T 213.736.1000 | 919 Albany Street
F 213.380.3769 | Los Angeles, CA 90015-1211
www.lls.edu

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Justin Hughes
Hon. William M. Byrne Professor of Law
213.736.8108
Justin.hughes@lls.edu

30 June 2019

Office of the Chief Economist
Mail Stop OPIA
U.S. Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313–1450

Via Email: successact@uspto.gov

Re: Comments on the Report Required by the Study of Underrepresented Classes Chasing Engineering and Sciences Success Act of 2018

Docket No. PTO-C-2019-0010

Dear Under Secretary Iancu:

In response to the Request for Comment Docket No. PTO-C-2019-0010, we the undersigned professors of law would like to submit the following comments.

We have no pecuniary interests before USPTO and respond to the Request because we recognize the importance of advancing women and minorities in STEM careers and inventorship as well as maintaining the integrity of and respect for the U.S. patent system. Some of us have written about the importance of the copyright system for opportunity for African-Americans and expressed concern about lack of parallel evidence of opportunity for minorities in technological sectors. *See* Justin Hughes and Robert Merges, *Copyright and Distributive Justice*, 92 NOTRE DAME L. REV 513 (2017).

We write you in response to one particular question posed by USPTO:

> **"(5) Should the USPTO collect demographic information on patent inventors at the time of patent application and why?"**

Our short answer to that question is a definitive **NO**. But we also believe that USPTO should support the establishment of a **separate non-profit entity** dedicated to gathering this kind of demographic information. USPTO should support the non-profit's collection, analysis, and dissemination of demographic information on inventor applicants, but the separation of the non-profit from USPTO and the Commerce Department would avoid any possible bias or *appearance of bias* that could come from this kind of information being held in-house at USPTO.

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DESIRABILITY OF HAVING THIS KIND OF DATA

In the past decade+ a number of federal agencies have worked to gather richer, more meaningful data on the citizen base they serve and the effectiveness of their grantees. https://2018.results4america.org/criteria/use-of-evidence-5-largest-competitive-grant-programs/ The idea that USPTO might collect demographic information on patent applicant inventors would seem part and parcel of the trend toward "data-driven" governance.

Having this kind of data would be extremely valuable for researchers and policymakers trying to address the underrepresentation of women and minorities in science and technology. Knowing more about patent applicants – and, therefore, the dispersion of inventorship among the population – is a laudable goal. Initial efforts by USPTO to calculate the percentage of women inventors filing patent applications has provided valuable insights (USPTO, PROGRESS AND POTENTIAL: A PROFILE OF WOMEN INVENTORS ON U.S. PATENTS (Feb 2019), as has parallel efforts by the World Intellectual Property Organization (WIPO) in relation to applications filed under the Patent Cooperation Treaty (PCT). MARTINEZ, RAFFO, AND SAITO, IDENTIFYING THE GENDER OF PCT INVENTORS, WIPO Economic Research Working Paper No. 33 (2016), available at https://www.wipo.int/edocs/pubdocs/en/wipo_pub_econstat_wp_33.pdf.

REASONS WHY USPTO SHOULD NOT COLLECT DEMOGRAPHIC INFORMATION ON APPLICANTS

Nonetheless, we believe that there would be significant reputational danger to the American patent system if USPTO collected demographic information on patent applicant inventors, including information on gender, ethnic or racial group, and education level. If USPTO collected such information, there would invariably be *allegations of bias*. Indeed, it might be virtually impossible for the agency to avoid the appearance of bias.

We believe this would be true no matter what precautions were taken intra-agency to ensure that patent examiners did not have access to demographic information concerning individual applicants. Although the agency might work hard to ensure that there is a total firewall between the personally-identified demographic information and patent examiners, the public would never be sure; there would inevitably be stories of bias for or against particular applications based on the characteristics of the inventors. USPTO collection of this kind of data about individual patent applicants could open the agency up to lawsuits alleging racial, ethnic, and/or gender bias in patent grants.

Beyond allegations of bias for or against particular patent applications, there will invariably be variations between the average rate of patent grants (or the average rate of patent grants in different technology centers) and the corresponding rates for women and different ethnic groups.

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Whenever the agency released aggregate demographic information on applicant inventors, the examining corps might face allegations of *systemic* bias for or against certain groups.

ESTABLISHMENT AND OPERATION OF A NON-PROFIT TO COLLECT, ANALYZE, AND DISSEMINATE DEMOGRAPHIC INFORMATION

We believe that the better model would be to establish a long-term structure by which this kind of demographic information is effectively collected and analyzed by an outside group, perhaps a non-profit entity supported by a combination of funding from NSF, USPTO, and private companies committed to increasing opportunity for women and minorities in STEM careers.

Once established, this non-profit could work closely with USPTO such that when a patent application comes in, each named inventor would receive a communication from USPTO introducing the non-profit and its mission as well as urging the applicant inventors to participate in the non-profits survey efforts. This communication – which could be repeated at multiple stages in the arc of application/examination/grant – would explain how the non-profit is completely separate from USPTO; that USPTO examiners would never have access to individually-identifying information on inventor applicants held at the non-profit; and that the non-profit would only disseminate statistical, non-PII data to the public, including USPTO. The non-profit would make binding commitments to release its non-PII data to any and all members of the public free of copyright or any other proprietary claim as well as to provide said data to USPTO only when the data is made available to the public.

(In this kind of system, we would recommend a mechanism that would allow the *applicant*(s) to report to USPTO that they have participated in the non-profit's data-collection, but we would not recommend the non-profit informing USPTO which applicants had already participated.)

Recognizing that there is balance between data-gathering, respondent fatigue/participation, and appropriateness of questions, information that should be *considered* for possible questions might include:

+ gender
+ ethnic group [using Census or Census-like categories]
+ highest education level achieved and field of study at that level (i.e. BS in mechanical engineering, PhD in Biology)
+ public or private high school? Science and math courses taken in high school?
+ country of birth [i.e. a neutral way to gauge contribution of first-generation immigrants]
+ years working in field relevant to invention for which patent is sought

Over time, data gathering might be expanded to include information on patent agents and attorneys, as access to the patent legal community is likely to be a factor in women and minority inventorship translating into patent applications.

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In all its activities, the non-profit could and *should* work with the USPTO Chief Economist in an advisory role – as long as the separation of agency and non-profit was maintained and transparent. This would include formulation of survey communications, formats for public release of data, etc.

Creating a structure to gather patent applicant inventor data built around a separate non-profit would effectively shield USPTO from criticism of bias, both individual and systematic, that would occur if the agency gathered the information itself.

At the same time, having the demographic information collected and analyzed outside the agency would both increase public confidence in the data and give USPTO some "breathing room" in how it responds to information released by the non-profit. For example, the initial demographic work on copyright registrations was done by scholars outside the U.S. Copyright Office (USCO), Robert Brauneis and Dotan Oliar, *An Empirical Study of the Race, Ethnicity, Gender, and Age of Copyright Registrants*, 86 GEORGE WASHINGTON LAW REVIEW 46 (2018), available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3158474. We think this separation both contributed to academic confidence in the study and eliminated the need for USCO to be immediately responsive to the data.

CONCLUSION

For all these reasons, we believe that USPTO should support the establishment of a **separate non-profit entity** dedicated to gathering demographic information on patent applicant inventors.

Thank you for your time and consideration.

Sincerely,

Justin Hughes
Hon. William Byrne Professor of Law
Loyola Law School
Loyola Marymount University

Steven D. Jamar
Professor of Law
Howard University School of Law
Howard University

Robert P. Merges
Wilson Sonsini Professor of Law
Boalt School of Law
University of California at Berkeley

Lateef Mtima
Professor of Law
Howard University School of Law
Howard University

[Institutional affiliations for identification purposes only]