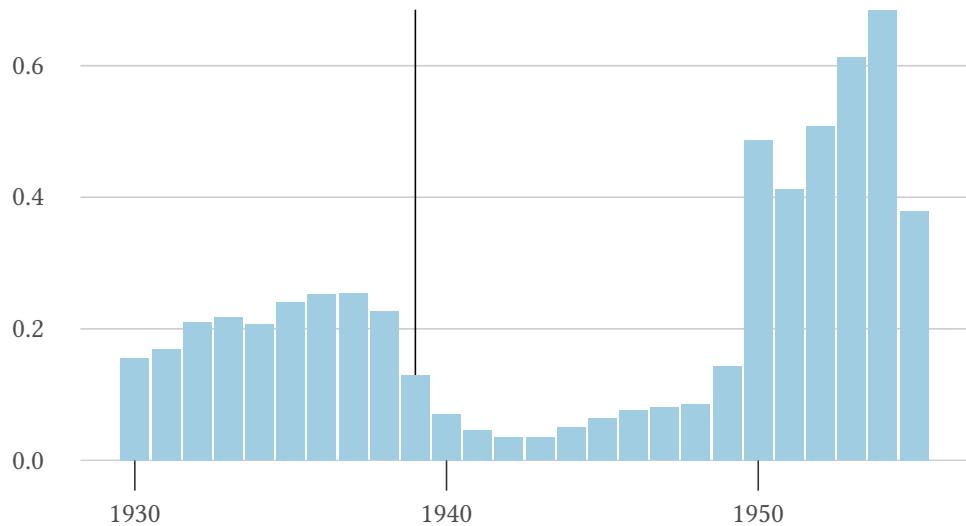
Figure A15. Newspaper housing adverts. We search the British Newspaper Archive (`http://www.britishnewspaperarchive.co.uk/`) for adverts containing the keywords 'semi-detached house', 'detached house' or 'house to let' in each year, and normalise this by the number of adverts containing the keywords 'for sale' or 'to let'.
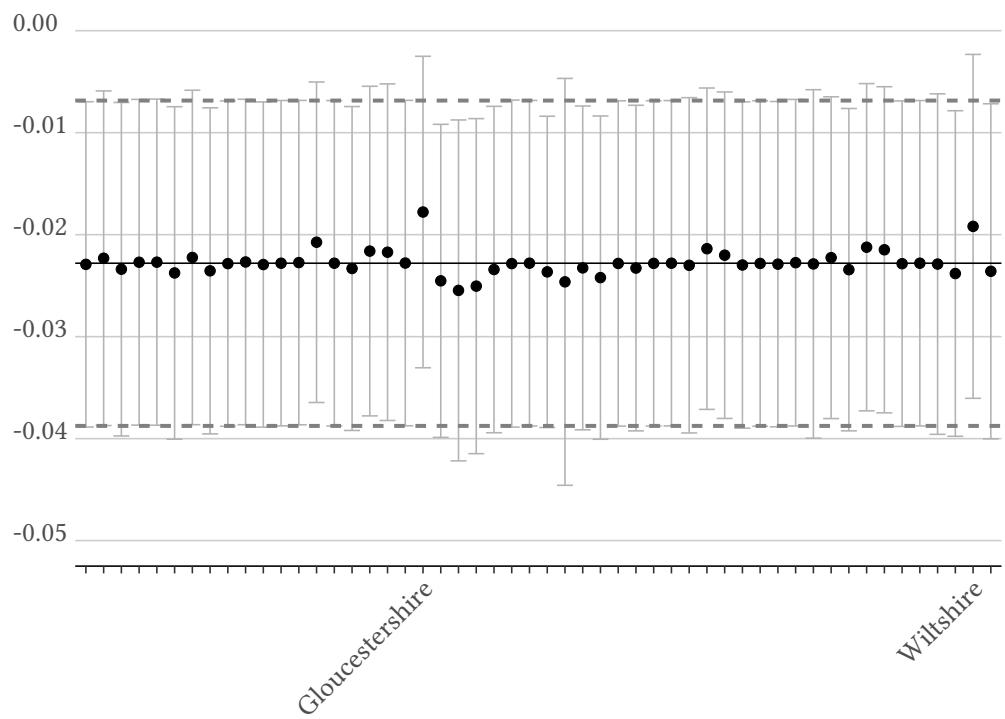
Figure A16. Leave-one-out plot. This figure plots the coefficients (black circles) and 95% confidence intervals from regressions of *BlackUnitMonths* on BNP members per 100,000 whites, at the neighbourhood level. Controls are as per Column 4 of Table 2. In each regression, all neighbourhoods inside a given county (shown on the horizontal axis) are excluded from the sample. The estimated coefficient from the baseline specification is shown with a solid black line.
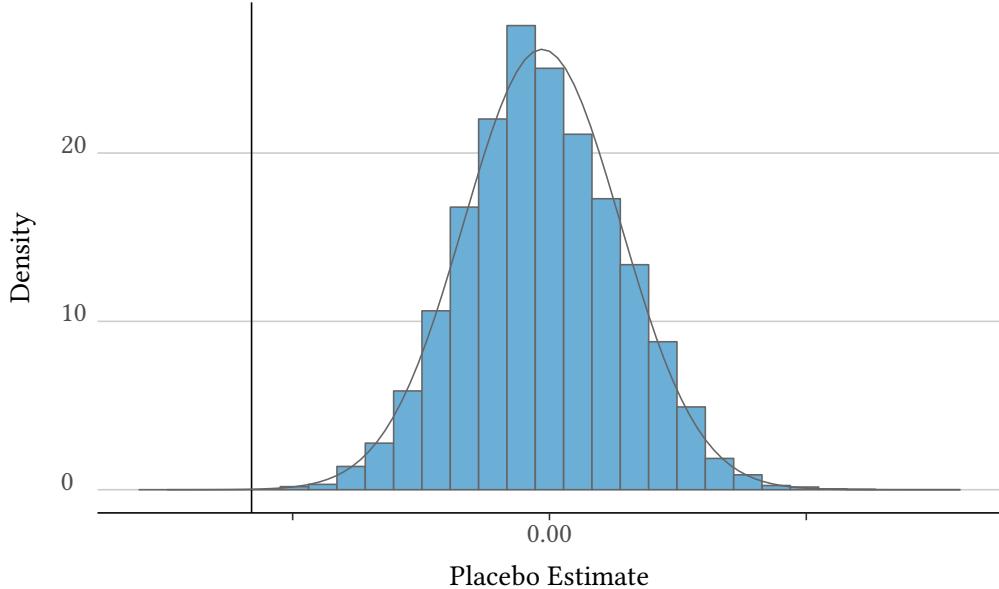
Figure A17. Randomization inference. This figure presents the distribution of coefficients resulting from estimating equation (1) under counter-factual treatments. For each base b, we calculate ($BlackUnitMonths_b/SupportUnitMonths_b$), i.e the share of support unitmonths due to black units. We then randomly shuffle this value between bases, and create a counterfactual $BlackUnitMonths_b$ for each base by multiplying the shuffled value of ($BlackUnitMonths_b/SupportUnitMonths_b$) by the true value of $SupportUnitMonths_b$. We then estimate Equation 1, using the counterfactual values of $BlackUnitMonths_b$ and the true values of $SupportUnitMonths_b$ to generate the postcode district-level treatment variables, and estimate Equation 1, with controls as per Column 4 of Table 2. We repeat the procedure 8,000 times, generating a distribution of counterfactual estimates on $BlackUnitMonths_i$, which is plotted in the figure. The baseline estimate is depicted as a black vertical line, and is larger in magnitude than all but 0.1% of the counterfactual estimates.

Table A1: Changes in opinions caused by American presence in the U.K.

| | Dependent variable: | | | | | |
| | Higher opinion of English | | | English have higher opinion of Americans | | |
	(1)	(2)	(3)	(4)	(5)	(6)
Black	0.28***	0.28***	0.29***	0.21***	0.19***	0.17***
	(0.02)	(0.03)	(0.04)	(0.02)	(0.03)	(0.04)
Unit controls		✓	✓		✓	✓
Individual controls			✓			✓
Observations	2,560	2,560	2,525	2,503	2,503	2,471

Notes: Columns report results from OLS regressions. The sample is soldiers surveyed in the War Department "Attitudes Toward Army Army Life" survey (S-92), carried out in the U.K. in November 1943. The dependent variable in Columns 1 to 3 is a binary variable indicating if a survey respondent's opinion of the English has become more favourable since being stationed in the United Kingdom. The dependent variable in Columns 4 to 6 is a binary variable indicating if a survey respondent thinks that the English people's opinion of Americans has become higher as a result of having American soldiers in England. Individual controls are rank, education level, age and state of birth. Unit controls are indicator variables for the branch of the army to which the unit belongs and the station at which the unit is posted. Robust standard errors are reported in brackets. One, two and three stars indicate significance at the 10%, 5% and 1% levels respectively.

Table A2: U.S. Army Station Lists used to construct dataset

Date	Title	Source
21/06/43	MRU United Kingdom Station List	Captain Philip Grinton
14/08/43	MRU United Kingdom Station List	Captain Philip Grinton
30/09/43	MRU United Kingdom Station List	Captain Philip Grinton
14/11/43	MRU United Kingdom Station List	Captain Philip Grinton
31/12/43	MRU United Kingdom Station List	Captain Philip Grinton
21/01/44	MRU United Kingdom Station List	Own digitalisation
21/02/44	MRU United Kingdom Station List	Captain Philip Grinton
31/03/44	MRU United Kingdom Station List	Captain Philip Grinton
30/04/44	MRU United Kingdom Station List	Captain Philip Grinton
31/05/44	MRU United Kingdom Station List	Captain Philip Grinton
30/06/44	MRU United Kingdom Station List	Captain Philip Grinton
14/07/44	MRU United Kingdom Station List	Own digitalisation
31/08/44	MRU United Kingdom Station List	Captain Philip Grinton
31/10/44	MRU United Kingdom Station List	Captain Philip Grinton
25/11/44	MRU United Kingdom and Continental Station List	Captain Philip Grinton
16/12/44	MRU United Kingdom and Continental Station List	Captain Philip Grinton
01/01/45	MRU United Kingdom and Continental Station List	Own digitalisation
02/02/45	MRU United Kingdom and Continental Station List	Own digitalisation
17/04/45	MRU United Kingdom and Continental Station List	Own digitalisation
02/05/45	MRU United Kingdom and Continental Station List	Own digitalisation
04/06/45	MRU United Kingdom and Continental Station List	Own digitalisation
05/07/45	MRU United Kingdom and Continental Station List	Own digitalisation
02/08/45	MRU United Kingdom and Continental Station List	Own digitalisation
04/09/45	MRU United Kingdom and Continental Station List	Own digitalisation
30/09/45	MRU United Kingdom and Continental Station List	Own digitalisation
08/11/45	MRU United Kingdom and Continental Station List	Own digitalisation
11/12/45	MRU United Kingdom and Continental Station List	Own digitalisation
29/12/45	MRU United Kingdom and Continental Station List	Captain Philip Grinton

Table A3: Determinants of frequency of location changes

| | Dependent Variable: | | |
| | Number of locations per unit | | |
	(1) OLS	(2) OLS	(3) Poisson
Black unit	0.124***	0.0270	0.0169
	(0.0258)	(0.0293)	(0.0182)
Support Units		✓	✓
Observations	23,569	23,569	23,569

Notes: Coefficients from OLS regressions in columns (1) and (2) and from a Poisson regression in column (3). The unit of observation is a military unit. Outcome is the number of locations at which this unit was stationed. Independent variables are an indicator for whether the unit is black and an indicator for whether the unit is a support unit. Robust standard errors are reported in brackets. One, two and three stars indicate significance at the 10%, 5% and 1% levels respectively.

Table A4: Support units

Unit Role	Black units	Other units	Black share
Quartermaster Truck	317	380	45%
General Service	297	399	43%
Quartermaster Service	239	127	65%
Port Company	176	158	53%
Engineer Battalion Company	149	752	17%
Quartermaster Headquarters	128	150	46%
Quartermaster Other	119	799	13%
Detachment of Patients	98	212	32%
Quartermaster Medical	69	57	55%
General Hospital Complementary	55	114	32%
Ordnance Ammunition Company	48	92	34%
Sterilization	46	46	50%
Signal Construction	45	79	36%
Quartermaster Bakery	41	74	36%
Laundry	38	63	38%
Gas Supply	37	35	51%
Ordnance Base Depot	24	283	8%
Troop Transport	24	0	100%
Fire Fighting	21	169	11%
Quartermaster Railhead	20	38	34%
Engineer Dump Truck Company	17	7	71%
Port Headquarters	17	63	21%
Quartermaster Salvage	14	47	23%
Amphibious Truck Company	12	8	60%
Army Postal	11	328	3%
Ambulance Company	8	49	14%
Chemical Smoke	8	5	62%
Other	216	17,694	0.1%
Total	2,294	22,114	10.3%

Table A5: Effect on BNP membership, treatment at the local goverment district level

	Dependent variable:			
	BNP members per 100,000 whites (std.)			
	(1)	(2)	(3)	(4)
Black unit-months (std.)	-0.016*	-0.024***	-0.019**	-0.016**
	(0.009)	(0.009)	(0.007)	(0.008)
Support unit-months	✓	✓	✓	✓
Grid-cell fixed effects		✓	✓	✓
Economic controls			✓	✓
Geographic controls				✓
Clusters	255	255	254	254
Observations	79,712	79,712	79,496	79,496

Notes: Coefficients from OLS regressions where both the dependent variable and main independent variables have been standardised to have mean zero and standard deviation one. The unit of observation is the local government district. Outcome is BNP members per 100,000 white inhabitants. Independent variables are our measure for contact with black troops 'Black unit-months'. Standard errors are clustered at the level of the modern local authority and reported in brackets. One, two and three stars indicate significance at the 10%, 5% and 1% levels respectively.

Table A6: Attitudes towards migration and membership of the BNP, constituency level

| | Dependent variable: | | | | |
| | BNP members per 100,000 whites | | | | |
	(1)	(2)	(3)	(4)	(5)
Negative attitude to immigration (std.)	4.99***	5.14***	8.41***	7.68***	7.90***
	(0.46)	(0.47)	(0.74)	(0.60)	(0.85)
Unemployment rate (in %)		1.41***			0.35
		(0.25)			(0.33)
Population density			0.18***		0.039
			(0.027)		(0.035)
Non-white population share (in %)				0.33***	0.27***
				(0.050)	(0.065)
Observations	573	573	573	573	573
R^2	0.11	0.16	0.16	0.20	0.20

Notes: Columns report results from OLS regressions at the constituency level. 'Negative attitude to immigration' is the estimate of average constituency attitudes to migration from Hanretty and Vivyan (2015). The mean of the dependent variable, BNP members per 100,000 whites, is 25. The estimate is based on answers to the question 'Do you think that immigration undermines or enriches Britain's cultural life' in the 2015 British Election Study data, which was answered on a seven point Likert scale. The variable is standardised to have mean 0 and standard deviation one. Population density is measured in persons per hectares. One, two and three stars indicate significance at the 10%, 5% and 1% levels respectively.

Table A7: Effect on BNP membership, regression at the postcode district level

	Dependent variable:			
	BNP members per 100,000 whites (std.)			
	(1)	(2)	(3)	(4)
Black unit-months (std.)	-0.37***	-0.38***	-0.38***	-0.35***
	(0.10)	(0.10)	(0.10)	(0.1)
Support unit-months	✓	✓	✓	✓
Grid Fixed Effects		✓	✓	✓
1931 population density			✓	✓
Location controls				✓
Conley Standard Error	0.10	0.096	0.096	0.10
Clusters	88	88	88	88
Observations	603	603	603	603

Notes: Table is as per Table 2, but on a dataset of postcode-districts generated by aggregating neighbourhoods.

Table A8: Effect on BNP membership, weighted regressions

	Dependent variable:				
	BNP members per 100,000 whites (std.)				
	(1)	(2)	(3)	(4)	(5)
Black unit-months (std.)	-0.021***	-0.023***	-0.022***	-0.023***	-0.029**
	(0.008)	(0.008)	(0.008)	(0.008)	(0.01)
Support unit-months	✓	✓	✓	✓	✓
Grid-cell fixed effects		✓	✓	✓	✓
Economic controls			✓	✓	✓
Location controls				✓	✓
Political controls					✓
Clusters	234	234	234	234	172
Observations	48,732	48,732	48,665	48,665	26,498

Notes: as per Table 2, but with observations (neighbourhoods) weighted by the size of their white population.