

February 14, 2025

Christopher S. Marcum
Desk Officer for National Science Foundation
U.S. Office of Management and Budget

Suzanne H. Plimpton
Reports Clearance Officer
National Science Foundation

Via reginfo.gov and email

RE: Agency Information Collection Activities; Submission for OMB Review; Comment Request; 2025 National Survey of College Graduates (**FR Doc. 2025-00683**)

Dear OMB and NSF Officials,

Thank you for the opportunity to comment on the National Science Foundation's (NSF) National Center for Science and Engineering Statistics' (NCSES) information collection request related to the 2025 National Survey of College Graduates (NSCG). See 90 FR 3969 (January 15, 2025). My comments today follow an extensive line of public comments over the past 7 years requesting inclusion of sexual orientation and gender identity (SOGI) questions on NCSES' surveys, including the [2019](#), [2021](#), and [2023](#) NSCG cycles. At times these previous comments were submitted on behalf of 17 major NSF stakeholders such as the American Association for the Advancement of Science (AAAS) and the American Educational Research Association (AERA), and at other times on behalf of 1,700 scientists including Nobel laureates, members of the National Academies, university officials, and a broad range of constituents across the U.S. scientific workforce.

NCSES' Decision to Delay Consideration of Sexual Orientation Likely Violates Federal Law

NCSES' decision to exclude a sexual orientation (SO) question from the 2025 NSCG raises significant concerns and lacks proper scientific and legal justification. Despite NCSES' pilot results that unequivocally support SO's inclusion ([Appendix](#)), the agency now claims it must wait for results from the American Community Survey (ACS) SOGI Test for an unplanned benchmarking process. This contradicts prior agency commitments, imposes an arbitrary new standard, and introduces internal inconsistencies across survey items that undermine the scientific integrity of NCSES' decision-making process, in likely violation of the Administrative Procedure Act (APA). Further, NCSES' selective disregard of its own pilot data – picking and choosing which items it wishes to move forward with and apply its pilot data to – likely violates the Evidence Act and Paperwork Reduction Act (PRA), which mandate that statistical agencies engage in evidence-based decision-making based on established OMB data quality standards. Based on the evidence ([Appendix](#)), NCSES should immediately move forward with a SO item for the 2025 NSCG.

Specifically, NCSES' decision to delay consideration of SO by disregarding its own favorable pilot data, while simultaneously relying on those same data for its gender identity (GI) decision ([Appendix](#)), likely constitutes an "arbitrary and capricious" action (5 U.S.C. § 706(2)(A)) in violation of the APA. Agencies may not ignore their own factual determinations without a rational basis and may not introduce retroactive justifications to avoid previously supported agency actions (*DHS v. Regents of the University of California*, 2020). NCSES' claim that it must now wait for the ACS SOGI Test to conduct an unplanned benchmarking process with SO imposes an arbitrary new standard that is wholly unsupported by the administrative record ([Appendix](#)). Moreover, NCSES has applied this standard unevenly to different survey items – only to SO rather than GI or other items – despite these items' equally excellent methodological performance ([Appendix](#)). Such a post-hoc

and irrationally applied justification suggests politically motivated rather than evidence-based action, and likely violates statutory requirements under the APA, Evidence Act, and PRA, specifically because:

- a) Official NCSES and OMB records have indicated consistently for years that SOGI decisions for the NSCG were to rely exclusively on the results of NCSES' testing, with no relationship to any ACS testing.
- b) A GI item was previously added to the NSCG without waiting for the ACS SOGI Test results, showing that NCSES' rationale is internally inconsistent and that the agency can move forward with SOGI items independently from the ACS. Similar to the NSCG, other federal surveys use ACS as a sampling frame and are co-sponsored by Census, such as the National Health Interview Survey and National Crime Victimization Survey; these surveys have included SOGI questions for 10 years without any ACS testing.
- c) The ACS SOGI Test was announced only after the 2023 NSCG Bridge Panel was launched, which was OMB-approved for the explicit purpose of making immediate SOGI decisions for the 2025 NSCG. This indicates NCSES' rationale with the ACS is post-hoc and reflects a retroactive addition of new criteria.

Recent Executive Orders 14168 and 14151 Do Not Override NCSES' Statutory Obligations

Recent Executive Orders (EOs) issued after the 30-Day Federal Register notice have introduced legal uncertainties regarding the collection of GI data in particular, as well as SO data and more detailed race/ethnicity data currently under revision by OMB Statistical Policy Directive 15 (SPD-15). Specifically, EO 14168 directs agencies to collect only biological sex rather than gender-related data, and EO 14151 directs agencies to terminate all diversity, equity, and inclusion (DEI) policies and practices. However, EOs are subject to legal challenge and cannot cause an agency to violate existing federal law. Notably, these directives do not override NCSES' statutory obligations under the Evidence Act, PRA, and APA related to data quality standards, evidence-based decision-making, and proper notice-and-comment. Moreover, the extent to which these EOs directly pertain to federal statistical surveys is unclear.

NCSES Should Keep Gender Identity and SPD-15 Race/Ethnicity Items Intact Until Legally Attentive Guidance On Implementing Recent Executive Orders

Given the new policy landscape, NSF's General Counsel or OMB should provide legally attentive guidance to NCSES before any abrupt methodological changes are made to its surveys, particularly in light of the importance of these surveys' trends data. Until such guidance, NCSES should proceed with retaining the GI question added in 2023 and with adopting the more detailed SPD-15 race/ethnicity question, as currently proposed, but should additionally add the SO question.

In particular, NCSES should not react prematurely to EO 14168 by moving to now replace its existing two-step sex/gender approach (i.e., sex-at-birth and GI items) with an untested question about biological sex. For decades, the NSCG had used a conventional sex/gender question ("Are you male or female?"). After careful experimentation, NCSES adopted the two-step sex-at-birth/GI approach for the 2023 cycle. If based on its interpretation of EO 14168, NCSES now seeks to immediately replace the two-step sex-at-birth/GI items with a single question about biological sex prior to first conducting the necessary pilot research, such action would likely conflict with NCSES' mandates to maintain rigorous data quality standards established by OMB's Statistical Policy Directives, whose authority are derived from the PRA.

Using an untested single item about biological sex could disrupt sex-related trends data by introducing inaccuracies in how gender minority respondents report their sex or gender. This could have a substantial impact, as NCSES [estimates](#) a sizable percentage of gender minorities in the NSCG, particularly at younger age groups (NCSES has since [removed](#) these data tables). When the NSCG historically asked "Are you male or female?", which NCSES defines as sex data, transgender men and transgender women would have likely indicated "male" and "female", respectively, responding as if it were a gender question given the ambiguity. However, under the recently adopted two-step approach, these respondents would mark their sex as that which was given at birth, i.e., "female" and "male", respectively. NCSES made this change after extensive testing, which increases accuracy and data quality. Federal surveys have never asked sex at birth without

asking about gender, and [OMB](#) and the [National Academies](#) have explicitly cautioned agencies not to ask sex at birth without also asking gender. If the EO survives legal challenge, new testing is therefore needed to determine how best to ask about biological sex in isolation (without gender) in ways that can still preserve data quality. Until further guidance, OMB should allow NCSES to retain its proposed sex-at-birth/GI approach.

Conclusion

NCSES should immediately include SO in the 2025 NSCG, as its own pilot data clearly supports this decision and its sudden reliance on the ACS SOGI Test is unjustified. Delaying consideration of SO likely constitutes an “arbitrary and capricious” action in violation of the APA because: (a) NCSES and OMB have consistently indicated for years that SOGI decisions would be based solely on NCSES’ pilot data, without regard to the ACS; (b) NCSES already added GI to the NSCG without waiting on the ACS SOGI Test (as have other federal surveys that use the ACS as a sampling frame), thereby showing that NCSES’ rationale is internally inconsistent; and (c) NCSES invoked the ACS SOGI Test rationale in a post-hoc manner that retroactively introduces a new and arbitrary standard. Delaying consideration of SO therefore not only undermines NCSES’ credibility and statistical integrity but also likely violates federal law including the APA, Evidence Act, and PRA. The agency’s failure to include SO could also set a dangerous precedent, allowing statistical agencies’ research to be overridden by shifting political considerations rather than scientific evidence.

More broadly, NSF’s General Counsel or OMB should provide legally attentive guidance to NCSES on how to implement recent EOs given likely conflicts with statutory mandates and anticipated legal challenges. NCSES should not take premature action by now seeking to immediately replace its two-step sex-at-birth/GI items with an untested item for biological sex, as doing so without sufficient pilot research would contradict NCSES’ mandates to ensure rigorous data quality standards and would risk compromising trends data. Until further guidance, NCSES should collect SOGI data and detailed SPD-15 race/ethnicity data on the 2025 NSCG.

Thank you for your time and consideration.

Respectfully submitted,



Jonathan B. Freeman, Ph.D.
Associate Professor of Psychology
Columbia University

APPENDIX

Public Administrative Record

- **April 17, 2023:** Based on its pilot data in the 2021 NSCG Bridge Panel, NCSES proposed adding a GI item to the 2023 NSCG, without any relationship to ACS SOGI testing (which was not yet launched). Because of data quality concerns (and not concerns related to the ACS), NCSES decided to hold off on adding the SO item until further piloting. In its Supporting Statement, NCSES stated: *“Additional research is needed to understand how the breakoff rate and the question response options order affects the overall quality of the NSCG before we can move forward with confidence that data will accurately reflect the prevalence of sexual minority college graduates in STEM fields and provide utility for exploring reasons for and solutions to potential underrepresentation....NCSES plans to continue research, beginning with the 2023 NSCG bridge panel, to further explore the quality concerns associated with previous research efforts to collect sexual orientation data. We are hopeful that we can derive solutions through our upcoming studies, and as we continue conversations with other agencies and institutions about their survey designs and experiences. Respondents to the bridge panel will be asked one of the following two sexual orientation question options through the use of a randomized split-panel experimental design. The proposed question wording is in alignment with the OMB recommendations on the best practices for the collection of SOGI data on federal statistical surveys. We will compare the responses to the two question options using standard quality assessment metrics, including breakoff rates, item nonresponse rates, number of changed responses, and completion times. In addition, estimates from these question options will be compared against sexual orientation estimates of the nation’s college-educated population from surveys conducted by the National Center for Health Statistics (NCHS) and National Center for Education Statistics (NCES).”*
- **April 20, 2023:** OMB’s terms of clearance for the 2023 NSCG indicated that the new SOGI experiment in the 2023 NSCG Bridge Panel (and if necessary any additional follow-up experiments NCSES might need to conduct) would be the sole evidence NCSES would be expected to use for deciding about a SO item in time for inclusion for the 2025 NSCG: *“A two year clearance is provided consistent with an understanding that NCSES will brief OMB and FCSM colleagues on the results of the bridge panel embedded experiments for measuring sexual orientation as soon as they are available so that any additional testing can be done in advance of the 2025 NSCG.”* No mention is made to benchmarking with the ACS, and OMB’s language indicates it expects NCSES to include SO in the 2025 NSCG following the new pilot.
- **April 29, 2024:** Census announces the ACS SOGI Test.
- **May 23, 2024:** Based on NCSES’ SOGI field test in the 2024 Survey of Earned Doctorates (SED), NCSES added both SO and GI questions to the 2025 SED cycle (the SED does not use the ACS as a sampling frame). This was prior to the election of the new political administration.
- **January 13, 2025:** NCSES publishes its first official statistics using SOGI data by breaking data down by GI and sex at birth in official data tables [published](#) for the 2023 NSCG (these tables were later removed).
- **January 15, 2025:** For the 2025 NSCG, with a new political administration elected, NCSES proposes to now disregard its pilot data for the SO decision (which clearly supports adding SO), even though NCSES did appropriately use its pilot data for GI (see next section). In its Supporting Statement, NCSES states that: *“For the examination of potential modifications to the gender identity question wording, the 2023 NSCG Bridge Panel research did not uncover any reason to change the question wording used in the 2023 NSCG production data collection. As [a] result, for the 2025 NSCG, NCSES will continue to use the two-step sex-at-birth/gender identity question from the 2023 NSCG survey cycle. For the assessment of the response option ordering for the sexual orientation question, the 2023 NSCG Bridge Panel research found no significant difference in the response distribution due to the response option ordering. The Bridge Panel findings have been shared with the Census Bureau to help inform their on-going SOGI research efforts, including a proposed test of SOGI questions on the American Community Survey (ACS). The Census Bureau’s ACS is an authoritative source for demographic data used by federal and*

non-federal studies for benchmarking purposes to ensure consistency in survey estimates across different data collection programs. Given the critical role of the ACS in ensuring coordination and synchronization across the federal statistical system and its potential use as a benchmark for sexual orientation estimates, NCSES will await the findings from the Census Bureau's ACS sexual orientation research to guide future data collection decisions. As a result, NCSES will not include a sexual orientation question on the 2025 NSCG and will use the Census Bureau's ACS research, when completed, to inform our data collection plans for the 2027 NSCG."

- **January 20, 2025:** EOs 14168 and 14151 are signed.
- **January 31, 2025:** NCSES [removes](#) all SOGI-related reports and materials from its website, including 12 data tables that broke data down by GI and sex at birth (out of a total of 27 tables that [published](#) official statistics from the 2023 NSCG). For the remaining tables, if sex/gender is used, sex at birth (2023) is used in conjunction with the prior conventional sex/gender question ("Are you male or female?") (2003-2021) without making clear the 2023 version asks for sex at birth and is part of the GI context. OMB also [removes](#) SOGI-related reports and materials from its website.

Pilot Results for the 2025 NSCG

NCSES previously expressed concerns about the SO item, citing a high breakoff rate in a field test and a response order effect observed in an online convenience sample. However, both concerns had significant methodological [flaws](#). To address these issues, the 2023 NSCG Bridge Panel ($n = 5,000$) tested SOGI items using the [OMB-recommended](#) question design for SO and conducted a split-panel experiment to further examine the response order effect. NCSES also used the Bridge Panel to test an alternative question design for GI. The results are detailed in [Appendix J](#). While NCSES relied on its pilot data to inform its GI decision for the 2025 NSCG, it ignored the same evidence for SO, instead arbitrarily claiming that it must wait for ACS SOGI Test to conduct an unplanned benchmarking process that is not supported by the administrative record.

- **Response order:** As [predicted](#), NCSES did not replicate its response order effect obtained using an online convenience sample with significant methodological flaws, now finding no response order effect for SO, $p = .62$, thereby eliminating any concerns about order of response options.
- **Paradata:** NCSES corrected significant [flaws](#) in its prior method of calculating breakoff rates, now using the standard and scientifically appropriate metric. Breakoff rates did not raise concerns: SO and GI were both ~0%. Changed-answer rates were low: GI was 0.9% (N/A for SO). Previous-click rates were low: SO was 2.0% and GI was 1.0%. Item nonresponse rates were low: SO was 3.2% and GI was 0.6%. SO's nonresponse rate is considerably lower than comparable items such as salary (5.5%) and income (7.2%), as [provided](#) in the 2021 NSCG Bridge Panel Report, although NCSES does not provide the 2023 NSCG comparisons in [Appendix J](#).
- **Probe questions:** Self-reported comfort levels were similarly high for both SO and GI, with slightly more favorable responses for SO. A majority of respondents felt very comfortable with SO (66.7%) and GI (68.5%), while a small percentage skipped the probe, indicating no concerns (SO: 3.0%, GI: 2.2%). When asked about specific concerns, 24.5% skipped the series for both SO and GI, suggesting comparable levels of comfort. Slightly more respondents indicated "other concerns" for GI (7.4%) than SO (3.4%). While SO was viewed as more private (34.8%) than GI (27.8%), which is expected as they are different constructs, both were seen as useful to the NSCG at similar rates (SO: 63.5%, GI: 65.4%). Concerns about how data would be used were minimal for both (SO: 75.4%, GI: 78.0%). SO had a slight advantage over GI in terms of response accuracy (SO: 3.1%, GI: 5.6%) and completeness (SO: 7.7%, GI: 10.2%).

In short, the SO item performed excellently. Based on the evidence, SO should be included in the 2025 NSCG, particularly given that GI and [comparable items](#) like disability, income, and salary are included.