Referee 1

In "Can we detect the effects of racial violence on patenting? Reanalyzing Cook (2014)", the author re-evaluates a paper from the Journal of Economic Growth by Lisa Cook on lynching, race riots, segregation, and patenting.

The author convincingly shows that the original Cook paper appears flawed and that the empirical reality doesn't support the conclusions of the paper. The severely unbalanced panel in Table 7 should have been a red flag for the original editor and reviewers that something was wrong. The original paper should either have explained which state-year observations were dropped and why or been rerun with a balanced panel (or something close to it). The lack of a credible identification strategy makes the original paper's causal claim untenable even if all of the data were perfect and the results replicated.

I have five comments about the replication.

1. The author needs to make a case for "Why should this replication appear in Economic Inquiry?" If this were a brand new study (newly assembled or collected data, new identification strategy, new something else) that took a fresh look at the big question of racism and innovation, that would be a case for publication (and then if it overturned or agreed with but corrected or whatever else-ed Cook's paper in the process, great). But that is not the manuscript. Instead, this is an attempted replication of a paper originally published elsewhere. It seems a comment in the JEG would make more sense. The author tries to make the case for the importance of Cook's original paper but the case is not that convincing. Several quotes in PR pieces and from journalists combined with a citation in a working paper (a citation that just recapitulates the empirical results, doesn't build on them or meaningfully use them) doesn't seem sufficient. Citations or other measures of importance in the field would be better, though I'm not sure that really fits (the paper has only 148 citations per Google Scholar). There's also the question of the specific case for Economic Inquiry; as far as I can tell from Google Scholar, none of the cites to Cook's original are in Economic Inquiry. So why should Economic Inquiry readers (and referees) care about this paper enough to see if it replicates or not?
The paper continues to be cited in the literature (now 161 citations on Google Scholar) and the media, and was used to justify Cook's nomination to the Federal Reserve Board. If the results are unreliable, then publishing my replication is warranted.

2. The author focuses on one column in the original Table 6 and one column in the original Table 7. The replication of Table 6 should probably also look at the effects on white patenting and stacked sample patenting.
Given that the main conclusions of the paper are for Black inventors, I omit the results for white inventors.
I'm more skeptical of the new Table 3. I suspect Cook's Table 7 won't replicate at all given the problems with the state-panel (the unbalanced panel with unknown missing patterns), but the replication change to omit the key RHS variable (lynching) makes this not much of a replication. Maybe lynching can't be included and that's damning to the quality of the replication package in Cook's original paper but a regression missing the key X Cook writes about doesn't seem like a

good way to try to replicate something. Just focusing on riots (of which there are apparently only 2 in the estimation sample) seems like a very strong choice.
As I discuss in the paper, the lynching and segregation law variables are different in the application-year data: The Table 9 (application-year) data includes cumulative segregation laws, while the Table 7 (grant-year) data has annual segregation laws. For lynching, California has no lynchings in the Table 7 data, but nonzero lynchings in every year in the Table 9 data. Since the variables are different, any result I find could be explained by the different definition, instead of the timing of applications and grants. Since my focus is on the timing, I focus on riots.
It is not true that lynchings are the key variable. Cook treats the three variables as equally important, and finds statistically significant results in Table 7 for lynchings and riots. In fact, the abstract mentions only riots and segregation laws. Focusing solely on riots is justified because the coefficient (-0.362***, my Table 3 Column 1) is similar to the original (-0.364***, Cook's Table 7 Column 4), so controlling for lynchings and segregation laws is not driving the result. As I note in the paper, there are 4 riots when using the application-year data (not 2), and 5 riots in the original sample, so the results are comparable.

3. The replication author writes several times about what the model predicts (page 3 especially) but there is no model, informal or formal, here. I would suggest adding one (that might be a step towards a new study rather than a replication) or change the language.
This is semantics. Given the time gap between applications and grants, violence in year T should affect grants and applications differently. This generates testable hypotheses that Cook doesn't explore.

4. Figure 1 is very hard to read in black and white.

5. The missing data in the state-year panel seems to be key. More data archeology to figure out why it is unbalanced and which states are missing seems necessary. Could the author use some of the control variables to help identify which state is which?
Please make suggestions!

Referee 2

Report on “Can we detect the effects of racial violence on patenting? Reanalyzing Cook (2014)”

This paper is a self-described replication of Cook (2014), which appeared in the Journal of Economic Growth. Cook (2014) is described as a seminal paper that makes contributions to the economics of innovation, macroeconomics, and economic history. At the time it was written, it introduced several new data sets to the innovation literature, including patents obtained by African Americans and lynchings/race riots, a series that had never been constructed or used, to my knowledge, in economics papers. As such, the author of this replication may be forgiven for finding it difficult to keep track of all different data series used in the original paper, although it appears that all data in the paper has been made available publicly.

As a replication, however, there are several problems. First, it appears that the author has misunderstood or ignored major elements of Cook (2014) in order to produce this comment on the Cook paper. The author does not attempt to replicate the main results of Cook (2014), which are chiefly derived from the state panel regressions, not the time-series regressions that are the main item of this comment.

False. I show in Fig 2 that the panel regressions are based on a highly unbalanced panel, and in Table 3 I show that the results for riots are inconsistent with the timing of applications and grants. (Also note that Referee 1 takes the unbalanced panel to be a severe flaw with the panel regressions.)

It is in the state regressions that Cook controls for observed heterogeneity in state patent outcomes based on inventor and invention characteristics, etc. Additionally, to the extent that the author focuses on time-series estimates, results from this approach contain several errors concerning time-series estimation, and the author fails to explain the drop in patenting after 1899, which is the largest change in the patent series and likely the most important result in Cook (2014).

The 1899 drop in patents is the most striking pattern in Cook’s Fig 1, but in fact Cook does *not* emphasize it. Table 6 tests for a trend break in 1921, corresponding to the Tulsa race riot. 1899 shows up only as a control variable.

In the regressions presented by the author in the paper under review, they take the year 1899 as given. This leaves the exercise as appearing incomplete and a bit piecemeal as an attempt to replicate, especially for the main results as emphasized in the original paper.

My comments on the paper focus on four areas: the replication exercise, data, methods, and economic history/institutional details.

Based on the merits of this attempt at replication, my assessment is that this paper is not a careful, meaningful replication exercise nor insightful contribution to this line of research and to the economics literature. It would not meet the usual high standard of publication in this journal, and I would recommend rejecting the paper.

1. Replication

My first concern with the paper is that this is not a true replication exercise. The author only

replicates one of Cook's three time-series regressions and none of the 20 panel regressions, although the data in the replication files are available to do this or are publicly available. The impression the reader is left with is that the author is cherry-picking results from the Cook paper to reproduce and report. For a true replication concentrating on such a small set of results seems curious as the thrust of Cook (2014) does not hinge on the results the author would seek to question in the comment. Also, without comment on the numerous other specifications we are left wondering about the paper overall.
As mentioned in my response to Referee 1, the main time series results are for Black inventors, so that is where I focus. (Note that Cook does not run panel regressions for white patents; this is because the results for Black inventors are the main story.)
As noted above, I do in fact reanalyze the panel regressions in Figure 2 and Table 3.

The author claims not to be able to find certain variables in the replication data set, and this undergirds much of the author's critique. For example, in Footnote 6 on page 2, the author claims that Cook does not have patent data by application year for Whites. In fact, in Footnote 21 of Cook (2014), Cook reports how the data are constructed for Whites (subtracting Black patents from total patents), and total patents are publicly available for download via several mechanisms, unlike when Cook was writing in the early 2000's. It seems that the author, if indeed interested in reproducing Cook's results, would have collected these data and executed all of the time-series regressions and replicated Figures 1 and 2, not just Figure 1. Such a curious choice would need to be justified. As the statement on its face would appear to be false.
This is a fair point; it is true that Cook does not include this data in the replication package, but I could also reconstruct it myself. However, as noted above, the main results are for Black inventors. I will update footnote 6 to reflect this.

Rather than attempting to truly replicate the results in Cook (2014), the author concentrates on distinguishing between patents organized by application year and those organized by grant year. The author characterizes such an exercise as a robustness check on Cook's results. However, the author's results are likely different for reasons related to econometric methods (see below) rather than due to data organized by grant year or application year. Nonetheless, Cook (2014) finds that results using data organized by application year (time series) and grant year (state panel regressions) are consistent. It is therefore unclear what new this comment adds, unless it is to say that the statement offered by Cook is in error.
False. Cook's time series results use the grant-year variable (lpatgrntpc); this referee clearly did not look at the data and code. Application-year patents (pat_appyear_pm) are used only in Table 9, and then only to match white and black patents (not as a panel variable). As I note in my appendix, Cook's text is ambiguous about the dependent variable used in Table 6.

Although the author is not convincing with the focus on one time-series regression and the "correction" of Cook's patent data which looks similar, if not identical to the Cook application data (see below), the author's results are still consistent with racial violence adversely affecting patenting among African Americans. There is significant evidence from the historical literature on the "Red Summer" of racial violence in 1919 (see Table 1, Panel B in Cook (2014); Tuttle 1974, Ellis 1994, Voogd 2008, Whitaker 2008, McWhirter 2011, and Stevens 2019) that is

consistent with the drop in Black applications in 1920 (major race riots at different times and in different cities in the second half of the year likely spilled over into 1920 in terms of innovative activity and the actual processing and application of work done in prior years) and the drop in Black patent grants in 1921 the author finds. It is also consistent with adding 1.4 years (average time-to-patent) to applications submitted in the summer or the second half of the year 1919 (or early 1920), as the author does.
This explanation of my Table 2 is insufficient. Why was there a huge increase in applications in 1919? Surely this is inconsistent with the Red Summer. And if the 1921 Tulsa race riot had a big effect, why is there not a drop in applications in 1921 or 1922?
This finding substantially strengthens, not weakens, the main finding of Cook (2014) that racial violence negatively affects Black patenting activity. A robustness check on Cook (2014) is what the author sets out to accomplish, and this is what is ultimately accomplished, although not in the direction the author claims in the paper.

2. Data
It is not clear that the author understands patent data nor Cook's patent data set. Nor is it clear how the author reconstructs or "corrects" the Cook patent data. Part of my work on this review was going back to Cook (2014) to better understand the documentation of the data in the text and then to cross-reference it to the comment. My first conclusion is that the data presented by the author in Figure 1 closely resemble the data presented in Cook's Figures 2 and 3.

The author does not seem to have read Cook (2014) carefully in order to execute a legitimate, credible replication of this work. For example, the author misidentifies the data series and scales used in Figures 1 and 2 and confuses the type(s) of patent data used in the paper, particularly in estimation. Specifically, one of the author's first criticisms in the paper is that Cook claims to use application data in Figure 1, and the author goes to great lengths to show that patent data by grant year are used in Figure 1. However, the note accompanying Figures 1 and 2 in Cook (2014) states, "Patent data in Figure 1 are presented by grant year and in Figure 2 by application year" so I am not sure where this confusion is coming from.
My paper states: "In the paper, Figure 1 reports Black patents per million using grant-year, while Figure 2 shows Black patents per million using application-year." So I am not sure where the referee's confusion is coming from.

The exercise the author is engaged in at best warrants Cook adding a note to Figure 2 to address the rescaling that seems obvious to more clearly represent three different series with small numbers per million (lynchings, riots, and patents per million or 10,00,000) instead of two series in Figure 1.
This is confused. Figure 2 uses two separate axes: one for lynchings and riots, and one for patents. The issue I focus on is that the scale of patents in Figure 1 is 10x the scale in Figure 2.
Perhaps this would be noteworthy to send and create a new note to the figure for Journal of Economic Growth, if those editors see as fit. This "discovery" by the author is minor with respect to the findings in Cook (2014). If anything, if the Black patent series is scaled by the White population, it would bias Cook's coefficients toward zero, which suggests that the original results are more robust than Cook claims in the original paper.

This is a nonsensical claim. As I show in my Table 1, the incorrect scaling barely affects the results (presumably because the effect is like rescaling by a scalar).
I see nothing in the comment that justifies another conclusion.

A. Time-Series vs Panel Data
The author reports another "discrepancy" when comparing the patent data used in time-series versus panel estimation. The author claims to have calculated N's by comparing the raw counts to data in Table 7 and that N for time-series estimation is 672 and is 702 for panel-data estimation. Again, it is not clear that the author has thoroughly read the original paper or is as familiar with the data in the paper as they'd need to be to understand the issues. Equations 1 and 2 in Cook's paper summarize the data used in time-series and panel estimation, respectively. Each equation contains different covariates of patents, and, therefore, may not be identically matched to patent data, particularly given the historical data sets (with possible missing data) being used.
If the issue was matching to covariates and missing data, then the number of patents in the aggregate time series data should be larger than the number in the panel data (since data on state-level covariates is less available). But the opposite is true.
The author does not tell us why this is an issue, expect to say that there is a difference, but this is common in empirical work for a number of different reasons.
In fact, one of the main results in my Table 1 (Column 4) is that the grant-year correlations disappear when using the aggregated panel data variable.

Moreover, in Footnote 4 on page 1, the author attempts to cast doubt on the total number of patents identified by Cook, 726. For empirical economists, it is not unusual for observations to go unmatched to all covariates, particularly when using historical data which may not be as complete as contemporary data. If only half the observations, 363 patents, remained in estimation, I would be worried, but a share of unmatched patents of seven percent or less seems entirely reasonable in empirical work, especially if based on historical data series. Again, putting something there about missing data does not imply incorrect data nor poor methodology.
My footnote 4 reads: "Cook reports collecting data on 726 patents. It is not clear why the totals in the replication files are lower." My conclusions about the data and results are not based on this footnote, but my Tables and Figures.

The author claims to have "corrected" the time series by aggregating the panel data patents by year.
False. My correction of the time series variable is from calculating Black patents per million using the Black population, whereas Cook uses the white population. Aggregating the panel variable is a separate exercise.
Given the description of the data in and estimation procedure in Cook (2014), this does not seem to be the right approach, because the time-series and panel patent may differ, given the covariates used in each estimation, as mentioned above. Therefore, the "corrected" time series the author purports to have constructed does not seem to have been, first, understood by the author, and, second, in need of correction.

As noted above, if missing covariates in the disaggregated state-level data is the issue, why is the total number of patents higher in the panel data? If anything, including more data should make Cook's results stronger. But as I show in my Table 1, in fact the correlations disappear when using the aggregated panel variable.

Worse still, the author claims to have scaled the Black patent data by Black population, rather than the White population.

Yes, the Black patents per million variable should be scaled using the Black population. Cook made an error by using the white population.

However, the "fixed" time series in the author's Figure 1 on p. 2 seems similar or identical to the data presented in Cook (2014) in Figures 2 and 3.

The referee is confused. As I note in the paper, Cook used the white population for grant-year patents (Cook's Figure 1), and the Black population for application-year patents (Cook's Figure 2). This explains why the scale is 10x larger in Figure 2. In my Figure 1, 'Time series' and 'Time series (fixed)' differ by a factor of 10, corresponding to the difference between the white and Black populations.

Even in the note to the author's Figure 1, it is stated that a grant-year variable is reported in Table 6, and, in fact, these estimates are based on data using patent data by application year (see Equation 1 of Cook's posted paper).

Again, the referee is confused about the patent variable used in the time series regressions in Table 6. As noted above, Cook uses the grant-year variable in the code, and the text is ambiguous.

Importantly, it appears that the author fundamentally misunderstands the construction of Cook's patent data series and the models executed in estimation. For example, in Footnote 6, the author opines that Cook does not have application-year time series data for White patents. Cook clearly does have, uses, and presents application-year data for Whites, e.g., see Equation (1) and the estimated coefficients presented in Table 6 that are based on application-year data and presented for all, Black, and White patentees.

Again, Table 6 uses grant-year patents. Cook's Equation 1 is ambiguous, but the code uses grant-year.

Moreover, the author concentrates on whether data are organized by application year or grant year.

This is a novel contribution of my paper. Cook does not explore the testable implications derived from the different timing of applications and grants.

The more important distinction is between national time-series data and state panel data, which reflect different empirical approaches (see below).

As noted already, I do address both the time series and panel data.

According to the description in the data and in the data appendix, each patent observation has a grant year and a patent year associated with it, except for the years 1870 to 1873 (see Cook 2014, Footnote 20). The times-series regressions with patents by application year are typical in contemporary patent literature, because the researcher wants to best reflect the year in which an addition to the stock of knowledge was added by the invention. Because of the novelty of Cook's work in 2014, needed to present the time-series estimates as a baseline to compare them with the existing patent literature.

Again, Cook uses grant-year patents in the time series regressions (Table 6).
Cook is using patent data by grant year in the panel estimates. Importantly, when organized by state, the data set that results from merging patent data with covariates is much richer than the national time-series data set. For instance, in the state panel data, Cook is able to control for a number of salient observables for which the unit of observation is the state, including illiteracy, number of firms per capita, and participation in given industries. As Cook states in the state regressions section, "Therefore, the second prong of the empirical strategy is to estimate a model using panel data containing state-level characteristics of patents (and inventors) that therefore allow me to account better for observed heterogeneity than if I were to rely on the aggregate data." [As a distant second matter, Cook may have chosen to preserve as many observations as possible (not dropping the 1870-1873 observations), which is consistent with a larger N in the state panel data and regressions than in the times-series data and regressions in Cook (2014). This is a defensible empirical decision, not a fundamental flaw in Cook's approach.]
This is confused. The application-year data is missing 1870-72, but the grant-year variable is used in both the time series regressions (Table 6) and the panel regressions (Table 7).

The author claims to have "discovered a discrepancy explained by Cook dividing Black grant-year patents by the white population to calculate patents per million." Given the description in the paper and the paper's data appendix, this does not seem correct. Census data were collected on both Black and White populations, and the patents obtained by Black and White inventors were divided by their respective population in Cook (2014).
Yes, what I'm trying to say is that Cook's description is incorrect! This is the whole point of my Figure 1. (Note also that the referee is now contradicting their earlier comments; see "worse still" above.)
In particular, it appears that Cook adjusted the scale on the right-hand side in Figure 2 to more consistently match the scale on the left-hand side, which is for Black lynchings per million and major race riots. Alternatively, to elucidate a data series with very small numbers, Cook appears to have done something that is not unusual in data visualization and simply multiplied the series expressed per million by 10 (numerator and denominator) to more clearly show the variation in the patent series.
This is nonsensical. Cook's Figure 2 uses a separate scale for patents, so there is no need to match the left-hand scale. (And multiplying both the numerator and denominator by 10 wouldn't change anything!) If the referee had read my paper closely, they would see that the difference in scale is from dividing by the white population.
Indeed, upon inspection it appears that this is what Cook did, and the patent series for Blacks in Figures 1 and 2 are therefore consistent. Further, Cook includes a footnote that reports the average time-to-patent for Black patentees, 1.4 years, which explains the slight differences in the Black patent series in Figures 1 and 2.
No, Cook divided Black patents by the white population, as I demonstrate.

In general, Cook includes detailed notes on data collection, data-set mergers, and calculations derived from collected data throughout the paper and in the data appendixes. Among these notes is significant reference to use of census data, including a note in Appendix 1 on the

source of population estimates and a note in Appendix 2 about attempts to identify Black patentees using census data. In addition, Cook is transparent and reports descriptive statistics for patents per million for Black and White inventors, as well as population data by race, in Tables 4 and 5, and the descriptive statistics are consistent with the graphical representation of the data in Figures 1 and 2. Moreover, Black patents are presented by application year in Figure 3 and are compared to Black newspaper data. There are similarities in the Black patent series and the Black newspaper series (a series with small numbers on an annual basis), and these data are consistent with the data presented by the author, as well as the data presented in Cook's Figure 2. Finally, as aforementioned, Cook notes that data on application year is not recorded in the patent data for the years 1870 to 1873. This would appear to further account for any slight differences in the grant-year and application-year data.

The data "discrepancy" the author suggests does not appear to be a discrepancy at all but a minor comment on data visualization. The rescaling in Cook's Figure 2 is designed to more clearly represent three trends with small numbers per million (lynchings, riots, and patents per million or 10,00,000) instead of two series in Figure 1. This "discovery" by the author is minor, if not trivial, with respect to the important, groundbreaking research encapsulated in Cook (2014). At most, the author's comment may warrant an additional note to Figure 2 by Cook to confirm that multiplication by 10 is what was done to the Black patent series by application year in Figure 2 (and possibly Figure 3).
Again, the discrepancy between Cook's Figure 1 and 2 is from dividing Black patents by the white population.

3. Methods
Given the issues raised with respect to how the author is defining, using, and interpreting the data, it is unclear how we should interpret and assess the estimates the author produces nor how we should compare them to Cook's results based on the author's data. Nonetheless, there are separate econometric issues that suggest that the replication strategy falls short and would produce different estimates from Cook (2014).

A. Time Series Regression (Section 3)
First, there is a problem with controls. The set of controls used in the paper does not match those used in Cook (2014).
False. I include the same variables as Cook used in Table 6, as can be verified by comparing the code.
In my view, this highly inappropriate if the purpose is replication. The set includes a linear trend, while the dependent variable is expressed in delta logs and, therefore, does not require a linear time trend.
As can be verified in the code, Cook includes the variable `t` as a linear time trend. Here's the Stata code for Column 3 of Table 6 from Cook's code:
reg D.lpatgrntpc riot D.llynchpc D.LMRindex seglaw _iyear_1921 t DG1899 _iyear_1910 _iyear_1913 _iyear_1928 if race==1, robust

The set of controls also includes some year dummies. However, unlike Cook (2014), the author does not include NBER business cycle dummies that are necessary to take into account the state of the business cycle, which is important for the relationship of interest.
Cook calls these “Additional controls for peak and trough years”. I call them “year dummies for 1910, 1913, and 1928”.

Second, there are issues with testing for the lagged effect of proxies for violence. Some variants of the author’s regressions reported in Table 1 (p. 4) include both current and lagged values of lynching, riot, and segregation law variables together. If the author wants to test whether the effect is lagged, they should include the lagged variables only, not the current and lagged variables together.
Why is this a problem?
In particular, riot and segregation law variables have many zeroes (for this reason in Cook 2014 they appear in levels). Therefore, having current and lagged values is most likely problematic and might preclude the possibility of identifying jointly current and lagged effects on the outcomes.
Why does having many zero values make including current and lagged values incorrect? No reason is given.
An inappropriate set of controls would also be problematic in testing for the lagged effect of the violence variables.

Third, robustness of the author’s results concerning 1921 is likely an issue. Cook (2014) uses a standard detection procedure to detect the relevance of the year 1921 (the Quandt LR statistics) in a regression based on a defensible set of controls. In the Table 2 regressions, the author arbitrarily uses a set of year dummies that span 1921 in regressions that already include a linear time trend and other yearly dummies. It is difficult to understand a rationale for this procedure as a time series exercise. Either a linear trend or a full set of year dummies would be reasonable, but this appears to be a mix that is not justified in the text.
I include a linear time trend to match the original specification. I could include a full set of year dummies and report only 5, but that would be a large deviation from the original specification, which included only three year dummies.

B. Panel Data
The author laments the fact that the state panel data analysis in Cook (2014, Section 3.2) is based on an unbalanced panel in which, for many states, the number of yearly observations is limited. For this reason, the author argues, when working with small effects and noisy data, spurious statistical significance should be expected. This statement is not justified in the present context: Cook (2014) handles the panel structure carefully via random effects and in this way parsimoniously handles heterogeneity across states and conducting an array of sensible robustness exercises (Cook 2014, Table 7).
Cook’s handling is far from careful. For instance, there are only 5 riots in the panel regressions (and 35 in the time series data).
In contrast, the “robustness” exercise the author executes (Table 3, p.8) is based on a strict subset of the regressors used in Cook (2014).

See my response to Referee 1 on this point.

Finally, while the distinction between patent year and application year is the author's focus, it is not the major focus of Cook (2014). Nonetheless, Cook (2014) finds that results using data organized by application year and grant year are consistent.

Again, the referee is operating under the mistaken belief that Cook's time series results use the application-year patent variable. In fact, both the time series and panel regressions use grant-year patents.

4. Economic History and Salient Institutional Details

In general, the author seems to underappreciate relevant context from economic history and salient institutional details in Cook (2014). It would be inappropriate to treat the Cook paper like an event study using high-frequency 21st-century financial data.

The problem is that Cook is not forthright about the unbalanced panel.

The author's analysis hinges on three critical assumptions enumerated on page 2 of the comment "to perform a more nuanced test of Cook's hypothesis that racial violence deters innovation by Black inventors." Much of the author's subsequent analysis rests on the first assumption that violence in year T leads to a drop in patent applications in the same year. While this is plausible, the author offers this conjecture without evidence.

I offer an empirical test of a plausible hypothesis. Cook does not even explore the timing of applications and grants.

Cook, on the other hand, provides rich discussion from the historical literature about the effect and timing of racial violence. From Cook's summary of the historical literature, lynchings and major race riots may have a contemporaneous effect on Black patenting.

The author appears unaware of the patenting process, of how patent examiners make decisions, and of the time period 1870 to 1940. An alternative model offered by the author on p. 3 is meant to explain the effect of racial violence on patenting outcomes: "Patent examiners may have delayed the granting of Black patents during years with high racial violence, to avoid becoming a target themselves." It is striking that a major contribution of this paper is that Cook identifies African American patentees, because race is not recorded on patent applications. Therefore, a patent examiner would not be able to incorporate considerations of race of the patentee into the examination process. How the author is able to offer this as an explanation without any narrative evidence from history is odd.

This is a good point, and I have updated my paper to include it. My purpose in offering the alternative explanation was to rationalize the inconsistent results in my Table 1. If the alternative explanation fails, then Cook has no way to explain the data.

In related work on Black innovators, Cook demonstrates that African American patentees benefited from the anonymity of patents, since no one without prior knowledge of the inventor would be able to ascertain the inventor's race. As such, the discussion in the current paper is ahistorical and uses unsupported conjecture.