Mainstreaming Race Science

Daniel J. Hicks,[1*] and Emilio J. C. Lobato[1]

[1]University of California, Merced

[*]Corresponding author: Daniel J. Hicks, dhicks4@ucmerced.edu.

Background: While anthropologists and human geneticists have long rejected the biological race concept, both social movements and prominent researchers have purported to justify racial inequality and colonialism by appealing to the epistemic authority of science.
Methods: Bibliometric and text mining methods were used to trace the appearance of race science discourse in both mainstream scientific journals and the parascholarly journal *Mankind Quarterly* from 1960 to 2010.
Results: Our analysis found two distinguishable lines of race science discourse. One is strongly associated with *Mankind Quarterly*, while the other — emphasizing race and intelligence — is strongly associated with mainstream psychology journals, especially *Intelligence* and *Personality and Individual Differences*.
Conclusion: Psychology, and especially intelligence research, has played a significant role in mainstreaming race science.

One sentence summary: Bibliometric and text mining analysis indicate that race science discourse appeared in mainstream psychology journals throughout the second half of the twentieth century.

Introduction

By the end of the Second World War, a combination of technical developments in anthropology and genetics, along with revelations of Nazi atrocities, had led most members of the scientific

community to reject attempts to scientifically justify racial inequalities and colonialism (*1*). But eugenic thinking and scientific racism persisted throughout the second half of the twentieth century, and recent work has found that white supremacists continue to attempt to use scientific research to justify racial violence (*2–4*).

The aim of the study reported here was to trace race science in the scholarly and parascholarly literature, examining the ways that fringe ideas can present themselves as legitimate scholarly inquiry.

We first propose a distinction between scientific racism, race science, and race science discourse. *Scientific racism* refers to the social practice of purporting to justify racial inequality and colonialism by appealing to the epistemic authority of science. *Race science* refers to scientific and/or pseudoscientific research, including research products (journal articles, etc.), that can be utilized for scientific racism. *Race science discourse* refers to a broader category, any treatment of race science as a legitimate area of scientific research. This includes methodological and empirical critiques of race science. For example, the Flynn effect (the finding that IQ scores have increased over time) poses a serious empirical challenge to hereditarian claims of racial differences in intelligence. But technical debates over the extent and causes of the Flynn effect likely create the impression among the general public of ordinary scientific disagreement. In this way technical critiques of race science based on the Flynn effect could potentially legitimize race science. So empirical research supporting the Flynn effect is usually not itself race science, but can still be race science discourse.

These distinction allow us to bracket the intentions and mindset of the researchers involved in any particular piece of research or debate. For the purposes of the current study, it is not important whether, for instance, Arthur Jensen is or is not correctly labelled a scientific racist (*5*). But it is important that much of Jensen's research was useful and indeed utilized to purportedly justify racial inequality.

Scientific racism, eugenics, and *Brown*

Histories of scientific racism in the twentieth century have often emphasized the Pioneer Fund and the parascholarly journal *Mankind Quarterly* (MQ) (*1, 6–13*). Pioneer was formed in 1937, during the waning years of the eugenics movement in North America (*1*), with the aim of "support[ing] academic research and the '[sic]dissemination of information, into the 'problem of heredity and eugenics' and 'the problems of race betterment' " (*6, p.21, quoting Laughlin*). MQ was founded in 1960 by biologist R. Ruggles Gates (1882-1962), psychologist Henry Garrett (1894-1973), and non-academic anthropologist G. Robert Gayre (self-styled as "Gayre of Gayre and Nigg"; 1907-1996). Gates' professional status had risen and fallen with eugenics and the explicit scientific racism of the 1920s, and by the end of the Second World War he was thoroughly marginalized (*7*). In contrast, Garrett had been president of the American Psychological Association in 1946 and chair of Psychology at Columbia from 1941 to 1955 (*7*).

In the landmark case *Brown v Board of Education of Topeka* (1954), the US Supreme Court banned *de jure* educational segregation. The Court's decision relied on expert testimony from psychologists and education researchers; but the segregationists also put forward their own experts, including Henry Garrett (*7, 9, 14*). As part of this segregationist reaction, MQ was created to provide a favorable venue for race scientists to publish their views, on the grounds that an "equalitarian dogma" created a censorious "taboo" against their research in mainstream publications (*8, 15*).

In light of the scientific racist origins of Pioneer and MQ, and the significant attention MQ has received in recent historiography, we hypothesized that bibliometric and text mining analyses would show race science ideas originating in MQ, and from there being disseminated to mainstream publications. This hypothesis was not supported. Instead, mainstream psychology journals provided a venue for a distinct form of race science, based on intelligence research and

originating outside of MQ.

Mankind Quarterly and Pioneer-funded researchers

We identified 16 researchers who had received funding from Pioneer; 14 of these researchers had profiles in the Web of Science (WoS) author search, allowing us identify 13 WoS-indexed journals that had published 6 or more of these authors. See Table 1 and Figure 1.

Table 1: Pioneer-funded researchers. Either identified in (*16*) or named on an archive copy of Pioneer's website, along with birth and death dates from Wikipedia, attributed discipline, and WoS author search result counts. Brunetto Chiarelli does not have a Wikipedia page.

Thomas J. Bouchard, Jr. (1937-)	psychology	184
Brunetto Chiarelli (?-?)	anthropology	91
Hans Eysenck (1916-1997)	psychology	661
Robert A. Gordon (1932-)	sociology	0
Linda Gottfredson (1947-)	psychology	71
Garrett Hardin (1915-2003)	ecology	75
Joseph M. Horn (1940-)	psychology	68
Lloyd Humphreys (1913-2003)	psychology	0
Arthur Jensen (1923-2003)	psychology	235
Michael Levin (1943-)	philosophy	96
Richard Lynn (1930-2023)	psychology	288
R. Travis Osborne (1913-2013)	psychology	59
J. Phillippe Rushton (1943-2012)	psychology	277
Audrey M. Shuey (1900-1977)	psychology	10
Philip A. Vernon (1950-)	psychology	227
Daniel Vining, Jr. (1944-)	demography	33

Figure 1 shows that, while MQ is among the "Pioneer-publishing" journals, a number of mainstream journals are more prominent: *Personality and Individual Differences* (PID), *Intelligence* (Int), *Behavior Genetics* (BG), and *Psychological Reports* (PR). In addition, only psychologist Richard Lynn appears to have published heavily in MQ. Lynn became an assistant

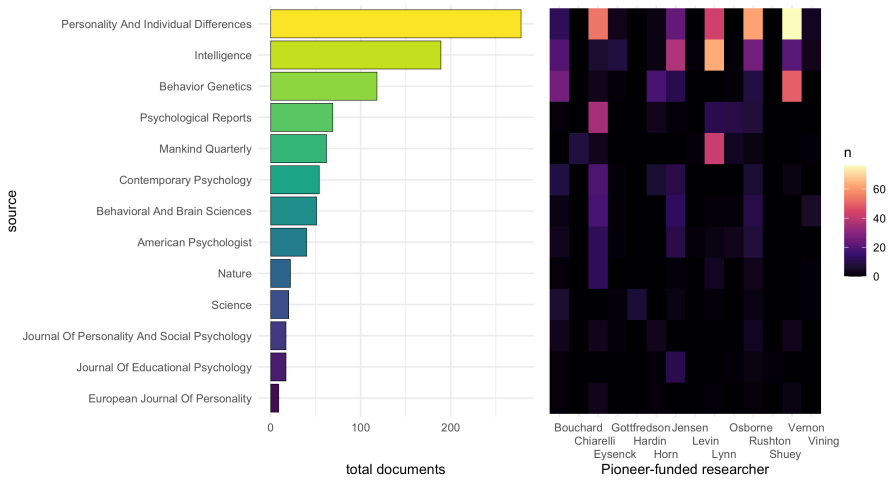

Figure 1: Journals publishing 6 or more Pioneer-funded researchers, Web of Science author search results.

editor of MQ in 1979 (vol. XX, Nos. 1 & 2) and is listed as editor-in-chief on MQ's current website as of 2023-07-21. He has also been president of Pioneer since the death of psychologist J. Phillippe Rushton in 2012 (*17*). By contrast, a number of Pioneer-funded researchers have published in PID, Int, and to a lesser degree BG: Bouchard, Eysenck, Jensen, Rushton, Vernon, and also Lynn.

Personality and Individual Differences (PID) was founded in 1980, with Eysenck as editor-in-chief and an editorial board including Jensen and Lynn. In the inaugural editorial, Eysenck identified "studies of the genetic determinants of individual differences in the areas of personality and intelligence" as one of the journal's eight major areas of interest. Eysenck remained editor-in-chief until his death in 1997. In 2005 the editorial board still included Jensen and Lynn. PID was first published by Pergamon Press, a mainstream academic press, and today is published by Elsevier.

Intelligence (Int) was founded in 1977, with psychologist Douglas Detterman as editor-in-chief from the founding until 2016. Lloyd Humphreys was on the editorial board starting from 1977; by 1990 he had been joined by Jensen and Philip Vernon. Richard Lynn joined the edi-

torial board sometime between 1998 and 2002. (Archive copies of the Int editorial board page are not available from the journal's website from 1999 through 2001.) Int has been criticized for including Lynn and Gerhard Meisenberg — who was editor-in-chief of MQ in 2015-18 — on its editorial board until 2018 (*10*). Int is published by Elsevier.

Topic model analysis identifies race science discourse

The fact that Pioneer-funded researchers published heavily in two mainstream psychology journals does not tell us anything about the content of their publications or the claims of their research. We assembled a full-text corpus of articles published in MQ, PID, Int, BG, PR, and Behavior and Brain Sciences (BBS) between 1960-2010 and used topic modeling to identify topics discussing race, intelligence, and both.

Figure 2 and this discussion focuses on three topics identified in one of the 24 fitted topic models; see figures S1.3, S1.4, S1.5 and supplemental visualizations S2-S4 for all topics from all models and S5-S7 for selected topics from all models. In the focal model, topic 07 is strongly associated with MQ: MQ published dozens of articles in this topic each year, and no other journal ever published more than a handful. The "Silge plot," showing the top 15 terms in the topic (*18*), contains racial terms (`races`, `whites`, `negroes` and potentially `europe`, `africa`, `india`, and `japan`) as well as `book`, likely reflecting the fact that MQ published a number of book reviews, while the psychology journals either did not or these were not available for the corpus.

Topic 22 is strongly associated with Int and PID in the same way that 07 is associated with MQ. The Silge plot does contain `jensen`, as well as a reference to Raymond Cattell, who played a major role in the development of factor analysis and intelligence testing but also advocated for eugenics, fascism, and Nazi race science (*19*). However, the other authors named in this topic — John Horn and Peter Bentler — do not appear to have contributed to scientific

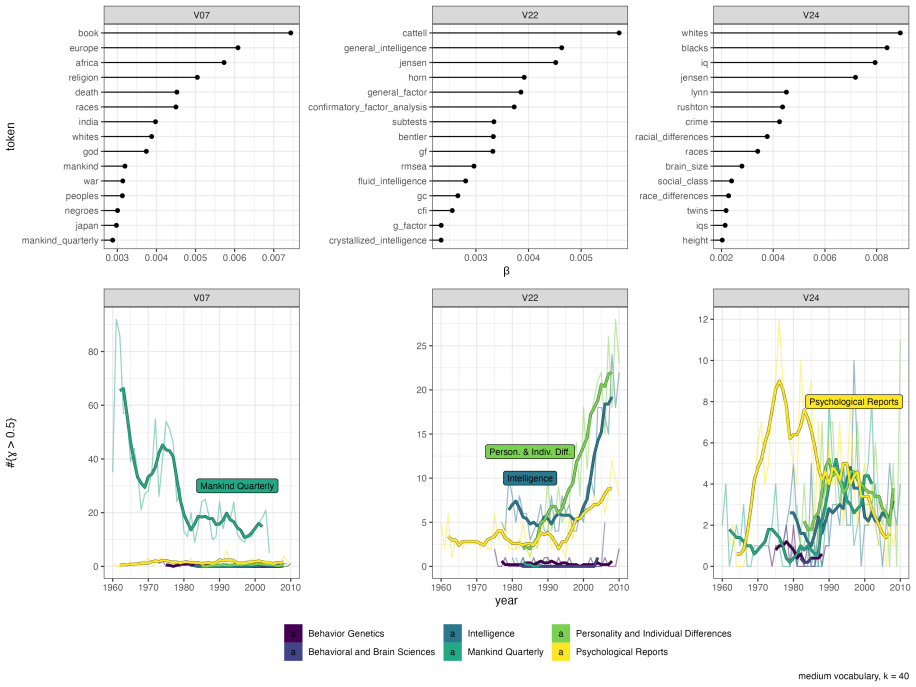

Figure 2: Silge plots (*18*) and smoothed time series for three focal topics. Top row: top 15 terms by β (term-topic distribution) for each topic. Bottom row: count of articles associated with each topic, by journal and year. Article counts use a threshold approach, with γ (topic-document distribution) greater than 0.5. Thin lines give annual values, thick lines give 5-year running averages. Because *Behavior Genetics* and *Behavioral and Brain Sciences* are not prominent in any panel, neither is given a direct label.

racism. Instead this topic appears to identify "mainstream" (non-race science) intelligence research, especially factor analysis and the debate over whether intelligence is unidimensional or multidimensional. (Three other topics only associated with mainstream intelligence journals and terms were also identified by this topic model.) This topic indicates that the model is not simply lumping race science research together with other intelligence research.

The Silge plot for topic 24, by contrast, suggests a distinct race science discourse topic, with multiple racial terms (`whites`, `blacks`, `racial_differences`, `races`, `race_differences`) and the names of three prominent Pioneer-funded researchers, `jensen`, `lynn`, and `rushton`. Independent qualitative coding of the top 121 papers in this topic (those with $\gamma > 0.97$) confirmed this interpretation of the topic, with 108 (89%) coded as race science discourse by both authors (Cohen's $\kappa = 0.86$).

In almost all years, most papers in topic 24 were published in mainstream journals rather than MQ. Jensen's "How Much Can We Boost IQ and Scholastic Achievement?" (*20*) was published in 1969 in *Harvard Educational Review* (not included in this study), and the time series indicates that, in the early 1970s, there was an increase in articles in topic 24 in both PR and MQ (the only two journals in our corpus that were active at the time). MQ shows another sharp increase in the late 1980s; using content analysis, Adams and Pilloud found that psychology was the dominant discipline in MQ in the period 1992-2018 (*12*). PID published multiple papers in topic 24 almost immediately after it was founded, with Int showing a more gradual increase between the mid-1970s and mid-1990s.

Race science, behavior genetics, and psychology

It's notable that BG published very few articles in any race-and-intelligence topic identified by any of the 24 topic models. Among both academics and the general public, the field of behavior genetics is strongly associated with race science, and specifically race-and-intelligence research.

Panofsky (*21*) argues that, prior to Jensen's 1969 paper, behavior genetics emphasized the study of non-human animals and intentionally avoided associations with eugenics and public controversy more generally. In response to Jensen, critics such as Lewontin offered broad critiques of behavior genetics as such, and behavior geneticists in turn adopted a radical conception of academic freedom (without any sense of responsibility for the social implications of academic research) and a siege or wartime mentality, as illustrated by Sandra Scarr's 1986 presidential address to the Behavior Genetics Association (BGA) (*22*). Scarr's address coincided with the period between 1970-1990 when BG published articles in topic 24 (including Scarr's address itself).

However, the topic model analysis suggests that, by the 1990s, behavior genetics may have distanced itself somewhat from race science, albeit without directly repudiating it. This interpretation was supported by a supplemental analysis that focused on BG specifically (SM section 1.5). In addition, the 1995 BGA presidential address by Glayde Whitney — in which he criticized the "Marxist-Lysenkoist denial of genetics" and proposed that differences in murder rates between countries and cities were caused by racial genetic differences in intelligence, empathy, aggression, and impulsivity — was published in MQ rather than BG. As a subdiscipline of psychology, behavior genetics may have been prominent in promoting race science in the past, but appears to have been less receptive to such ideas in more recent history.

Instead, our results suggest that other subdisciplines of psychology have provided the primary venue for mainstreaming race science. Over the past few decades, many professional organizations in genetics and anthropology have made formal statements rejecting race as a biologically meaningful concept (*23–30*), undermining the core assumption of race science. The American Psychological Association (APA) — whose members are predominantly clinical psychologists — and the Federation of Associations in Behavioral & Brain Sciences (FABBS) — an organization whose purpose is to provide policy recommendations — have openly rejected

race as biologically meaningful (*31, 32*). But research-focused psychological organizations like the Association for Psychological Science (APS) and Psychonomic Society (PS) stop short of rejecting race as biologically meaningful when they denounce racism (*33, 34*). Psychology as a discipline maintains space for several mythological race science narratives, such as allegations of a taboo against race and intelligence research (*35*), claims that scientists engaging in or calling for any kind of anti-racism in the field is an ideological corruption of dispassionate and value-neutral science (*36*), or arguments that holding race science to the same evidentiary standards as other psychological research is a violation of academic freedom (*37*). And historically several race scientists have secured important gatekeeping positions within the scientific community, such as on the editorial boards of Int and PID.

Discussion

Using bibliometric and text-mining methods, this study finds that Pioneer-funded researchers published heavily in certain mainstream psychology journals, much more than in *Mankind Quarterly*; and that a distinct topic of race science discourse, centered on race and intelligence, can be identified in these same mainstream journals across the period 1960-2010. These findings indicate that *Mankind Quarterly* (MQ) was less important as venue for late 20th century race science than mainstream psychology journals, especially *Intelligence* (Int) and *Personality and Individual Differences* (PID). Indeed, until the 1990s, MQ published a very different kind of race science from the race-and-intelligence research published in Int and PID. During this same period of time, race scientists served in prominent and influential positions in behavior genetics and psychology, including as society presidents and members of journal editorial boards. In some cases, some race scientists simultaneously maintained active connections to both the mainstream scientific community and white supremacist organizations (*5, 11, 38*). Except for the APA, we are not aware of other major organizations for scientific research in psychology

that have issued apologies for the historical contributions of their field to scientific racism.

We are not identifying any particular scientist as a racist, scientific racist, or race scientist based on the topic model results alone. Such claims require an analysis of documentary evidence that goes beyond the scope of the current study (*5*). We do assume that our readers, like us, regard white supremacy and scientific racism as morally odious and beyond the scope of reasonable debate (*39*). However, scientific research can be appropriated to promote scientific racism — and thus count as race science — even when this is contrary to the intentions of the original researchers themselves (*40–43*). Panofsky et al. show how the term "human biodiversity," originally developed for anti-racist purposes by biological anthropologist Jonathan Marks, has been inverted by white supremacists and is now a dogwhistle for biological racial hierarchy (*3*).

Research on the genetics of intelligence has been socially harmful, not just in the somewhat abstract sense of promoting racial stigma, but in the concrete sense of being used to rationalize mass shootings and other acts of racial violence (*4, 44*). While scientists do not fully control the downstream social effects of their research, like other citizens scientists are responsible for mitigating reasonably foreseeable harms that result from their actions (*45–48*). These actions include not only individual decisions to research this topic or that, but also collective decisions about who is awarded positions of power or influence. Given the way research on intelligence and behavior genetics has been used historically, these fields may be especially susceptible to appropriation by scientific racists. This only strengthens the obligations of researchers in these areas to prevent their research from causing harm (*42, 49*).

How should psychologists exercise these responsibilities? We believe restorative or reparative justice provides a useful model (*50, 51*). Unlike retributive justice (used by almost all criminal justice systems today), the aim of restorative justice is to repair the damaged relationships between victims and perpetrators of injustice. Typically, restorative justice requires perpetrators

to not only acknowledge their actions and the harms that these actions had on victims, but also to work with victims to identify concrete actions that perpetrators can take to redress or mitigate these harms. From this perspective, explicit apologies for contributions to scientific racism are essential as a first step (*27, 31, 52*), but not fully sufficient on their own.

References and Notes

References and Notes

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