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Abstract

This paper explores inequities in the Social Science and Humanities Research Council of Canada (SSHRCC) grant amounts awarded to successful applicants in Canada's universities. Specifically, the study seeks to discern whether ethnicity and gender matter for amounts of SSHRCC's award decisions using compiled SSHRCC data and names of successful grant applicants to generate a large sample from 1998 to 2018. Although the importance of ethnicity along with gender and region, as well as institutional factors such as discipline and status of an applicant's university are explored in relation to higher education institutions' applicants, our focus is on effects of racialization on SSHRCC's decisions. We find that several factors affect the amount of grants awarded and that racialized applicants, especially men, have tended to receive less funding than non-racialized applicants over this period. In addition, on the one hand, the grant amount for racialized minorities has decreased in recent years. On the other hand, racialized women applicants received higher grant amounts than their counterparts, and particularly in recent years. Conceptual, empirical, methodological, and policy implications of these findings are discussed.

Keywords: Research grant allocations, SSHRC, inequality, vertical mosaic, racialization, higher education, Canadian society.

Résumé

Cet article explore les inégalités dans les montants des subventions accordées par le Conseil de recherches en sciences humaines du Canada (CRSH) aux candidats retenus dans les universités canadiennes. Plus précisément, l'étude vise à déterminer si l'origine ethnique et le sexe ont une incidence sur le montant des subventions accordées par le CRSH, en utilisant les données compilées du CRSH et les noms des candidats retenus pour générer un vaste échantillon de 1998 à 2018. Bien que l'importance de l'ethnicité, du sexe et de la région, ainsi que des facteurs institutionnels tels que la discipline et le statut de l'université d'un candidat soient explorés par rapport aux candidats des établissements d'enseignement supérieur, nous centrons notre analyse sur les effets de la racialisation dans les décisions du CRSH. Nous postulons que plusieurs facteurs affectent le montant des subventions accordées et que les candidats racialisés, en particulier les hommes, ont tendance à recevoir moins de financement que les candidats non racialisés au cours de cette période. En outre, d'une part, le montant des subventions accordées aux minorités racialisées a diminué au cours des dernières années. D'autre part, les femmes racialisées candidates ont reçu un montant de subvention plus élevé que leurs homologues, en particulier au cours des dernières années. Les implications conceptuelles, empiriques, méthodologiques et politiques de ces résultats sont discutées.

Mots-clés : Attribution des subventions de recherche, CRSH, inégalité, mosaïque verticale, racialisation, enseignement supérieur, société canadienne.

Introduction

There is a growing corpus of studies showing Canadian universities are dominated by faculty of British and European ancestries and that racialized faculty are disadvantaged (Henry and Tator 2009; Nakhaie 2001; 2004). However, what remains unknown is the extent to which the mechanisms that influence career mobility in Canadian universities are also racialized. One such mechanism is government-funded research grants, including from the Social Science and Humanities Research Council of Canada (SSHRCC). For university faculty, receiving a major external research grant is a vital marker of academic career success. Such grants are typically an essential criterion for receiving tenure, promotion, and increasing status among university, national, and international colleagues. Often, acquired grants provide the means to generate more and higher quality scholarly publications, which then further contribute to success and promotion and, in turn, to more and/or higher value grant awards that enhance reputations and attract superiorly talented graduate students and other faculty to a university. With some exceptions, the most competitive, prestigious, and lucrative research grants are awarded by national government-funded agencies, including SSHRCC, to which members of the disciplines apply for funding, typically on an annual basis to conduct research over an extended period.

The underlying assumption of national government-funded agencies is that awards are allocated based on the merits of applications and not on applicants' ethnicity or other socio-cultural factors. Moreover, it is assumed that a meritocratic and competitive grant award can help increase productivity and scientific breakthroughs among social scientists, which in turn can ensure sound policies by private and government agencies. This matters because, as Robert K. Merton famously proclaimed, "to restrict scientific careers on grounds other than lack of competence is to prejudice the furtherance of science." The rational pursuit of truth demands that scientific "careers be open to talent" (Merton [1942] 1973, 270-72). The basis of this Enlightenment ideal is that universal and impersonal criteria, and not personal attributes such as ethnicity, should be used for scientific claims-making status. This view is also consistent with employment equity legislation (Cuneo 1990; Ng, Haq, and Tremblay 2014) that aims to achieve equality in the workplace based on ability and remedy the conditions disadvantaging visible minorities, women, Aboriginal people, and persons with disabilities. Consistent with such ideals, SSHRCC reviewers and

committee members "score" applications based on the proposed research, its scientific or other scholarly merits, and applicants' credentials, including their publication record. The stated goal is to award grants, including the grant amount, based on merit.

Despite the importance of grant success in academia, remarkably little is known about what factors might affect success or lead to failure. Even less is known about how ethnicity might lead to inequities in outcomes from these national agencies and whether these might be shifting over time. Consequently, we also know little about what policies might contribute to or alleviate these inequities. This is true of policies of universities where most grant applicants work and of the granting agencies to which they apply for funding. In this paper, we evaluate factors that contribute to securing larger grant amounts (i.e., the monetary value of SSHRCC grants), with a focus on racialization. We suggest that factors other than universalism, as a formal institutional imperative, operate in SSHRCC's decision-making. It should be stressed at the outset that inequities in grant success (whether a grant is awarded or not) are more important to academic mobility than the value of the awarded grant. However, because there is no available public data on grant success by ethnicity and/or racialization, in this study we focus on the variation in grant value or size which is available on the SSHRCC website.

SSHRCC

SSHRCC (2021a) is self-described as "the federal research funding agency that promotes and supports research and training in the humanities and social sciences." SSHRCC was created via federal legislation in 1977 and planned spending in 2022-23 has a budget of $1.1 billion (CDN), of which about two-thirds is for "Research and Training" and the remainder for "Institutional Support for the Indirect Costs of Research" and "Internal Services" such as administering the grant allocations (SSHRCC 2022). It is one of three Canadian granting agencies comprising what the federal government calls the 'Tri-Council', the other two being the Natural Sciences and Engineering Research Council of Canada and the Canadian Institutes of Health Research.

Comparing national granting agencies funded by government is not straightforward, since they differently carve up research funding budgets (Usher 2011). For example, the Economic and Research Council in the United Kingdom does not fund the humanities, the Australian Research Council covers the humanities, social sciences, as well as the natural sciences, and in Canada, SSHRCC, as its title suggests, provides grants to researchers in both the social sciences and humanities. Nonetheless, national granting agencies tend to operate similarly across countries and the disciplines they cover. Thus, a study of SSHRCC award decisions and related policies may well have implications for other large granting agencies globally.

The names of SSHRCC research grant competitions have changed over the last two decades, although their intent has remained similar, which is to support scholar-driven research projects "proposed by scholars and judged worthy of funding by their peers and/or other experts" from across social science and the humanities (e.g., sociology, literature, demography, geography, etc.) (SSHRCC 2021a). Thus, the 'Standard' research grant competition was held annually from the late 1990s through the 2000s, but by 2010 it had shifted to 'Insight' and the smaller 'Insight Development' research grant competitions, which have since focused on scholar-driven substantive research topics adjudicated by selection committees for various disciplines comprising invited university professors as members. SSHRCC has held other themed grant competitions on a single or multiple year basis over this approximately 20-year period too. For example, a competition held in the early 2000s on the 'New Economy' had a large research funding envelope available for topics in that area. SSHRCC has also made some research grant funds available to government departments with whom SSHRCC decided to 'partner' to form 'joint initiatives', thus discouraging funding for more open topics and forcing applicants to consider topics relevant to those departments' needs or desires. One example is the "Department of National Defence Research Initiative" (SSHRCC 2021b), with this government department providing a portion of funding awards. The department funding has often overlapped with existing 'Standard', 'Insight' and 'Insight Development' competitions in varying ways (sometimes funding was matched; other times it was supplemented or 'topped up' by the government department). For several years now, SSHRCC has also held three separate levels of SSHRCC 'partnership' grant competitions (i.e., 'Engage', 'Development' and 'Partnership') designed for researchers to conduct research with external organizations (not necessarily government departments) consistent with converging interests for up to seven years.

However, SSHRCC's grant awarding process has undergone serious criticism regarding its application process on several grounds. McGinn et al. (2019), using a self-narrative approach entailing hypothetical letters written to SSHRCC, identify key problems in the grant writing process, including the excessive time required and unnecessary uncertainty it generated for applicants. The appeal process concerning the very similar SSHRCC post-doctoral application process also has been criticized for not adhering to basic legal principles (Wheeldon 2012). Side and Robbins (2007) examined the inequalities stemming from SSHRCC's Canada Research Chairs program, which has been since reformed considerably to overcome this. Unfortunately, this study, like most scholarly accounts of SSHRCC allocation processes and outcomes, discussed below, was absent a quantitative analysis of a large dataset to determine how and whether ethnicity might affect success and grant amounts on its own, or in combination with gender and other factors noted above.

General Grant Inequities

Previous research has explored aspects of research grant application processes, outcomes, and other effects. Some research has shown the relationship between receiving grants and the research publication output that follows, thus suggesting the pivotal role of grants in academic career mobility. Gyorffy, Hermana, and Szabó (2020), for example, in their study of more than 13,000 applications to the Hungarian research granting agency over ten years, found grant success was the most important indicator of future research output. Other research has explored myriad factors affecting research grant allocation decision-making and results in several disciplines and countries. Laudel (2006) found in experimental physics in Australia and Germany, that while a grant application's "quality" remained the most important factor, followed by an applicant's "excellence" based on publication record and reputation, several "non-quality-related" factors influenced application success too. A UK study of the Engineering and Physical Sciences Research Council examined the effect of research team diversity based on skill sets, knowledge, and education on grant success, although diversity based on gender and ethnicity was neglected (Banal-Estañol, Macho-Stadler, and Pérez-Castrillo 2019).

Using a simulated peer review process culled from 2000 medical related grant applications, Day (2015) explored adjudication bias and found statistically significant differences between "preferred" and "non-preferred" classes of applicants not related to applications' merit. The importance of the study was showing "comparatively small levels of bias are capable of significantly influencing the rate at which grant applications are funded" (Day 2015, 1270). If there is bias in SSHRCC's grant review process based on racialization/ethnicity and/or gender, we suggest it could affect not only the success rate but also the value of the grants awarded.

Partially due to the kinds of research findings above, the US-based National Institute of Health (NIH) introduced a grant writing coaching program for applicants underrepresented by gender and race/ethnicity involving coaching over a four-to-twelve-month period. An evaluation of this program involving 545 applicants from 187 institutions showed this program helped increase grant success rates among these groups, mostly from the NIH (Weber-Main et al. 2020, 2). It also suggested that such a program might be useful "across a large spectrum of institutional types" (Weber-Main et al. 2020, 19).

Racialization and Gender Grant Inequities

More pertinent to our study is work that examined our two key independent variables: racialization/ethnicity and gender, albeit not in relation to Canada or SSHRCC. In their ground-breaking study[1] of NIH grant adjudication using an extensive grants database of almost 100,000 applications, Ginther et al. (2011, 1015)

found that Asian and Black researchers received significantly less funding than White Americans. For example, Blacks were 13.1 percent less likely to receive NIH funding than White applicants after controlling for demographic characteristics. The gaps were 5.4 percent for Asian researchers. This figure decreased to 10.4 percent for Blacks and 4.2 percent for Asians, after controlling for factors such as educational background, citations, and publication record. Ginther et al. (2012), in a related study of the same agency, found that overall, Blacks and Asians were less likely to receive funding than Whites, though among MD investigators, only Blacks were less likely to receive funding. The gap declined among MDs in medical schools, partly because Blacks were less likely to be from the top 30 NIH-funded medical schools. Ginther, Kahn and Schaffer (2016)'s study of grants from the NIH applications between 2000 and 2006 also showed that Asians and especially Blacks were significantly less likely to receive funding than Whites. In another study based on 2397 cases between 2003 to 2006, Ginther et al. (2018) showed that Blacks were less likely to receive a NIH award than White, Asians and Hispanics. They showed that publication, biometrics, and funding rank of the institution were important in explaining the Black/White gap more for newer researchers than experienced researchers. Nevertheless, when reflecting on her grant award research projects, Ginther (2022) expressed frustration that in 2020, only 166 out of 11,980 NIH awardees were Blacks.

Results of other studies generally confirm Ginther et al.'s various studies. Viner, Powell, and Green (2004) conducted a large quantitative study of UK Research Council grant awards related to gender and ethnicity as key factors. They showed that Blacks, Asians and "other races" received lower review criteria impact scores than Whites. Overall, the rate of funded grant success for Whites was 77 percent compared to 49 percent for other groups. Leberman, Eames, and Barnett (2016) examined the experiences of academics in New Zealand. They found that the data comparing researchers from White and other ethnic groups confirms that access to resources overall departs from the expectations of a wholly merit-based process. They also indicated that it remained unclear whether reviewer bias was directly responsible or accumulated disadvantage was at play (also see Viner, Powell, and Green 2004, 453). Finally, Eblen et al. (2016), based on a study of 123,700 applicants from 2010 to 2013, found "large differences" in NIH grant success rates by 'race' and lesser differences by gender. However, once they accounted for criterion scores – unavailable for Ginther's early study – these differences greatly faded. Nevertheless, in one of their models ("Impact"), they discovered that small, statistically significant differences in these variables was retained. Ginther, Kahn, and Schaffer (2016, 1098) also found that Asian and Black women with PhDs and Black women who were medical doctors were significantly less likely to receive funding than White women applicants. On the other hand, White women MDs and those with PhDs received about the same funding as White men.

Gender has been an important demarcation of inequality in Canada in general and especially in Canadian universities (e.g., Andres and Adamuti-Trache 2007; Bonikowska, Drolet and Fortin 2019; Nakhaie 2007). The Viner, Powell, and Green (2004) study provided mixed results with respect to grant application submission, with women being significantly more successful than men, but after initial success, becoming less so than men. However, a survey of British academics showed no significant gender difference in allocation of research funding despite women being less likely to hold a PhD and publish compared to men (Blake and LaValle 2000; also see, Leberman, Eames, and Barnett 2016; Rees 2011). The Rand Corporation (Hosek et al. 2005) examined the effect of gender on grant award amounts at three major US national funding bodies, including the National Science Foundation which includes funding for the social sciences. They also found no significant effect of gender, the one exception being in the National Institute of Health whereby women applicants were found to have received fewer awards. Hosek et al.'s (2005) research is the only study we are aware of with attention to grant *amounts*, which is our study's focus.

Overall, there has been limited study of the influence of applicants' racialization and/or gender on grant success. Among those which include measures of racialization and/or ethnicity, the evidence points to the disadvantage of racial minorities. On the other hand, studies on gender award inequities have been inconsistent, some pointing to no difference and others to women's disadvantage. More importantly, there has been little rigorous Canadian research on the standard or regular grant application processes and success at national research granting agencies, which in Canada account for the largest pot of research funds for the social sciences and humanities. Specifically, there is a dearth of international and no Canadian research about the presence of inequities in award amount decisions related to racialization or gender or how they change across time. For this reason, this paper seeks to discern whether racialization or gender matter for the value of SSHRCC's award decisions. We also consider the importance of covariates such as region, discipline, and status of an applicant's university, as well as how these might change over time.

Method and Research Procedures

To explore the effects of racialization on the amounts of major grant award decisions, we first located, and then systematically coded, extensive information found on the SSHRCC results website (www.sshrc.ca). Specifically, we consulted the SSHRCC awards database that includes "information about SSHRC grant and fellowship payments since 1998" for research grants from 1998 to 2018.

Due to the complexity of the SSHRCC awards and because the competitions cover all disciplines, we limited our selection and analysis to 'Standard', 'Insight' and

'Insight Development' awards. In focusing on these research grants from 1998 to 2018, we generated 53,709 cases for analysis. This data included grant recipients' names, university, province, and discipline, as well as the year, type and amount of award. As expected, individual names appeared several times due to multiple awards. Our focus was on the amounts of award decisions rather than successful applicants. Although SSHRCC also makes grants available for knowledge dissemination and communication, and for graduate student and post-doctoral research, we limited our focus to grants awarded to university faculty for original research. We further limited our analysis to those whose grant amounts were more than $10,000 because we thought grants under these amounts are generally far less consequential and more consistent with small internal university grants.[2] As well, we limited our analysis to sole applicants. We did this because the SSHRCC database does not list names of co-applicants, thus preventing us from isolating the effect of ethnicity and/or gender in a multiple applicant award. In addition, it can be argued that grant applications tend to be developed and written by principal applicants whose curriculum vitae is evaluated by external reviewers and a SSHRCC committee. Also, a multiple applicant team tends to be penalized because they are more difficult to evaluate (Lamont 2009).[3] This resulted in 32,501 cases. Finally, given that awards were from 1998 to 2018, to account for inflation, we converted award values to 2018 constant dollars.

In our analysis we first discovered that the dependent variable – award amounts – was sharply truncated to the left and regression residuals were non-normal. Consequently, to obtain robust standard errors, we employed the bootstrapping method in SPSS, which resamples the dataset, to create 1000 simulated samples. This allowed us to calculate more accurate standard errors and significant levels. We also logged the dependent variable and reported the results in Appendix 1.

Ethnicity of Grant Recipient

Because ethnicity is not reported by SSHRCC publicly, we deduced it from available information. For this purpose, we used grant recipients' surnames from the SSHRCC database as above. We have used this method independently to determine ethnicity (Nakhaie 2004) and gender (Lippert, Walby and Zaia 2019) in previous research.

Previous work has used name dictionaries to identify ethnicity (see Hunter 1986; Ogmundson and McLaughlin 1992; 1994; Nakhaie 1997; 2001; 2004) too. One criticism of this method is that it may overestimate English names and thus give an appearance of British dominance. To minimize this potential bias, we employed multiple methods of determining ethnic ancestry based on the surnames. First, we used name dictionaries (Hanks and Hodges 1988; MacLysaght 1964) and for those without entries, we then searched the phrase "ethnic origin of (the recipient's

surname)" using the Google search engine. If the results from the Google search returned relevant information, we then assigned the name to that ethnic category. For example, searching "ethnic origin of the surname Abbott" generated: "This ancient surname is generally of early English origins, predating the Anglo-Saxons and Normans." This surname was then coded as British/Anglophone. If the initial Google search of "ethnic origin of (the recipient's name)" failed to produce relevant or definitive information about recipients' ethnicity, the following procedures were then carried out to determine the recipient's ethnicity. First, the ethnic background of a name was sought using several criteria. We used Google to search the names (first name and surname only) to verify the recipient affiliated with the university and department categories as drawn from SSHRCC's data. We then examined their picture/image where available and in conjunction with this, considered the "sound" of their name. For example, if their surname was Smith and the person appeared White, we considered them of European ethnicity. If their surname was Jing and the recipient looked Chinese, we considered them such. If we could not determine a recipient's ethnicity by looking at images and the name's sound, we then read the person's webpage biography and sought to determine the country in which they obtained their first university degree or post-secondary diploma and to assign ethnicity that way. By using these procedures, we discerned the ethnic background of remaining SSHRCC grant recipients, except for 1.3% in the SSHRCC list. Given the large number of ethnic groups, we recoded the results into five groups: British, French, Other European, racialized minorities, and unknowns. In our multivariate analysis, we use British as the reference group and exclude the unknown ethnic category from the analysis. We also distinguished those whose ethnicities were identified based on name dictionaries and Google search and used name dictionary identification as the reference group in multivariate analysis.

Based on previous research, we expect that the gender of applicants may impact grant amounts. Besides gender, and given differences in prestige of Canadian universities, disciplinary differences in research requirements, availability of funds by grant types, and regional inequalities in Canada, we expect that the university's status, discipline, region of Canada, and grant type all influence amount of grants. Based on the available information, we were able to identify and include these factors as control variables.

We used first names to identify recipients' gender. In rare cases, some first names are assigned to either women or men (are unisex) (e.g., for persons of Indian ethnicity, these include 'Amanpreet' and 'Deepal'; for anglophones these include 'Pat' and 'Tracy'; and so on). In those relatively rare cases, we then searched the individual's university webpages for the individual's biography and if possible, their accompanying photograph to code as women or men. We did not discern names representing a

third gender amongst the cases, or otherwise identify recipients of a third gender using this method. We were not able to determine the first name of 11 individuals which amounted to 25 entries mostly due to use of initials, unisex names, and a lack of results from our Google searches. They were excluded from the multivariate analysis. Men were used as the reference group.

To isolate the effect of racialization and gender, we used several available control variables. The prestige of the university in which an applicant works has been shown to be related to grant success (Bazeley 1998; Blake and La Valle 2000; Ginther et al. 2012). This could be due to the "Matthew effect" (Bazeley 1998; Laudel 2006; Merton 1968), where applicants from highly prestigious universities are supported and funded disproportionately more. It is possible that the prestige of the applicant's university is used as a signal for the quality of the applicant and application. On the other hand, academics from primarily undergraduate universities are less likely to apply for grants (Hosek et al. 2005). Much previous literature shows this "Matthew Effect." We used Maclean's magazine's well-known university ranking categories (see Maclean's 2022) and identified three types of university prestige of grantees. We used medical/doctoral and comprehensive with primary undergraduate universities as the reference group. Although there is no previous study of discipline effects on grant amount, we suggest that disciplines differ in their need for research, type of research and amount of grant money available to the specific discipline. For this purpose, we distinguished social science disciplines from other disciplines and used the latter as the reference group. We also distinguished Quebec universities from other Canadian universities because there is an overlap between being French and working in Quebec universities. In the multivariate analysis, we included two models, one of which excluded Quebec universities. Finally, given that the funding envelope differs between the Standard, Insight, and Development Insight grants, we included them as control variables and used the Standard grant as the reference group.

Analysis

Descriptives

We first conducted a preliminary descriptive analysis of our data for sole applicants. Table 1 reveals that over the 20-year period examined, the average award amount was $31,034. The ethnic distribution of successful applicants includes British Isles (39.5%), Other European (35.1%), French (13.9%), Racialized (10.2%), and unknown (1.3%). Slightly under 80 percent of name identifications were based on dictionaries and 21 percent were discerned through internet searches. On the one hand, women accounted for 41.7 percent of sole grantees, which is close to the share of women SSHRCC award recipients between 1998-2018 (44.3%) (SSHRCC 2022).

On the other hand, the figure may be somewhat higher than the percent of women in Canadian universities during this period. Although 40.2 percent of academics were women in 2017-18 (Statistics Canada 2017), women's share of the university academic staff was somewhat lower in earlier years; this leads to the conclusion that women have secured higher amounts of awards than their proportionate distribution in Canadian universities, 1998-2018. However, the figure in Table 1 may be close to the percentage of women in social sciences and humanities, which is usually higher compared to other disciplines. The percentage of women in social sciences and humanities was 33.4 in 1999 and increased to 48.3 in 2018 (Statistics Canada 2022a).

TABLE 1. Descriptive Statistics

	Min.	Max.	Mean	Std. Deviation
Award 10K and higher, constant 2018	10005	212189	31033	16335
Year of Award	2	21	11.76	5.6
				Percentage
British		0	1	39.5
French		0	1	13.9
European		0	1	35.1
Racialized		0	1	10.2
Ethnicity unknown		0	1	1.3
Women		0	1	41.7
Quebec		0	1	23.7
Social Sciences		0	1	22.6
Medical Universities		0	1	57.6
Comprehensive Universities		0	1	28.6
Undergraduate Universities		0	1	13.8
Insight Grants		0	1	20.7
Developing Insight Grants		0	1	8.8
Standard Research Grants		0	1	70.5
Internet Search		0	1	20.9
N		32501		

Grantees from Quebec amount to 23.7 percent. This figure is nearly the same as the average percentage of academic staff in Quebec between 1998-2018 (23.1%) (Statistics Canada 2022b). Perhaps, understandably, a higher percentage of grantees were from doctoral/medical universities (57.6%) when compared to comprehensive (28.6%) and primarily undergraduate universities (13.8%). This observed difference

in grant types is a function of availability and amount. 'Standard' grants were available for most of the period under study when compared to more recent grant types, namely 'Insight' and 'Insight Development'.

TABLE 2. Total Award Granted (1998-2018 – Constant 2018 Dollars)

	Mean $	N	Sig.
English (ref.)	31236	12846	
French	31366	4521	
Other European	31070	11411	
Racialized	29988	3313	***
Unknown	28441	429	*
Men	30590	18941	
Women	31650	13561	***
Quebec (ref.)	31784	7363	
Non-Quebec	30799	24798	***
Name-Dictionary (ref.)	31073	25711	
Internet search	30879	6809	
Social Sciences (ref.)	35119	7363	
Non-Social Sciences	29837	25157	***
Standard Research Grant (ref.)	30185	22938	
Insight Development	29188	2862	**
Insight Grant	34712	6720	***
Medical (ref.)	31683	18721	
Comprehensive	31236	9304	
Undergraduate	27904	4495	***
Total	31033	32520	

*** P <.001, ** P <.01, * P <.05.

Table 2 presents bivariate relationships between amounts of awards and factors considered in this study. Racialized applicants received significantly lower amounts of grants than British applicants. A separate analysis showed that racialized groups also received significantly lower amount of grants than all other ethnic groups combined.

Results also show that French applicants do not differ from British applicants in amounts of grants received. However, Quebeckers were awarded grants that were of significantly higher value than those received by non-Quebeckers. As well, a further test showed that French Quebeckers received significantly higher awards than other

groups operating at Quebec universities, but they did not differ from the British grantees in Canada. There emerged no significant difference between names identified through name dictionaries when compared to internet search for sole applicants. Women applicants received higher amounts of grants than men. With respect to control variables, social science applicants received higher and undergraduate universities lower amounts from grants compared to non-social sciences and medical universities, respectively.

Table 3 provides multivariate regression analysis of grant amounts by racialization, gender, and controls considered in this study.[4] The purpose of multivariate analysis is to adjust for other available predictors of amounts of grants. We present results in five models. Model 1 includes ethno-racial groups and the identification mechanisms of such origins (internet vs. name dictionary). Consistent with bivariate analysis, racialized SSHRCC applicants received significantly lower amounts of grants than British applicants. There emerged no difference between French or Europeans with British applicants. Model 2 includes applicants from Quebec universities. They received significantly higher amounts of grants than applicants from other regions of Canada, even after we control for racialization. Model 3 includes women applicants. They too received significantly higher amounts of grants than men. Models 2 and 3 show that inclusion of gender and Quebec have a minimal effect on changing the relationship between racialization and amounts of grants.

Model 4 includes all other predictors, except for the Quebec applicants, due to the potential overlap of being French and from Quebec simultaneously. Model 5 includes all predictors including Quebeckers. Both Models 4 and 5 reveal that discipline, prestige of universities and year of grants all significantly affect grant amounts. Again, inclusion of these factors does not change the significant negative effect of being a racialized applicant and resulting award amounts. However, inclusion of control variables decreased the grant amount advantage of women applicants compared to men by 22 percent, suggesting that variations in control variables are somewhat responsible for amounts of grants received by women applicants. We also discerned whether bootstrap results are different when using the logarithm of grant amount. Results were substantially the same (see Appendix 1).[5] We performed block tests of multiplicative interactions of racialization and gender. Racialized women applicants received higher amounts of grants than their counterparts ($b = 1695$, $P = .01$). In addition, the multiplicative interaction of racialization and year showed that the racialized group ($b = -168$, $P = .001$) received lower award amounts in recent years. The three-way interaction of racialization, gender and year was also significant ($b = 126$, $P = .05$), suggesting improvement in racialized women's' grant amount in recent years.

TABLE 3. Bootstrap Regression Coefficients and Predictors

	Model 1		Model 2		Model 3		Model 4		Model 5		
	B	Sig	B	Sig	B	Sig	B	Sig	B	SE	Sig
(Constant)	31232	***	31084		30614	***	27671	***	27137	339	***
French	134		-438		-450	*	360		-507	289	
European	-159		-242		-209		-191		-322	243	
Racialized	-1230	***	-1261	***	-1197	***	-1212	***	-1269	298	***
Googled	-7		-37		-87		-61		-114	244	
Quebec			1145	***	1205	***			1805	234	***
Women					1078	***	772	***	842	179	***
Social Sciences							5224	***	5248	221	***
Medical Universities							3915	***	4222	250	***
Comprehensive Universities							3400	***	3542	265	***
Insight Grants							6765	***	6745	381	***
Insight Development Grants							1204	***	1181	305	***
Year of award							-228	***	-224	24	***
R^2	0.001		0.001		0.002		0.041		0.043		
F-Value	4.3		8.2		12.5		125.9		120.7		
N	32076		32076		32076		32076		32076		

* P<.05; ** P<.01, *** P<.001.

TABLE 4. Bootstrap Regression Coefficients and Predictors

	Model 1			Model 2		
	B	SE	Sig	B	SE	Sig
(Constant)	27804	342	***	27279	358	***
English Men = reference						
English Women	441	296		486	299	
French Women	1271	412	**	502	408	
French Men	17	341		-890	360	*
European Women	282	336		215	328	
European Men	-231	309		-376	303	
Racialized Women	371	462		357	457	
Racialized Men	-1962	391	***	-2017	401	***
Googled	-50	241		-105	252	
Quebec				1809	222	***
Social Sciences	5219	209	***	5244	226	***
Medical Universities	3916	244	***	4223	259	***
Comprehensive Universities	3397	274	***	3540	287	***
Insight Grants	6770	367	***	6750	364	***
Developing Insight Grants	1210	296	***	1186	282	***
Year of award	-227	23	***	-223	23	***
R-s	0.042			0.044		
F-value	99.7		***	97.2		***
N	32076			32076		

* P<.05; ** P<.01, *** P<.001.

We also included a series of dummy variables which included combination of gender with various racialized groups. Table 4 presents the dummy variables representing combination of ethno-racialized groups with gender and using the British men as the reference group. It shows that all women in all groups received higher, and men groups lower, grant amounts compared to British men. However, only two of these combination dummy variables were statistically significant. Racialized men were awarded $1962 less and French women $1271 more than British men if Quebec awardees were not included in the model. When Quebec awardees were also

included in model 2, the differences in grant amount for racialized men increased further from $1962 to $2017 when compared to British while the coefficient for French women became insignificant. On the other hand, French men now received $890 less than the British men. This difference is statistically significant. Further analysis revealed no two-way or three-way interaction between gender, French and Quebec.

Discussion and Conclusion

John Porter (1965), in his seminal book, theorized and empirically substantiated that ethnic groups in Canada have substantial differences in access to opportunities, resources, and rewards. He attributed this inequality to a blocked mobility experienced by non-British ethnic groups due to immigration policies, educational differences, and the fact that British conquerors were able to institutionalize avenues of upward mobility based on their cultural values, attitudes, and behaviours. In Porter's words, "power belongs almost exclusively to those of British origin" (1965, 286). Much subsequent research supported Porter's imagery of Canada regarding elites. Specifically, among education elites, it has been shown (Nakhaie 1997) that the index of dissimilarity[6] among the educational elites in the 35-64 age groups was the highest for the British at 1.44, followed by French at 1.29, and "other" ethnic groups at .18 in 1981.

However, Porter's views have been challenged (Lian and Matthews 1998; Nakhaie 2006; Ogmundson 1993). This study showed that the image of vertical mosaic originally proposed by John Porter in 1965 has significantly changed among *research elites*, measured here by those who are able to secure SSHRCC research grants. The most important disparity between Porter's imagery and our study is that racialized men applicants received significantly lower amounts of awards than British, French, and European applicants. There are two possible implications of these findings: a) that we should, as argued by Ogmundson (1993, 389), "abandon" Porter's vertical mosaic imagery or b) or retain it, but reconceptualize Canadian society as a coloured mosaic (Lian and Matthews 1998; Nakhaie 2006). Our findings regarding the SSHRCC granting agency and research elites tend to support the latter.

We showed that women applicants received higher amounts of grants than men applicants (but see Hosek et al. 2005). A related finding on the interaction of gender with ethno-racial groups pointed to the advantage of being racialized women and/or French women compared to their counterparts. We are not sure why this is true, only that at times some thematic designated SSHRCC grants focussed on gender and racialized issues, which were closer to these academics' areas of interest. It is also possible that gender equity in SSHRCC committee membership and their sympathy to their historical disadvantage has benefited women and racialized women. Either way,

the finding on racialized women challenges the idea about homogeneity of racialized disadvantages. Moreover, these findings tend to challenge the "Matthew Effect" hypothesis that those who have will receive more (see Merton 1968; Wenneras and Wold 1997).

In addition to the above challenge to Porter (1965), this study showed that French Canadians, particularly women, are not "junior partners" (Porter 1965) among the Canadian research elites. There emerged no significant difference between French and British in awarded grant amounts. We also showed that Quebeckers were awarded significantly more than non-Quebeckers and that French Quebeckers received significantly higher awards than other groups. Surely, in this realm the notion of blocked mobility (Porter 1965) is not applicable to French (and Quebec) Canadians. It may be that the advantage of being French and from Quebec is somewhat related to a higher level of bilingualism among French and Quebeckers when compared to other ethnic groups and non-Quebeckers, respectively. Bilingualism may be important in grant decisions because SSHRCC typically requires its committees to have bilingual individual members able to compare and rank applicants regardless of the language of the application. This requirement could produce bias in decision-making both because of French ethnic ancestry and because of a higher tendency of relationships between committee members and applicants. Due to a smaller population and greater cultural homogeneity when compared to various ethno-racialized groups, French committee members may be positioned to privilege Quebec and French applicants. This argument is consistent with Wenneras and Wold's (1997) research that suggested applicants affiliated with the resource control allocation panels were more successful than their counterparts. To the extent that committee members rank French and/or Quebec applicants higher than others, the likelihood of an applicant receiving all or most of the amount requested tends to increase.

In an attempt to discern the role of SSHRC committee and administrators on the allocation of grant size, the lead author contacted SSHRC officers for each type of grant. Two officers responded. They stated that cuts to grant amounts are not across the board and occur in two stages. First, ineligible expenses are removed from the budget ahead of the adjudication. Second, peer-review committees cut the grant amount after an application is discussed. Related to the above, administrators adjust the amount awarded based on the peer review. Therefore, the ethno-racial composition of the peer-review committee and that of the applicant in addition to familiarity with the applicant may produce bias in grant amount. An alternative explanation may be sought in the idea of representation by the population. If SSHRCC, immediately following adjudication of applications, makes a final decision of "who gets how much" based on regions of Canada, this would be more a political decision of a federal government agency and not based on merit as would be expected.

Another challenge to the vertical mosaic imagery is evidence of similar outcomes of Europeans, whom Porter called the entrance group, and the British grantees. The evidence that European and French are not significantly different from the British in this study may point to the cognitive dimensions of intergroup relations (Alba and Nee 2003; Schwartz 2014; Shibutani, Kwan, and Billigmeier 1965). The cultural fit model suggests those with similar ethnic and cultural backgrounds as those of the dominant British group are more likely to be successful than other groups. They can think, express themselves and act in a manner consistent with thoughts and behavioural expectation of the dominant group because their underlying values and attitudes are similar. As such, Europeans' success in grant amount points to their ability to write grant applications consistent with the sociocultural milieu prevailing in Canada. Alternatively, Europeans are more likely to be senior academic members who may apply for larger grants.

We also showed that university prestige has a significant impact on grant amounts. This may point to the "Matthew Effect" as suggested by Merton (1968). This could be interpreted in two ways: first, researchers from prestigious universities receive greater recognition by SSHRCC while minimizing the success of faculty in less prestigious universities. This is highly probable because SSHRCC tends to ask well established researchers to review applications and become members of adjudication committees. They may tend to assign higher "scores" in adjudication to well-established researchers who they deemed to be like themselves. Alternatively, given the nature of their project, researchers from more prestigious universities apply for and receive larger grants, in part because they have more internal resources to do so, such as greater availability of seed or pilot grants and larger and better staffed research offices to aid in the writing and honing of grant applications, as well as more qualified graduate students available to potentially employ for the project.[7]

Beyond the conceptual and empirical implications above, our study also has important methodological implications. Because no significant difference was found between applicants' names identified through name dictionaries when compared to internet searches for sole applicants in our large sample, this strongly suggests using name dictionaries is a viable and accurate methodological tool for future studies of racial/ethnic inequality in this and other societal domains. Using name dictionaries has been used in several previous studies, including by the authors separately, but its widespread use has not occurred. While not 100 percent certain, this study nonetheless suggests where alternative data is unavailable, this methodological procedure is reliable and promises to reveal how both gender and racialization affect decision-making in universities as well as any other institutional domains where the effects of gender discrimination and racialization are suspected.

Policy Considerations

The study found that racialized university faculty who are successful in securing grants from SSHRCC have, on average, received lower amounts of funding after controlling for several other determinants of grant value. On closer investigation, it was discovered that racialized men grantees have, on average, received significantly lower amounts of funding than British men, and overall compared to all other gendered ethnic/racialized groups, including racialized women. Furthermore, the interaction of racialization and year showed a declining amount of grants awarded to racialized groups. These findings challenge the meritocratic notion of research awards and tend to restrict scientific breakthroughs and the rational pursuit of truth. It also may have an adverse effect on tenure, promotion, and the status of racialized groups. It could be argued that a disadvantage of about $2000 for racialized groups is not substantially significant to have such effects. Yet, we should keep in mind that this is an indication of the *average* gap between groups. When we analyzed the data by limiting the study to those who received a SSHRCC grant of higher than $100,000, the gap between the racialized and British groups was just under $11,000. This amounted to $13,980 for racialized men and $6,433 for racialized women compared to British men. There are at least three possible explanations for these gaps: a) the gaps will become small and potentially statistically insignificant when factors such academic rank, publication, citation or other factors are taken into account, b) racialized university faculty are less likely to apply for large grants, perhaps because they are mostly junior members in academia;[8] and c) there is discrimination at work.

To the extent that there is discriminatory bias in grant amounts, the finding is contrary to the stated goals of SSHRC, Employment Equity and Multicultural policies. Given increasing attention to the issues related to Equity, Diversity, and Inclusion (EDI) in recent years, it is vital that SSHRCC consider these disadvantages affecting racialized men applicants. Doing so could include greater availability of thematic designated SSHRCC grants focused on racialization. Given that characteristics of peer reviewers, applicants and their institutions are shown to be associated with the outcome (Graves, Barnett and Clarke 2011; Viner, Powell, and Green 2004), an alternative adjudication process may also be established where external referees and committee members blindly review the *detailed* grant application. In fact, SSHRCC can develop software that automatically hides applicants' names to allow for this. SSHRCC could also reach out to racialized individuals for application reviews and SSHRCC's committee membership. In the least, the findings suggest SSHRCC should make available data on ethno-racial origins, so it can be monitored over time to ensure grant amounts are allocated more equitably and to continually overcome racialization effects. SSHRCC could also follow the US NIH's lead in

developing a grant writing coaching program, mentioned earlier, but in this case, for early career social science and humanities researchers across Canada. It also follows that since SSHRCC's existing appeal process, noted earlier regarding post-doctoral awards, continues to be lacking, it too could be improved as part of the alternative process to overcome these and other potentially discriminatory effects based on other dimensions we noted above. While there is not space to discuss it here, we wish to also indicate an alternative process could permit, where warranted, an additional and binding blind review of an application's details by another external referee and then adjudication by an alternative Committee, possibly during the subsequent annual competition cycle.

A related but arguably less urgent implication concerns the award amounts for French (women) and Quebec applicants relative to others noted earlier. The SSHRCC requirement that board members be functionally bilingual should be revisited. Otherwise, the pool of board and committee members will continue to be too narrow, potentially leading to deleterious effects. With the declining proportion of French Canadians in the Canadian population and given that we found that these applicants are apparently systematically, albeit only slightly, advantaged in the grant awarding process, the continued justification for this long-standing board composition requirement is becoming dubious. Still permitting French language applications to SSHRCC, while opening membership up to unilingual (including unilingual Francophones) and those with multilanguage capacities other than French, could also positively reduce the effects of racialization. This is because among bilingual individuals, 85.8 percent are born in Canada and 14.2 percent are immigrants, including racialized immigrants. Similarly, 80.7 percent of non-racialized compared to 17.5 percent of the racialized individuals in Canada are bilingual (Census 2016). Assuming this difference carries over to academia, from which committee members are drawn, this is a huge difference. While not a panacea, drawing from this decidedly wider pool of competent committee members, which would include more racialized immigrants, could also allow for the possibility of a truly blind review, since it would at least reduce the chance of committees identifying or knowing the applicant's existing work and reputation that comes from operating in smaller knowledge-producing or scholarly networks.

Limitations

Our method is not without limitations. First, it is based on a somewhat subjective perception of racialization/ethnicity, especially in rare instances where photographs had to be consulted as described above. Second, we are also cognizant that in a small minority of cases, there may have been inter-racial/ethnic marriages among recipients or preferences for, for example, anglicised (see Nakhaie 2001) or francophone

surnames (a common practice of immigrants to North America for generations) over names linked to ethnicity. For example, in Canada, many Korean immigrants adopted the 'Park' surname to replace one that would more immediately identify them as Korean. This anglicization, however, was truer for first names denoting gender than surnames, with individuals (or their parents) adopting a first name that was English (such as 'John' or 'Paul') rather than the original given name. A third limitation pertains to the photograph which reflects the authors' perceptions of race from which ethnicity/racialization was then deduced rather than a direct indicator of ethnicity. However, because we limited the number of ethnic ancestries to four groups, we think this would only bias distinctions among British, French and Europeans and have minimal effect on our overarching research question concerning differences between racialized and non-racialized groups. Also, minimizing the number of ethno-racial groups may fail to reflect the heterogeneity of racialized groups. To the extent that differential treatment of applicants by reviewers and committee members is present, one might expect that there would be differences in award outcomes within each of the European and racialized groups. For example, Eastern Europeans and Blacks may be disadvantaged. A related limitation concerns Black Canadians who have or whose ancestors adopted an Anglo surname, that of another dominant group, or the surname of their enslavers upon emancipation, their 'race' thereby becoming invisible through generations and to us. To some extent, we accounted for these limitations in two ways. First, as discussed above, we separated name dictionary identification from Google search identification and tested for the differences – the difference in amounts of awards between the two groups was not statistically significant. Second, one of the authors of this article examined a sample of 20 cases drawn randomly from the larger sample to discern whether the assessments agreed. For all 20 there was complete agreement about gender and ethnicity.

Another limitation is that our data measures amount of grants awarded and not grant success (whether the grant was awarded or not). This means the observed differences in grant amounts may be a function of applicants requesting higher or lower amounts due to the subject matter or other reasons perhaps related to teaching or other workload factors. Although this limitation should be kept in mind when interpreting results, we assume this does not affect our conclusion because there is no reason to assume that racialized applicants (or women) request lower (or higher) grant amounts, especially because we account for discipline, university status, type of grants and the year of award. In fact, as an example, a study of gender differences in amounts requested and awarded showed that "women request and receive slightly more than men" (Hosek et al. 2005, 25). A final limitation is that our data is devoid of applicants' Curriculum Vitaes, including applicants' full publication record.[9] However, given that we are evaluating amounts of grants among those whose applications have been successful, academic accomplishment has likely already been considered.

Notes

1. For an insightful retrospective discussion of the background and context of this study, see Ginther (2022).
2. The results of the analysis with and without those with less than $10,000 awards were substantially the same.
3. It is possible that inclusion of co-investigators will result in a different outcome than that reported here. Unfortunately, the SSHRCC search engine does not include co-applicants' names. It only identifies if the applicant does or does not have a co-applicant. We also analyzed results for all grantees which included multiple applicants. The results were substantially the same.
4. The unknown racialized group (N=425) or 1.5 percent of the population is excluded from the multivariate analysis.
5. Table 3 shows that the explained variance or the amount of variation in the dependent variable that is due to ethnicity or even in combination with gender is low. In part, this has to do with the fact that ethnicity is not a good predictor of grant value. That is, the model does not have a high predictive power. Alternatively, the low variance is a function of the number of dummy variables for ethnicity. Normally, the larger the number of categories, the higher the variation. Future research may consider including a larger number of ethnic groups.
6. The index of dissimilarity represents the ratio of the proportion of the ethnic group to the corresponding proportion of the Canadian population. A figure above 1 denotes overrepresentation and a figure below 1 suggests underrepresentation.
7. This resource differential recently became blatantly evident to one of this paper's authors when s/he was asked by a larger, more prestigious Canadian university's research office to 'pre' review a SSHRCC Insight application for their applicant working in a similar area, prior to the annual competition deadline. This arrangement does not exist in his/her university or many other smaller Canadian universities.
8. Racialized university professors comprised 17% of the total in 2006; this increased to 21% in 2016 (CAUT 2018).
9. While the latter could in principle be derived through Google Scholar or other complete indices, we would have had to establish the record and corresponding citations up to the year *of every single award* during the 20-year period in question. Unfortunately, we lacked the resources to collect this information and there are few indices that cover this entire period. For example, Google Scholar only began in 2004. Additionally, these indices may not capture all publications that might be included in applications.

References

Alba, R., and Nee, V. 2003. *Remaking the American Mainstream: Assimilation and Contemporary Immigration.* Cambridge, MA: Harvard University Press.

Andres, L., and Adamuti-Trache, M. 2007. You've Come a Long Way, Baby? Persistent Gender Inequality in University Enrolment and Completion in Canada, 1979-2004. *Canadian Public Policy* 33.1: 93-116.

Banal-Estañol, A., Macho-Stadler, I., and Pérez-Castrillo, D. 2019. Evaluation in Research Funding Agencies: Are Structurally Diverse Teams Biased Against? *Research Policy* 48.7: 1823-1840.

Bazeley, P. 1998. Peer Review and Panel Decisions in the Assessment of Australian Research Council Project Grant Applicants: What Counts in a Highly Competitive Context? *Higher Education* 35.4: 435-452.

Blake, M., and LaValle, I. 2000. *Who Applies for Research Funding? Key Factors Shaping Funding Application Behaviour Among Women and Men in British Higher Education Institutions.* The Wellcome Trust; London, England.

Bonikowska, A., Drolet, M., and Fortin, N. 2019. Earning Inequality and the Gender Pay Gap in Canada: The Role of Women's Under-representation Among Top Earners. *Economic Insights;* Statistics Canada, Communications Division 11-626-X. No. 088.

CAUT, 2018. *Underrepresented & Underpaid: Diversity & Equity among Canada's Post-Secondary Education Teachers.* April 2018. www.caut.ca.

Census 2016. *PUMF 98M0001-E-2016-individuals_F1.* Statistics Canada.

Cuneo, C. 1990. *Pay Equity: The Labour-Feminist Challenge.* Toronto, ON. Oxford University Press.

Day, T. E. 2015. The Big Consequences of Small Biases: A Simulation of Peer Review. *Research Policy* 44.6: 1266-1270.

Eblen, M. K., Wagner, R. M., RoyChowdhury, D., Patel, K. C., and Pearson, K. 2016. How Criterion Scores Predict the Overall Impact Score and Funding Outcomes for National Institutes of Health Peer-Reviewed Applications. *PloS One* 11.6: 1-17.

Ginther, D. K. 2022. Reflections on Race, Ethnicity, and NIH Research Awards. *Molecular Biology of the Cell* 33.1: ae1-ae4.

Ginther, D. K., Basner, J., Jensen, U., Schnell, J., Kington and Schaffer, W. T. 2018. Publications as Predictors of Racial and Ethnic Differences in NIH Research Awards. *PLOS* 13.11: 1-24.

Ginther, D. K., Haak, L. L., Schaffer, W. T., and Kington, R. 2012. Are Race, Ethnicity, and Medical School Affiliation Associated with NIH R01 Type 1 Award Probability for Physician Investigators? *Academic medicine: Journal of the Association of American Medical Colleges* 87.11: 1516-1524.

Ginther, D. K., Kahn, S., and Schaffer, W. T. 2016. Gender, Race/Ethnicity, and National Institutes of Health R01 Research Awards: Is There Evidence of a Double Bind for Women of Color? *Academic medicine: Journal of the Association of American Medical Colleges* 91.8: 1098-1107.

Ginther, D. K., Schaffer, W. T., Schnell, J., Masimore, B., Liu, F., Haak, L. L., and Kington, R. 2011. Race, Ethnicity, and NIH Research Awards. *Science (American Association for the Advancement of Science)* 333.6045: 1015-1019.

Graves, N., Barnett, A., and Clarke, P. 2011. Funding grant proposals for scientific research: Retrospective analysis of scores by members of grant review panel. *British Medical Journal* 343.7825: 680.

Gyorffy, B., Herman, P., and Szabó, I. 2020. Research Funding: Past Performance is a Stronger Predictor of Future Scientific Output than Reviewer Scores. *Journal of Informetrics* 14.3: 101050.

Hanks, P., and Hodges, F. 1988. *A Dictionary of Surnames.* New York, NY: Oxford University Press.

Henry, F., and Tator, C. 2009. *Racism in the Canadian University: Demanding Social Justice, Inclusion, and Equity.* Toronto, ON: University of Toronto Press.

Hosek, S., Cox, A., Ghosh-Dastidar, B., Kofner, A., Ramphal, N., Scott, J., and Berry, S. 2005. Gender Differences in Major Federal External Grant Programs. *Policy File,* RAND Corporation.

Hunter, A. 1986. *Class Tells: On Social Inequality in Canada.* Toronto, ON: Butterworth Pub Ltd.

Lamont, M. 2009. *How Professors Think: Inside the Curious World of Academic Judgement.* Cambridge, MA: Harvard University Press.

Laudel, G. 2006. The 'Quality Myth': Promoting and Hindering Conditions for Acquiring Research Funds. *Higher Education* 52.3: 375-403.

Leberman, S.I., Eames, B., and Barnett, S. 2016. Unless You are Collaborating with a Big Name Successful Professor, You are Unlikely to Receive Funding. *Gender and Education* 28.5: 644-661.

Li, P. 2000. Earning Disparities between Immigrants and Native-born Canadians. *The Canadian Review of Sociology and Anthropology* 37.3: 289-311.

Lian, J., and Matthews, R. 1998. Does the Vertical Mosaic still exist? Ethnicity and Income in Canada 1991. *Canadian Review of Sociology and Anthropology* 35.4: 461-82.

Lippert, R., Walby, K., and Zaia, M. 2019. Police moonlighting and gender difference: exploring paid detail security for men and women officers in North American police departments. *Security Journal* 32.2: 119-136.

Maclean's 2022. Maclean's University Rankings. https://education.macleans.ca/rankings/.

MacLysaght, E. 1964. *A Guide to Irish Surnames.* Dublin, IE: Helicon.

McGinn, M., Acker, S., Vander Kloet, M., and Wagner, A. 2019. Dear SSHRC, What do You Want? An Epistolary Narrative of Expertise, Identity, and Time in Grant Writing. *Forum: Qualitative Social Research* 20.1. https://www.ssoar.info/ssoar/bitstream/handle/document/61271/ssoar-fqs-2019-1-mcginn_et_al-Dear_SSHRC_what_do_you.pdf;jsessionid=B945AD628A86E357E8E6686D8ED5011E?sequence=1.

Merton, R.K. 1968. The Matthew Effect in Science: The Reward and Communication Systems of Science are Considered. *Science* 159.3810: 56-63.

———. 1973 [1942]. The Normative Structure of Science. In R.K. Merton (Ed.), *The Sociology of Science* (267-78). Chicago, IL: University of Chicago Press.

Nakhaie, R. 1997. Vertical mosaic among the elites: The new imagery revisited. *Canadian Review of Sociology* 34.1: 1-24.

———. 2001. Ethnic and gender distribution of sociologists and anthropologists, 1971-96: Canada. *Canadian Journal of Sociology* 26.2: 215-232.

———. 2004. Who controls Canadian universities? Ethnoracial origins of Canadian university administrators and faculty's perception of mistreatment. *Canadian Ethnic Studies Journal* 36.1: 92-111.

———. 2006. A comparison of the earnings of the Canadian native-born and immigrants, 2001. *Canadian Ethnic Studies* 38: 19-46.

———. 2007. Ethno-racial origins, social capital and income inequality. *Journal of International Migration and Integration* 8: 307-325.

Ng, E., Haq, R., and Tremblay, D.G. 2014. A Review of Two Decades of Employment Equity in Canada: Progress and Propositions. In A. Klarsfeld, L., Booysen, E., Ng., I. Roper, and A. Tali (Eds.), *International Handbook on Diversity Management at Work: Country Perspectives on Diversity and Equal Treatment* (46-67). Northampton, MA: Edward Elgar.

Ogmundson, R. 1990. Perspectives on Class and Ethnic Origins of Canadian Elites: Methodological Critique of the Porter/Clement/Olsen Tradition. *Canadian Journal of Sociology* 15.2: 165-177.

———. 1993. At the Top of the Mosaic: Doubts about the Data. *The American Review of Canadian Studies* 23.3: 373-386.

Ogmundson, R., and McLaughlin, J. 1992. Trends in the Ethnic Origins of Canadian Elites: The Decline of the BRITS?. *The Canadian Review of Sociology and Anthropology* 29.2: 227-242.

———. 1994. Changes in an Intellectual Elite 1960-1990: The Royal Society Revisited. *The Canadian Review of Sociology and Anthropology* 31.1: 1-34.

Porter, J. 1965. *The Vertical Mosaic: An Analysis of Social Class and Power in Canada.* Toronto, ON: University of Toronto Press.

Rees, T. 2011. The Gendered Construction of Scientific Excellence. *Interdisciplinary Science Reviews* 36.2: 133-145.

Schwartz, S. 2014. Rethinking the Concept and Measurement of Social Culture in Light of Empirical Findings. *Journal of Cross-Cultural Psychology* 45.1: 5-13.

Shibutani, T., Kwan, K., and Billigmeier, R. 1965. *Ethnic Stratification: A Comparative Approach.* New York, NY: Macmillan.

Side, K., and Robbins, W. 2007. Institutionalizing Inequalities in Canadian Universities: The Canada Research Chairs Program. *NWSA Journal* 19.3: 163-181.

SSHRCC. 2021a. Social Sciences and Humanities Research Council 2020-21 Departmental Plan. https://www.sshrc-crsh.gc.ca/about-au_sujet/publications/dp/2020-2021/dp-eng.aspx#6.

———. 2021b. Department of National Defence Research Initiative. https://www.sshrc-crsh.gc.ca/funding-financement/programs-programmes/dnd-eng.aspxesearch.

———. 2022. Social Sciences and Humanities Research Council 2022-23 Departmental Plan. https://www.sshrc-crsh.gc.ca/about-au_sujet/publications/dp/2022-2023/departmental_plan-plan-ministeriel-2022-23-eng.pdf.

Statistics Canada. 2017. Number and Salaries of Full-time Teaching Staff at Canadian Universities, 2016-2017. https://www150.statcan.gc.ca/n1/daily-quotidien/170425/dq170425b-eng.htm.

———. 2022a. Number and median age of full-time teaching staff at Canadian universities, by highest earned degree, rank and gender. https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3710007701.

———. 2022b. Number and median age of full-time teaching staff at Canadian universities, by highest earned degree, rank and gender. https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3710007701&pickMembers%5B0%5D=1.6&pickMembers%5B1%5D=2.1&pickMembers%5B2%5D=4.1&pickMembers%5B3%5D=6.1&cubeTimeFrame.startYear=1998+%2F+1999&cubeTimeFrame.endYear=2020+%2F+2021&referencePeriods=19980101%2C20200101.

Usher, A. 2011. Comparing Support for the Social Sciences and Humanities. *Strategic Research.* https://higheredstrategy.com/comparing-support-for-the-social-sciences-and-humanities/.

Viner, N., Powell, P., and Green, R. 2004. Institutionalized Biases in the Award of Research Grants: A Preliminary Analysis Revisiting the Principle of Accumulative Advantage. *Research Policy* 33.3: 443-454.

Weber-Main, A.M., McGee, R., Eide Boman, K., Hemming, J., Hall, M., Unold, T., et al. 2020. Grant Application Outcomes for Biomedical Researchers who Participated in the National Research Mentoring Network's Grant Writing Coaching Programs. *PLoS ONE* 15.11: e0241851.

Wenneras, C., and Wold, A. 1997. Nepotism and sexism peer review. *Nature* 387: 341-343.

Wheeldon, J. 2012. SSHRC, Post Docs, and Procedural Fairness at the Federal Court of Canada. *Our Schools/Our Selves* 21.4: 137-152.

APPENDIX 1. Antilog of Bootstrap Regression Coefficients and Predictors

	B	St. Error	Sig
(Constant)	10.07	0.011	**
French	-0.003	0.008	
European	-0.005	0.007	
Racialized	-0.024	0.009	**
Googled	-0.007	0.007	
Quebec	0.065	0.006	***
Women	0.033	0.005	***
Social Science	0.171	0.006	***
Medical Universities	0.143	0.008	***
Comprehensive Universities	0.119	0.008	***
Insight Grants	0.117	0.01	***
Insight Development Grants	0.048	0.01	***
Year of award	-0.004	0.001	***
R^2	0.04		
F-Value	112.7		
N	32076		

* P<.05; ** P<.01, *** P<.001.

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