# Academic Placement Data and Analysis: 2017 Final Report

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September 30th, 2017

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## 1 Funding Details

From July 2016 to January 2017 the project was funded through Carolyn Dicey Jennings' research funds. The American Philosophical Association provided \$5000 in funds to be used between January and June 2017. Those funds were used to fund three Graduate Student Researchers (Patrice Cobb, Pablo Contreras Kallens, and Angelo Kyrilov) and two Undergraduate Research Assistants (Jessica Imes and Blair Macleod) in order to administer and analyze a survey, with a special focus on nonacademic placements. A third Undergraduate Research Assistant was funded through Jennings' research fund (Yang Lu).

## 2 Progress Updates

## 2.1 IRB Approval

The project continues to be approved for exempt status under UCM15-0033.

## 2.2 Personnel Changes

There were several changes in project personnel over the past twelve months:

- Evette Montes graduated from UC Merced and left the project in August 2016.
- Chelsea Gordon also left the project in August 2016 to work on other research projects.

- Jessica Imes and Blair Macleod were hired in September 2016 as Undergraduate Research Assistants.
- Pablo Contreras Kallens joined the project in January 2017 as a Graduate Student Researcher.
- Yang Lu was hired in February 2017 as an Undergraduate Research Assistant.
- Blair Macleod left the project in April 2017 to work on another research project.
- David Vinson graduated from UC Merced and left the project in May 2017.
- The UC Berkeley IRB approval expired and was not renewed, so Justin Vlasits left the project in May 2017.
- Jessica Imes left the project in June 2017 when funding from the APA ended.
- In July 2017 Angelo Kyrilov took up a faculty position at UC Merced, and so his status has changed from Graduate Student Researcher to co-Principal Investigator.

Current members of the project include: Carolyn Dicey Jennings (co-PI), Angelo Kyrilov (co-PI), Patrice Cobb (Graduate Student Researcher), Pablo Contreras Kallens (Graduate Student Researcher), Sam Spevack (Graduate Student Researcher), and Yang Lu (Undergraduate Research Assistant).

## 2.3 University List

The canonical university list is now complete and linked to the 2015 Carnegie Classifications for universities in the United States. New entries to the database are now made using a university search and drop down menu (see section 2.9.2), which allows those entering data to select from nearly 5,000 known universities, which are automatically linked to the canonical university list.

To help achieve this, Blair Macleod worked from September to November 2016, removing duplicates from the canonical university list, replacing some university names with official university names, and adding location information to all universities in the database. At the same time, Jessica Imes worked from September to December 2016 matching this canonical university list to our placement list, adding new universities to our canonical university list as needed (this work was updated by Carolyn Dicey Jennings in September 2017). As of September 2017, nearly

all placements have been matched to the canonical university list. That is, of 9,812 placements, 545 (6%) do not have a placement ID or are marked as being at an unknown university (e.g. "a university in Korea"). In the future, nearly all entered data should be automatically linked to the canonical university list. Exceptions may occur when a university is not in our database or because of some other error (e.g. a spelling mistake).

## 2.4 2016 Survey Coding

During August 2016, Pablo Contreras Kallens and Carolyn Dicey Jennings coded 2016 survey responses to the following question: "Please list three to five key words or phrases that describe theoretical perspectives, methodologies, and/or training that especially distinguish your graduate program." The coding manually assigned the keywords from the 2017 survey (Appendix A) to the free text answers of the previous question. These responses were used alongside the survey responses to the 2017 question, "Select from this list up to 5 keywords that you would associate with this program."

From October to November 2016 David Vinson and Justin Vlasits coded 2016 survey responses to the following question: "This question pertains to your current or most recent position of employment. Please describe your experience in your place of employment so far. Again, please be as detailed as you like, including any experiences that may be useful to other graduates and/or job applicants." Instructions for coding were as follows: "rate these responses, from 1-5, on the attractiveness of the placement described, keeping in mind the fit (or perceived fit) of that placement for that individual. So the best placement is the best fit, or the placement that makes that person maximally happy". Codes included:

- 1. Non-ideal placement
- 2. Below average placement
- 3. Average placement
- 4. Above average placement
- 5. Ideal placement

Coders were not aware of any details about the participants or their placements while rating these descriptions, nor were they aware of the purpose of rating these descriptions.

## 2.5 Program Review

From November 2016 to January 2017 Blair Macleod collected faculty data on 190 PhD programs in philosophy. She recorded:

- Title, for full-time faculty only (included Assistant, Associate, or Full; excluded part time, affiliate, or emeritus)
- Area of Specialization Category, for first listed area only (categories include LEMM Philosophy of Action,
  Epistemology, Philosophy of Language, Metaphilosophy, Metaphysics, Philosophy of Mind, and Philosophy
  of Religion; Value Theory Aesthetics/Art, Applied Ethics, Philosophy of Gender/Race/Sexuality/Disability,
  Philosophy of Law, Normative Ethics, and Social/Political Philosophy; History and Traditions 17th/18th/19th/20th
  Century Philosophy, African/Africana Philosophy, Ancient Greek and Roman Philosophy, Asian Philosophy,
  Continental Philosophy, European Philosophy, Medieval and Renaissance Philosophy, and Philosophy of the
  Americas; Science, Logic, and Math Philosophy of Biology, Cognitive Science, Computing and Information,
  General Science, Logic, Mathematics, Physical Science, Probability, and Social Science)
- Gender, using name and appearance (recorded number of women)
- Race/Ethnicity, using name and appearance (recorded number of faculty who appeared to be at least partly Black/African American, Asian/Pacific Islander, Hispanic, or Native American).

## 2.6 Data Gathering and Data Checks

The APDA project considers the records for 135 PhD granting programs in its database to be complete for the years 2012 to 2016 (see Appendix B). These programs were included in the analyses and reports in "Program-Level Analyses and Graphs." Most programs without a placement page were excluded. Those programs without a placement page that were included had both provided placement information to APDA and had libary records that enabled APDA to verify the total number of graduates per year from that program.

From December 2016 to March 2017 Jessica Imes updated the records in our database using program placement pages, where available. 1,502 graduates of all years were added by Jessica Imes in this period.

From January to April 2017 Blair Macleod updated the records in our database using ProQuest, working on only those programs marked as complete by Imes and concentrating on graduates between 2012 and 2016. ProQuest

provides a record of most dissertations and theses in North America with "growing international coverage." One can search for a specific university, department, subject, and time period. Using this method Macleod was able to add any missing graduates into our database, precluding the need to gather graduation numbers from other sources. (Inconsistent graduation numbers proved a challenge for earlier APDA reports.) 337 graduates were added by Blair Macleod in this period.

From April to September 2017 (with a break between June and September) Yang Lu did a final error check on the programs reviewed by Imes and Macleod. Lu checked all categories of data, but focused on position title (especially the status of permanent versus temporary). Lu corrected 864 records in this period.

In August 330 2017 PhD program representatives and 3,775 PhD graduates were invited to update their data in the APDA database.

In September 2017 Carolyn Dicey Jennings and Pablo Contreras Kallens checked any programs left unchecked by Imes, Macleod, and Lu. Jennings and Contreras Kallens used program placement pages, ProQuest, library dissertation lists, and other public information to complete records in the database, concentrating on graduates between 2012 and 2016. Jennings added 376 graduates to the database in this period.

In these checks several issues arose:

- placement pages undergo structural changes, move, and disappear (e.g. Macquarie University), so automation is unlikely to be successful
- many placement pages are incomplete (e.g. Rice University) and only some of them are explicit about this (e.g. University of British Columbia)
- many placement pages are less complete than APDA, missing both graduates and even the tenure-track placements of graduates (e.g. a graduate of DePaul University who was listed as "unknown" has a tenure-track placement at Emory University)
- some placement pages are organized by graduation year, but some are organized by placement year, and many are not clear about this (e.g. York University)
- many placement pages have removed the names of their graduates, making it more difficult to check their records (e.g. Harvard University)

• many placement pages do not have a record of nonacademic placements, and only some are explicit about this (e.g. University of Southern California)

For these reasons, it will be essential that any analyses of placement records perform error checks, such as those listed above, on a yearly basis. It may also be useful for the APA and other professional organizations to advise programs on how best to present their placement data. The issue of making names public is a difficult one, requiring that one weigh privacy against transparency. We have decided not to make names public on our website, and many placement pages now do the same. Yet, if all programs do this then gathering placement data will become more challenging.

As examples of good placement pages, in our error checks we noted that the placement page of the University of Southern California was helpful in terms of organization. It had one line per graduate, organized by graduation year. It included area of specialization and placement information, with the types of positions coded. Yet, their page was missing placement year as well as some graduates now in academic positions (e.g. a graduate of 2015-2016 in an adjunct position). A placement page that appeared to be complete was that of the University of California, Irvine (LPS).

### 2.7 Nonacademic Positions

In August 2017 Pablo Contreras Kallens coded 410 nonacademic positions in the database to explore the types of nonacademic placements philosophers find. Using The International Standard Classification of Occupations (ISCO-08), Contreras Kallens coded each placement with five pieces of information:

- Job Class (ISCO-08 Level 1, e.g. 26)
- ISCO-08 Level 2 (e.g. 261)
- ISCO-08 Level 3 (e.g. 2611)
- Name of Job (e.g. Lawyer)
- Industry Sector (e.g. Law)

The following list of positions, taken from the ISCO-08 Level 3 list of occupations, in order from highest to lowest number of placements for positions with at least 3 placements, should give a sense of the diversity of positions occupied by philosophers: Administration Professionals; Lawyers; Philosophers, Historians and Political Scientists; Managing Directors and Chief Executives; Policy Administration Professionals; Secondary Education Teachers; Software Developers; Health Professionals Not Elsewhere Classified; Authors and Related Writers; Teaching Professionals Not Elsewhere Classified; Management and Organization Analysts; Personnel and Careers Professional; Religious professionals; Research and Development Managers; Database Designers and Administrators; Database and Network Professionals Not Elsewhere Classified; Education Managers; Law Clerk; Legal Professionals; Psychologists; Web and Multimedia Developers; Environmental Protection Professionals; Financial Analysts; Advertising and Marketing Professionals; Education Methods Specialists; Senior Government Officials; Accountants; Archivists and Curators; Policy and Planning Managers; Professional Services Managers Not Elsewhere Classified; and Systems Administrators.

The chart in Figure 1 depicts the percentage of these nonacademic placements in each Industry Sector.

## 2.8 2017 Survey Design

From January to April 2017 Pablo Contreras Kallens developed a new survey for philosophy PhD graduates, updating the survey developed in 2016 by Chelsea Gordon and Sam Spevack. Development of the survey was achieved in consultation with the entire APDA team, through a series of bi-weekly meetings from February to April 2017.

## 2.8.1 Survey Goals and Redesign

In redesigning this year's survey, our goals were to, first, expand the range of the topics of the questions aimed at those in academic positions to include information on their working conditions; second, broaden the scope of the questions to gather specific information about PhD graduates with non-academic employment; and finally, to adjust the questions from 2016 that resulted in data that were difficult to analyze.

The first set of modifications aimed to include in the gathered data information not only about the place and type of employment, but also on more specific features of graduates' working conditions. With this information, we aimed to make the picture of the relationship between graduation and employment more complete. Moreover, it

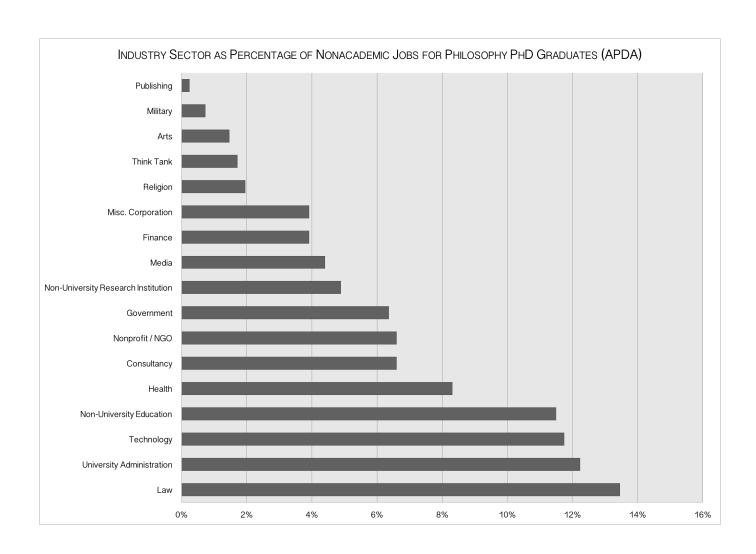


Figure 1: Industry Sector as a Percentage of Non-academic Jobs For Philosophy PhD Graduates (APDA)

would provide a way to further explore interactions between academic (e.g. AOS, graduation year) and demographic factors (e.g. gender), on the one hand, and features of the graduates' employment (e.g. salary), on the other.

The second set of modifications was aimed at a substantive goal of this year's project: the inclusion in our data of graduates working outside of academia. After comments received from some of these graduates in 2016 regarding the specificity of the survey questions to academic employment, we decided to include a new set of questions specifically geared toward this group. This proved to be a difficult task, as "non-academic employment" is an extremely diverse category, even when limited to the jobs that the graduates in our database perform. Moreover, because of that same reason, the set of possible questions that could be asked in order to characterize the different aspects of employment outside of academia is orders of magnitude larger than the scope of our project. Thus, we decided to focus on two different kinds of information: features of their current employment comparable to the ones we gathered in our survey of academic employment, and data on how participants thought their philosophical education prepared them for nonacademic work.

Lastly, we redesigned part of the 2016 survey and eliminated other parts. This was done on the basis of the difficulty of analyzing some results from that survey, and thus the lack of significant conclusions that could be drawn from them. Most notably, the answers to open text box prompts did not lend themselves to the linguistic statistical analysis that we had planned, and trends were difficult to observe in the data. Thus, we decided to introduce more structure into one of these questions, which was potentially informative about graduate programs in relation to the whole field, and to reduce and redirect the rest of these questions.

In the next section, we will state and explain the questions that appeared in the final version of the survey.

### 2.8.2 Survey Questions

The final version of the 2017 survey has three different sections: a first section that includes 3 questions for everyone; a second section that displays only for respondents with current academic employment and that includes 5 questions; and a third section with 4 questions that only graduates with non-academic employment could see and answer.

### **General questions:**

1. How likely would you be to recommend the program from which you obtained your PhD to prospective philosophy students?

Question 1 was also present in the previous version of the survey. The answer is provided through a Likert Scale that ranges from "Definitely would not recommend" to "Definitely would recommend." This question aims to get a direct rating of the graduate's perception of the overall quality of the program, as a result of their time spent in it.

2. Describe aspects of your program that you found most relevant in answering Question 1, especially the ones that would be useful to prospective students. These comments will remain anonymous, and we will release them only with your authorization.

Question 2 is a redesigned version of a similar question from the previous survey. This year, the purpose of the question was to gather specific comments of graduates about their program to be used in a hand-coded, program-by-program evaluation. For this purpose, we also asked the respondent's permission to use their raw comments in an anonymous form with the query: "Check this box to make your comment public. It will be displayed alongside other comments from graduates of your program, without any personal identifying information."

3. Select from this list up to 5 keywords that you would associate with this program.

Question 3 is the result of structuring a question from last year's survey: "Please list three to five key words or phrases that describe theoretical perspectives, methodologies, and/or training that especially distinguish your graduate program." The answer to this question was an open text-box, and we extracted keywords from their answers using two independent coders. There was not enough data to show any trends, and we wanted to streamline this process so that it did not rely on hand coding. Thus, this year we provided a set list of keywords, inspired by the keywords provided in the 2016 survey and by discussion between Carolyn Dicey Jennings, Justin Vlasits, and Pablo Contreras Kallens (see Appendix B for the list of keywords provided).

#### **Academic Employment questions:**

- 4. What is the distribution of your expected working hours (e. g. according to your job description) between teaching, research and service?
- 5. What is the approximate distribution of your actual working hours between teaching, research and service?

6. What is your ideal distribution of working hours?

Questions 4, 5, and 6 aim to characterize the structure of the distribution of time alloted by week to the various activities that academics are supposed to perform. The answers to these questions were provided through sliders that changed the proportion of hours the respondent allocated to *Research*, *Teaching* and *Service*. The answer also included a box where the respondents provided the total number of hours worked in a week. The different distributions (expected, approximate, ideal) highlight different dimensions of the respondent's employment. The difference between the answer to Questions 4 and 5 shows the amount of total working hours, and relative time spent in one activity over the other, that is not formally part of the job description. The difference between questions 5 and 6 points to the control that the respondent has over the amount of time they work, and the kind of activity they perform in that time. Finally, the difference between questions 4 and 6 is a measure of satisfaction of the respondents with the time distribution and demand of the jobs being offered in the academic job market.

7. What is your approximate yearly salary?

Question 7 aims to gather information about salary to show trends in the salaries of different kinds of positions, AOS, and other possible determinants.

8. What kind of placement was your priority after graduating from your program?

Although it is part of both the Academic and the Non-Academic placement surveys, the main objective of *Question 8* is to complement *Question 12* (see below) in knowing what the respondent's motivations for looking for their kind of employment were at the time of their placement. More specifically, we wanted to know if graduates who have non-academic jobs do so because they wanted to, or if they were not able to find academic employment.

### Non-Academic Employment questions:

9. How relevant would you say you graduate education is with respect to your primary employment?

One of the unknowns regarding nonacademic employment after a PhD in philosophy is the relationship between the education received and the ultimate type of placement. *Question 9* aims to clarify this by asking graduates for their perception of the relevance of their education to their job. A key feature of the question

is to separate "placement" from "employment": our goal was not to measure how relevant their education was to *obtaining their job* but how relevant it is to the *job that they currently perform*.

10. Please, elaborate on your previous answer providing details about how or why your graduate education is relevant or not for the work you perform. These comments will always remain anonymous, and we will release them only with your authorization.

Question 10 has an analogous objective to Question 2, in that it is designed to serve as a program-by-program source of information after being hand-coded. It also included an option to allow the display of the answer without processing.

- 11. What is your approximate yearly salary?
- 12. What kind of placement was your priority after graduating from your program?

Questions 10 and 11 serve the same goal as that of their counterparts in the Academic Placement page, questions 7 and 8. They aim to characterize the employment and motivation for employment of the graduates who work outside of academia.

## 2.9 Structural Development

## 2.9.1 Survey Management System

Due to the nature of the 2017 survey, where each participant received questions based on their placement information in the APDA database, it was necessary to develop an in-house survey management system. The survey system needed the ability to interface with the database in order to determine which set of questions to present to a respondent, as there were question sets aimed at everybody, people with academic employment only, and respondents with nonacademic employment only.

Angelo Kyrilov developed a survey management system which allows APDA team members to create and modify surveys, without the need for programming or web development. Each survey is represented as a row in a database table, with questions defined as rows of a related table. At present, the system supports the creation of the following types of questions: multiple choice, paragraph responses, keyword selection, range selection, and one-word-answer.

The main differentiating feature of this survey system is that it allows each survey question to be designated to a particular group of respondents. Available groups are as summarized in Table 1. The assignment of respondents to specific groups is completely dynamic, meaning that if a user updates their placement records, even if they are in the middle of a survey, the system will immediately update the questions visible to this user, based on their new placement information.

Group	Description			
Everybody	Any respondent has access to this question			
Any Academic	Only respondents whose latest placement record is an academic position			
Permanent Academic	Only respondents whose latest placement record is a permanent academic position			
Temporary Academic	Only respondents whose latest placement record is a temporary academic position			
Non-Academic	Only respondents whose latest placement record is a nonacademic position			
Unemployed	Only respondents for whom there are no placement records in the database			

Table 1: User Groups in Survey Management System

In addition to creating surveys with dynamically assigned questions, the system offers all the standard management features, such as setting up the period of availability for each survey, grouping questions on separate pages, and asking for respondents' consent to use their answer in publications. There is also an email system, that interfaces with the APDA database to retrieve emails of graduates we have on file, and send them an invitation to participate in a survey.

The system is designed to be easily extensible and highly scalable, allowing the APDA team to continue using it for all future surveys and questionnaires.

### 2.9.2 Enhancements and Bug Fixes

In addition to general bug fixes throughout the system, Kyrilov addressed an issue that had led to data inconsistencies in placement records. The reason for this was that placement officers updating records for their respective programs were asked to manually type the name of the institution where their graduates are placed. Placement officers from different programs sometimes referred to the same university in different ways, such as calling the

University of California, Los Angeles "UCLA." This causes a serious problem when attempting to aggregate data for a specific institution, which led to many hours of manual labor on the part of APDA team members, to go through the data and make sure institutions are named in a consistent way.

To address this issue, Kyrilov modified the data collection interface for program officers by removing the text field associated with placement institution, and replacing it with a searchable drop-down list of universities. This was made possible because we now have a complete canonical list of universities. It is an important feature that represents a significant labor saving for team members by keeping the data in placement records as consistent as possible.

Another useful feature that was added to the APDA website is a blog. It was not necessary to develop an inhouse solution for this, instead an open-source blogging platform was integrated to the website. Since the platform was built with the same open standards as the website, it integrates well in terms of look and feel. APDA team members have already begun posting on the platform.

In summary, the software development effort this cycle included the in-house development of a major feature, namely the survey management system, which allows the dynamic allocation of questions to respondents, based on their placement status in the database. The addition of a searchable drop-down list makes it easier for program officers to input placement information about their graduates, while maintaining the data in a consistent state. A blogging platform was also integrated into the website, allowing team members to effectively disseminate important findings. The work also included many bug fixes that made the system more stable and reliable.

## 3 State of The Database

The APDA database includes more than 30 tables. The contents of some of them are summarized below. Note that the data reported here and below were pulled on September 25th, 2017.

### 3.1 AOS

APDA currently uses 39 distinct areas of specialization (AOS), a list developed by Carolyn Dicey Jennings and Justin Vlasits in 2016, and updated by Jennings in 2017: Unknown, 19th / 20th, Action, Aesthetics, African, American (incl Latin American), Analytic (History of), Ancient, Applied Ethics (incl Bio and Medical), Asian, Biology (incl

Environmental), Cognitive Science / Psychology / Neuroscience / Linguistics, Comparative, Continental (incl Phenomenology), Decision Theory, Economics, Education, Epistemology, Ethics, Gender / Race / Sexuality / Disability Studies, German (incl Kant), History (General), Language, Law, Logic, Math, Medieval / Renaissance, Meta-Ethics, Metaphilosophy (incl Experimental), Metaphysics, Mind, Modern, Physics, Religion, Science (General), Social / Political, Technology, Value (General), and Other. These areas of specialization fit into one of five categories: Unknown; LEMM (Language, Epistemology, Mind, and Metaphysics); Value Theory; History and Traditions; or Science, Logic, and Math.

Of the 7,433 unique persons in the database, 2,451 have an unknown AOS (33%) and 2,409 have an unknown AOS category (32%). Of the other categories, 1,359 are in LEMM (18%), 1,672 are in Value Theory (22%), 1,195 are in History and Traditions (16%), and 798 are in Science, Logic, and Math (11%).

## 3.2 Gender, Ethnicity, and Race

APDA currently uses five gender categories: Man, Woman, Unknown, Other, and Prefer not to answer. In the first instance gender is matched using the first name, but this can be updated by individuals who choose to edit their own data. 5,290 are listed as men (71%), 2,118 (28%) are listed as women, and 25 (<1%) are listed as something else.

In the database, categories of ethnicity include Hispanic or Latino, Not Hispanic or Latino, Prefer Not to Answer, and Unknown. Categories of race include American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or Other Pacific Islander, White, Prefer Not to Answer, Unknown, and Two or More Races. Ethnicity and race are solely selected by individuals who choose to edit their data, and are otherwise marked as "Unknown." 559 of those in our database have selected an ethnicity, and 566 have selected a race (8%). Of those selecting an ethnicity, 4% identify as Hispanic and 3% prefer not to answer (93% identify as non-Hispanic). Of those selecting a race, 10% identify as something other than white (<1% American Indian or Alaska Native, 5% Asian, 1% Black or African American, and 4% as Two or More Races) and 3% selected Prefer Not to Answer (87% identify as White). In comparison, 8.5% of all PhD graduates in the United States between 1973 and 2014 who were U.S. citizens were "non-white," according to a review of data from the Survey of Earned Doctorates.

#### 3.3 Graduation Year

Graduates of the years 2011 to 2016 are better represented than those graduates of other years, in part because data gathering and data checking efforts have focused on those years. (Jennings founded APDA in 2011-2012.) 4,628 of 7,426 graduates in the database (62%) graduated 2011 or later. This chart in Figure 2 depicts the number of graduates in the APDA database per year, in comparison to the number of graduates recorded by the Survey of Earned Doctorates (SED) per year.

The Survey of Earned Doctorates only has data up to 2014, and only from the United States, but we can compare it to APDA numbers using graduation year and location information. For 2011 to 2017, around 70% of graduates in the APDA database came from programs in the United States and APDA appears to have around 90% of the graduates listed in the SED for 2011–2014. In 2011 APDA has 578 graduates total, and 418 from the United States, compared to 462 from SED (418 is 90% of 462). In 2012 APDA has 718 graduates total, and 489 from the United States (93%). In 2013 APDA has 714 graduates total, and 457 from the United States (88%). In 2014 APDA has 687 graduates total, and 427 from the United States (89%). In 2015 APDA has 648 graduates total and 421 in the United States; in 2016 it has 625 total and 470 in the United States; and in 2017 so far it has 297 total and 226 in the United States.

## 3.4 Placement Types

Graduates in the APDA database may have one of four current statuses: permanent academic position, temporary academic position, nonacademic position, or unknown position. Of these 7,433 graduates, 49% are in a permanent academic job, 33% are in a temporary academic job, 7% are in a nonacademic job, and 12% have unknown placement. Breaking this down further, 42% of the total graduates are listed as being in tenure-track jobs, 3% in permanent lectureships, 1% in permanent instructorships, <1% in permanent adjunct positions, 3% in other permanent academic positions, 11% in postdoctoral or fellowship positions, 5% in visiting positions, 6% in temporary lectureships, 3% in temporary instructorships, 3% in temporary adjunct positions, and 5% in other temporary academic positions. Looking at only those graduates whose current placement has a known 2015 Basic Carnegie Classification (3,684 total, including both permanent and temporary academic placements), 7% are in community colleges (Associate's or special focus two-year colleges), 33% are in doctoral institutions with the highest level of research activity (R1),

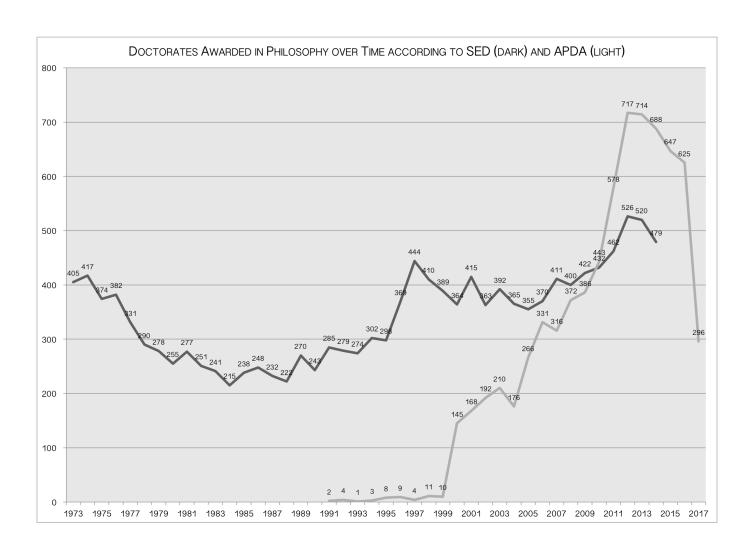


Figure 2: Doctorates Awarded in Philosophy over Time According to SED (dark gray) and APDA (light gray)

and 52% are in a doctoral institution of any kind.

These numbers change somewhat if we restrict this to graduates between 2012 and 2016, the years for which we have the most complete data (and so for which our data is less likely to be biased). In that case, 36% are in permanent academic positions, 40% are in temporary academic positions, 9% are in nonacademic positions, and 15% have unknown placement status.

If we include all placements in the database (i.e. not just graduates' current positions), 4,380 of the 9,812 are in permanent academic positions (45%), 4,823 are in temporary academic positions (49%), and 609 are in nonacademic positions (6%).

## 4 Analyses

The following analyses have been divided into three sections. The first set includes findings at the level of individual graduates (e.g. what predicts the placement outcomes for graduates). The second set includes findings at the level of programs (e.g. what programs have the best placement records). The third set includes findings at the level of the discipline (e.g. how are different programs connected to one another).

## 4.1 Individual-Level Analyses

### 4.1.1 Placement Preferences and Nonacademic Preparation

We found that while philosophy PhD graduates seem to prefer academic positions, only those in permanent academic positions seem better off than those in nonacademic positions, in terms of rated fit.

In 2017 we asked participants the following question: "What kind of placement was your priority after graduating from your program?" We found that those in academic positions strongly preferred an academic position: 395 of the 404 participants in academic positions who answered this question chose "academic" (98%), 3 chose "nonacademic," and 6 chose "no strong preference." Both those in permanent and temporary academic positions show this trend (98% of permanent, 97% of temporary). In contrast, 13 of the 21 participants in nonacademic positions who answered this question (62%) chose "academic," while 8 chose "prefer nonacademic" (38%).

Yet, academic positions may not always be the best fit for graduates. As described above, respondents to the

2016 survey were asked to describe their current placement, and those descriptions were then coded for level of fit by two separate coders. Taking the average of their ratings, we can examine the relationship between placement fit and placement type.

209 participants provided descriptions of their current placement in 2016. The average rated level of fit was 3.8 (5 is ideal placement, 1 is non-ideal placement). The highest average level of fit was for those with permanent academic jobs in PhD granting programs (4.5, n=42). Permanent academic jobs at all other programs had a 3.8 average (n=109), permanent academic jobs overall had a 4.0 average (n=151), nonacademic jobs had a 3.4 average (n=8), and temporary academic jobs had the lowest average, at 3.2 (n=40).

Worth noting is that there was a difference in the average graduation year of these participants, and that average level of fit varies with graduation year. Those in permanent positions had an average graduation year of 2011, whereas those in temporary and nonacademic positions had an average graduation year of 2013. The average level of fit ranged from 4.5 for graduates in 2000 (n=3) to 3.3 for graduates in 2015 (n=21), with the level of fit being higher for 2011 graduates than for 2013 graduates. Using a linear best fit line, we can calculate the expected fit of those in permanent, temporary, and nonacademic positions based on their average graduation year alone to be 3.7, 3.6, and 3.6. See graph in Figure 3.

Another factor to take into consideration here is the type of temporary academic position. Those in postdoctoral positions make up fewer of those in temporary academic positions in the 2016 survey (27%) than in the 2017 survey (38%). Those in postdoctoral positions had an average rated fit of 3.9, versus 3.0 for all other temporary academic positions.

Importantly, other results from the 2017 survey indicate that PhD granting programs may not be preparing graduates for nonacademic employment. When those in nonacademic positions were asked "How relevant would you say your graduate education is with respect to your primary employment?", answers averaged at around 3–"neither relevant nor irrelevant." The same number answered "very relevant" (13%) as answered "very irrelevant" (13%). In the text responses provided by these participants, the highest mentioned skills as relevant for nonacademic employment were critical thinking and writing (50%).

Perhaps that is one of the reasons that graduates stay in temporary academic employment longer than one might expect. For the most part, philosophy PhD graduates who are now in permanent academic positions were

<sup>&</sup>lt;sup>1</sup>This difference also occurred in the 2017 survey data: those in permanent positions had an average graduation year of 2011, those in nonacademic positions had an average graduation year of 2012, and those in temporary positions had an average graduation year of 2013.

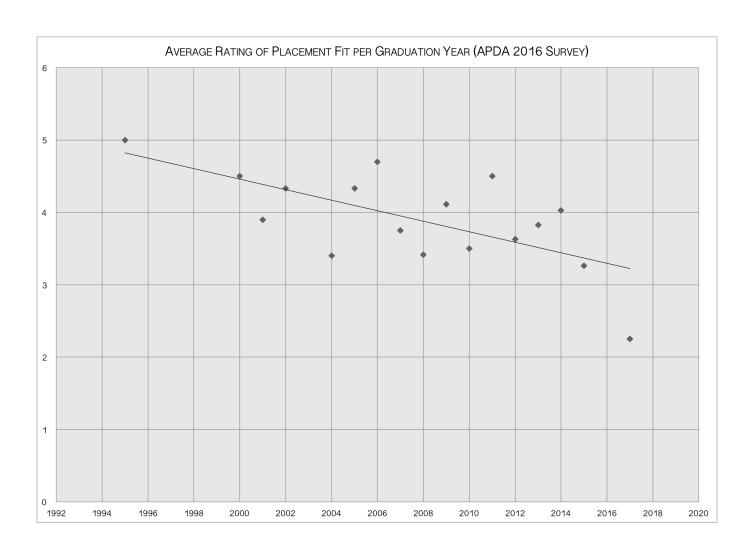


Figure 3: Average Rating of Placement Fit per Graduation Year (APDA 2016 Survey)

placed within a year of graduating. One's chances of obtaining a permanent academic job in a particular year past graduation are as follows:

- 1 in 5 in the first year after graduation<sup>2</sup>
- 1 in 8 in the second year after graduation<sup>3</sup>
- 1 in 8 in the third year after graduation<sup>4</sup>
- 1 in 12 in the fourth year after graduation<sup>5</sup>
- 1 in 17 in the fifth year after graduation<sup>6</sup>
- 1 in 22 in the sixth year after graduation <sup>7</sup>
- 1 in 23 in the seventh year after graduation <sup>8</sup>

Although the chances of finding permanent academic employment after one's 7th year are very low, 22% of all 2009 and earlier graduates in the APDA database are now in temporary academic employment. We suspect that

<sup>&</sup>lt;sup>2</sup>794 permanent placements by the first year after graduation of 3,974 graduates 2010 to 2016 with known placement year and no nonacademic position

<sup>&</sup>lt;sup>3</sup>347 permanent placements in the second year after graduation of 2,722 graduates 2010 to 2015 with known placement year, no nonacademic position, and no previous permanent placement

<sup>&</sup>lt;sup>4</sup>231 permanent placements in the third year after graduation of 1,945 graduates 2010 to 2014 with known placement year, no nonacademic position, and no previous permanent placement

<sup>&</sup>lt;sup>5</sup>116 permanent placements in the fourth year after graduation of 1,334 graduates 2010 to 2013 with known placement year, no nonacademic position, and no previous permanent placement

<sup>&</sup>lt;sup>6</sup>50 permanent placements in the fifth year after graduation of 836 graduates 2010 to 2012 with known placement year, no nonacademic position, and no previous permanent placement

<sup>&</sup>lt;sup>7</sup>21 permanent placements in the sixth year after graduation of 461 graduates 2010 to 2011 with known placement year, no nonacademic position, and no previous permanent placement

<sup>&</sup>lt;sup>8</sup>8 permanent placements in the seventh year after graduation of 180 graduates in 2010 with known placement year, no nonacademic position, and no previous permanent placement

<sup>&</sup>lt;sup>9</sup>That is, the most recent recorded placement of 588 of 2,614 graduates from 2009 and earlier is a temporary academic position.

this percentage is lower than the real percentage of graduates 2009 and earlier in temporary academic positions, since APDA data prior to 2011 are skewed toward permanent academic placements. If no other employment option were available, this might be unsurprising. Yet, given the availability of nonacademic employment, and that it on average appears to be a better fit than temporary academic employment (at least for those who answered our survey in 2016) with higher pay (see the section on salary differences below), we find the number of those in temporary academic positions to be higher than expected. In the future, it would be worthwhile to explore this preference in more detail. We suspect that graduates are not receiving adequate guidance on nonacademic placement, which would ideally take place prior to their first year of seeking employment. A model similar to that of economics, in which nonacademic jobs are treated as on a par with academic jobs in one's job search, might be desirable.

#### 4.1.2 Salary and Distribution of Labor

398 participants in the 2017 survey reported their annual salary. From the data so far it is clear that this information should be gathered in future years, as some trends are already emerging.

Most relevant to the previous section is the difference between those in academic and nonacademic positions. Survey participants included a small number in nonacademic positions (n=18, but as a percentage of the participants this is similar to the database as a whole, at 5%). These participants reported an average annual salary of \$103,035. The average reported salary of all other participants was \$65,426. Restricting this to those in permanent academic positions, the average was \$70,495. Thus, those in nonacademic positions appear to be making more than those in academic positions. This difference was significant, as you can see in the results of an analysis, below (see Table 2).

Given national discussions in the United States concerning the wage gap for gender and race/ethnicity (see the 2016 Pew Research Center report), we also decided to look at the intersection of salary and certain demographics. For this, we looked only at the salary of those in permanent academic positions. A small but representative sample of graduates of color in permanent academic positions reported their annual salary as \$63,333. In comparison, the average reported salary of all white, non-Hispanic graduates of color in permanent academic positions was \$69,440. Similarly, the average reported salary of the women who participated in the survey was \$69,278. For men, it was \$71,064. This points to the possibility of a wage gap in philosophy, both for gender and for race/ethnicity. Yet, in

<sup>&</sup>lt;sup>10</sup>Salaries reported in currencies other than USD were translated to USD in August 2017, based on that day's market rates.

an analysis that controlled for position type and other factors, the gender difference was significant, but reversed, whereas the race/ethnicity difference was not found to be significant (see Table 2). In the former case, it could be that restricting graduation year in that analysis changed the outcome (we looked only at graduates between 2012 and 2016). In the latter case, it could be a problem of small numbers (very few graduates of color reported salary information). These issues will require further exploration.

The analysis we performed was a generalized linear regression to evaluate predictors of annual salary. To investigate factors that may predict participants' reported yearly salary we looked at the survey responses from graduates between 2012 and 2016 (to match other analyses). Out of all 421 2017 survey participants, salary information for 242 participants (171 men) was obtained.

The outcome variable of interest was yearly salary. Predictor variables included the following: gender ("man" or "woman"), race/ethnicity (grouped into either "white, non-Hispanic" or "person of color"), Area of Specialty ("LEMM," "Value Theory," "History & Traditions," or "Science, Logic, & Math"), position obtained ("permanent academic," "temporary academic," or "non-academic"), and graduation year (2012-2016). All models were implemented in R.

In the table below are the coefficient estimates, their standard errors, t-tests and their associated p-values. The intercept is significant, simply signifying that it is different than zero. Gender was a statistically significant predictor of salary with women having a statistically significant difference in salary ( $\beta$  = 9005, t(158) = 4.44, p < 0.05). As expected, temporary academic positions earn significantly less than permanent academic positions ( $\beta$  = -16061, t(158) = -3.40, p < 0.001). Additionally, yearly salaries for non-academic positions were significantly greater than for permanent academic positions ( $\beta$  = 37309, t(158) = 4.44, p < 0.001).

Looking at all types of jobs and the change in salary over time, it appears as though average salary is lower for graduates of these more recent years than for earlier years, as one might expect, see graph in Figure 4.

In addition to exploring the interaction of salary and certain demographics, we also explored the interaction of these demographics with distribution of labor. That is, participants reported the total number of hours worked as well as the distribution of those hours spent on research, teaching, and service. Due to the higher service burden some have reported for women faculty and faculty of color (see, e.g., this *Atlantic* article on "invisible labor"), we were especially interested in this part of the distribution.

In the following, we looked at only those graduates in permanent academic positions. The total reported number of hours worked by men and women appeared to be the same. Both groups reported that they are expected to work

Coefficients	Estimate Std. Error	t-value	p-value
\$56,270	\$7,266	7.744	1.44e-12 ***
\$9,005	\$4,417	2.039	0.043273 *
-\$3,345	\$5,814	-0.575	0.565928
-\$2,786	\$5,141	-0.542	0.588708
-\$13,451	\$5,596	-2.404	0.017473 *
-\$3,849	\$6,010	-0.640	0.522907
-\$16,061	\$4,719	-3.404	0.000857 ***
\$37,309	\$8,404	4.439	1.76e-05 ***
\$1,043	\$5,601	0.186	0.852579
\$4,034	\$5,704	0.707	0.480593
-\$3,586	\$6,082	-0.590	0.556356
\$4,408	\$7,901	0.558	0.577775
	\$56,270 \$9,005 -\$3,345 -\$2,786 -\$13,451 -\$3,849 -\$16,061 \$37,309 \$1,043 \$4,034 -\$3,586	\$56,270 \$7,266 \$9,005 \$4,417 -\$3,345 \$5,814 -\$2,786 \$5,141 -\$13,451 \$5,596 -\$3,849 \$6,010 -\$16,061 \$4,719 \$37,309 \$8,404 \$1,043 \$5,601 \$4,034 \$5,704 -\$3,586 \$6,082	\$56,270 \$7,266 7.744 \$9,005 \$4,417 2.039 -\$3,345 \$5,814 -0.575 -\$2,786 \$5,141 -0.542 -\$13,451 \$5,596 -2.404 -\$3,849 \$6,010 -0.640 -\$16,061 \$4,719 -3.404 \$37,309 \$8,404 4.439 \$1,043 \$5,601 0.186 \$4,034 \$5,704 0.707 -\$3,586 \$6,082 -0.590

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Table 2: Results of a Generalized Linear Regression to Evaluate Predictors of Annual Salary

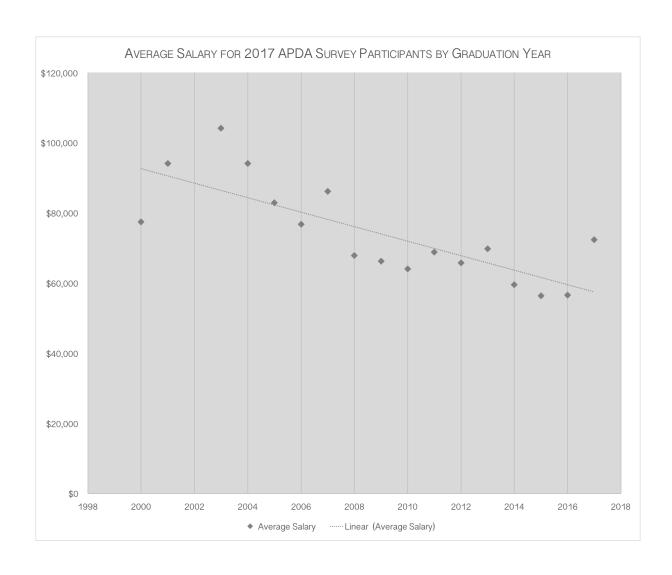


Figure 4: Average Salary for 2017 APDA Survey Participants by Graduation Year

40 hours a week, and both say that they in fact work 44 hours a week, with a slight difference in the ideal number of hours each would work: 41 for men and 40 for women (this last difference is significant; see Table 3).

In terms of the distribution of hours, on the other hand, there are some apparent differences. Women are in positions that expect them to do more research than they are actually doing (35% versus 31% of their total hours), whereas men are in positions that expect them to do about the same amount of research as they are actually doing (32.4% and 32.6%). Both would prefer to do more research, with men preferring a little more time for research than women (46% and 45%). In terms of teaching, the expected, actual, and ideal situation for men is one in which they do more teaching than women (45%, 45%, and 39% respectively for men; 41%, 44%, and 36% respectively for women). Finally, in terms of service, women report being expected to do only slightly more service than men (23.8% versus 23%), but actually doing more service (25% versus 23%), and, interestingly, wanting to do more service (19% versus 15%). These differences were not found to be significant (see Table 3).

Similarly, graduates of color report being expected to do more research than white, non-Hispanic graduates, but in their case they report actually spending more time on research (37% and 36% for graduates of color; 32% and 30% for white, non-Hispanic graduates). What's more, they would prefer to be doing much more research: 50% versus the 43% preferred by white, non-Hispanic graduates. The difference between men and women is mirrored in that between white, non-Hispanic graduates and graduates of color with teaching, in that white, non-Hispanic graduates report being expected to do more teaching, actually doing more teaching, and wanting to do more teaching (45%, 46%, and 40% versus 43%, 40%, and 32%). Finally, graduates of color would prefer that 18% of their time is devoted to service, compared to 17% for white, non-Hispanic graduates. Yet, they report being expected to devote 28% of their hours to service, compared to 23% for white, non-Hispanic graduates. As with gender, these differences were not found to be significant in an analysis (see Table 3).

For analysis purposes, graduation years were again restricted to 2012 to 2016. Separate regression models were developed for the expected distribution, the actual distribution and the ideal distribution of service, teaching, and research hours. As with the previous model, predictor variables were gender, race/ethnicity, Area of Specialty, position obtained, and graduation year. We found no statistically significant predictors in any of the 9 models. We did find significance for gender for ideal number of hours, as is mentioned above. Table 3 gathers these results.

Overall, across all types of positions, philosophy PhD graduates are working a reported average of 44 hours a week, while expected to work 40 hours a week, with an ideal of 41 hours a week. They are expected to put around a third of their time into research (34%), with the largest chunk of their time expected to go toward teaching (45%),

	Coefficients	Estimate Std. Error	t-value	p-value
Intercept (man; white, non-Hisp; LEMM; perm; 2012)	43.16759	1.13147	38.152	<2e-16 ***
Gender	-1.55104	0.67902	-2.284	0.0238 *
Race/Ethnicity	-0.12450	0.87399	-0.142	0.8869
Value Theory	0.26280	0.79896	0.329	0.7427
History & Traditions	-0.43985	0.86502	-0.508	0.6119
Science, Logic, & Math	0.03525	0.93445	0.038	0.9700
Temporary Academic	-0.47287	0.73455	-0.644	0.5208
2013 Graduate	0.51625	0.87802	0.588	0.5575
2014 Graduate	-0.58370	0.88934	-0.656	0.5127
2015 Graduate	-0.38522	0.94935	-0.406	0.6855
2016 Graduate	-1.19069	1.24061	-0.960	0.3388

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Table 3: Results of a Generalized Linear Regression to Evaluate Reported Ideal Total Working Hours

with service expected to take up around a fifth of their time (21%). Yet, graduates would prefer to do more research (45%), less teaching (38%), and less service (17%).

## 4.1.3 Predicting Program Ratings and Permanent Academic Placement

As will be discussed in the next section, participants in the 2016 and 2017 APDA surveys were asked "How likely would you be to recommend the program from which you obtained your PhD to prospective philosophy students?" To investigate factors that may predict participants' likelihood to recommend a program we looked at the survey responses from graduates between 2012 and 2016.

The outcome variable of interest we used was a 5-point Likert scale rating ranging from "Definitely would not recommend" to "Definitely would recommend." Below we use proportional odds logistic regression. Predictor variables again included the following: gender ("man" or "woman"), race/ethnicity (grouped into either "white, non-Hispanic" or "person of color"), Area of Specialty ("LEMM," "Value Theory," "History and Traditions," or "Science, Logic, and Math"), position obtained ("permanent academic," "temporary academic," or "non-academic"), and

graduation year (2012-2016). All models were again implemented in R.

Table 4 shows the values, their standard errors, t-tests, and their associated p-values. Two variables were statistically significant: gender (women were less likely to recommend their programs, p<.05) and AOS (those in both History & Traditions and Science, Logic, & Math were less likely to recommend their programs). By way of example, this means that we expect women graduates, as compared to men, to have a 0.54 decrease in log odds of recommending their graduate program, given all other variables in the model that are held constant. These can also be converted to proportional odds ratios by exponentiating the coefficient estimates. Therefore, we would expect that for women graduates, the odds of moving from "Definitely would not recommend" to a higher recommendation level is multiplied by 0.58, or 58%.

	Values	Std. Error	t value	p-value
Gender	-0.5355878	0.2536458	-2.1115577	3.472441e-02 **
Race/Ethnicity	-0.3187071	0.3193924	-0.9978544	3.183500e-01
Value Theory	-0.4234010	0.3065655	-1.3811110	1.672448e-01
History & Traditions	-0.9738430	0.3319029	-2.9341199	3.344950e-03 ***
Science, Logic, & Math	-0.8336709	0.3543779	-2.3524914	1.864812e-02 *
Temporary Academic	-0.8635042	0.5381761	-1.6045011	1.086036e-01
2013 Graduate	0.1818858	0.3187703	0.5705859	5.682804e-01
2014 Graduate	0.1659306	0.3419271	0.4852807	6.274773e-01
2015 Graduate	-0.2788178	0.3643569	-0.7652327	4.441330e-01
2016 Graduate	-0.3601030	0.5089632	-0.7075226	4.792418e-01
00 1 - (4444) (441 (4) (1) - (1)				

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Table 4: Results of Proportional Odds Logistic Regression to Evaluate PhD Graduates' Program Ratings

Finally, we investigated factors which might predict having obtained a permanent academic position versus a temporary academic position, a nonacademic position, or unknown position for graduates between 2012 and 2016, using their last reported or current position. The outcome variable of interest we used is a categorical variable for placement with two levels, permanent academic placement or other placement. A binary logistic regression is appropriate when the model estimates the value of a binary variable – in this case, having attained a permanent

academic placement versus not having attained a permanent academic placement. Participants were nested within PhD-granting programs, therefore we looked at a multilevel logistic model with a random intercept.

Unlike the previous analyses, in this analysis we sorted areas of specialization into two groups. This was to try to reflect gender differences in area of specialization that might be relevant to employment. In previous reports, we have been concerned that the standard way of organizing area of specialization does not adequately capture fine-grained differences (see, e.g., posts at the APA blog and Daily Nous). Yet, using all 40 areas of specialization in the database would mean losing statistical power. We decided to group areas of specialization according to a hypothesis: women are more likely to be in applied, interdisciplinary, and non-Western fields of philosophy. Since these areas are contained within each of the standard AOS categories, our previous analyses may not have gone far enough to control for the possibility that women tend to specialize in these fields, and that these fields are likewise the most in demand. Thus, three of us (Cobb, Contreras Kallens, and Jennings), sorted each area of specialization into one of two categories: "Core, Western" or "Applied, Interdisciplinary, Non-Western" (see Appendix C).

	Fixed effects	Estimate Std. Error	z-value	p-value
Intercept (man; Core, Western; 2012)	-0.75978	0.14137	-5.374	7.69e-08 ***
Gender	0.51246	0.09022	5.680	1.34e-08 ***
Applied, Interdisciplinary, Non-Western	0.22092	0.09013	2.451	0.01425 *
2013 Graduate	-0.25250	0.11956	-2.112	0.03470 *
2014 Graduate	-0.38951	0.12082	-3.224	0.00126 **
2015 Graduate	-0.49442	0.12477	-3.963	7.41e-05 ***
2016 Graduate	-0.74613	0.13019	-5.731	9.98e-09 ***

Signif. codes: 0 "\*\*\* 0.001 "\*\* 0.01 "\* 0.05 ". 0.1 " 1

Table 5: Multilevel Logistic Model with a Random Intercept to Predict Placement Outcome

There were 2,765 participants across 158 programs. All of our variables–gender, area of specialization (in this case, divided into "Core, Western" and "Applied, Interdisciplinary, Non-Western"), and graduation year (2012-2016)—were significant predictors of permanent academic placement. The log odds for women participants to have a permanent academic placement are .51, p < 0.001 when all other factors are held constant. This means that women participants were exp (0.51) = 1.665 times as likely to have a permanent placement when these other

factors are held constant. Those in Applied/Interdisciplinary/Non-Western fields were also more likely to have a permanent academic placement, compared to those in Core/Western fields (.22, p < 0.001), but this did not account for the gender difference we have observed in earlier reports. And all four graduation years-2013, 2014, 2015, and 2016-had decreased log odds of reporting a permanent academic placement as compared to 2012. The full output can be found in Table 5.

## 4.2 Program-Level Analyses

Much of the data in following three sections are presented in an Infogram, here.

### 4.2.1 Program Ratings and Comments by Past Graduates

In both 2016 and 2017 survey participants were asked to rate the graduate program from which they obtained their PhD from 1 ("Definitely would not recommend") to 5 ("Definitely would recommend"). For the 135 included programs (see Appendix A), a total of 672 graduates and an average of 5 graduates per program participated, providing an average rating of 3.86 ("Somewhat likely" to recommend that graduate program). Including only those programs with at least 5 participants, those programs with a mean rating greater than the average mean rating are listed below. This list includes 37 programs organized by mean rating, then by number of participants, and then by university name. Next to each university name is the number of participants and the mean rating in parentheses, followed by keywords selected by the survey participants (listed alphabetically for keywords selected by at least 3 participants, with the number of participants provided in parentheses), and public comments provided by the 2017 survey participants, as available (ordered by date provided):

## 1. University of California, Berkeley (n = 9, 5.00)Analytic(9), Epistemology(4), Historical(4), Language(4), Logic(4), Mind(6)

- "The faculty and graduate students are first rate; many of the faculty care deeply about teaching; smart and energetic undergraduates make the teaching component of the graduate program very rewarding; and the geographical location is unbeatable."
- "I found the atmosphere supportive; faculty were great and happy to work with grad students."

• "The most relevant consideration with respect to question 1, for me, would be placement record, followed by department climate. My PhD program has had quite a good placement record over the past few years (all things considered), and I found the climate to be very positive and supportive during my career there."

#### 2. Australian National University (n = 6, 5.00)

Analytic(3), Bioethics/Medical Ethics(5), Ethics(5), Metaphysics(3), Pluralist(7)

### 3. Georgetown University (n = 9, 4.89)

Bioethics/Medical Ethics(5), Ethics(5), Pluralist(7)

• "Helpful, Warm, Nurturing. They will go the extra miles to help you succeed."

### 4. University of California, Riverside (n = 6, 4.83)

Analytic(4), Continental(4)

• "The Dept at UCR is genuinely pluralistic, collegial, and supportive. It is also rigorous. Faculty and graduate students care about each other and the Dept. Faculty work very hard to help place graduates."

## 5. Harvard University (n = 8, 4.75)

Analytic(4), Early Modern(3), Ethics(3), Metaphysics(3)

• "Harvard profs set an inspiring example of doing creative work on important questions (not just chasing current fads and publication). The departmental culture was extremely caring, friendly and comfortable for me as a mixed race woman with various mental health diagnoses. And my advisors consistently went above-and-beyond to help me solve problems re: teaching, writing and the job market."

### 6. Massachusetts Institute of Technology (n = 7, 4.71)

Analytic(5), Epistemology(6), Ethics(4), Gender/Feminist(3), Language(6), Logic(3), Metaphysics(4), Mind(5)

- "Wonderful, collaborative graduate community."
- "Wonderful sense of community, very stimulating philosophically, fantastic faculty."

• "Faculty and other students in the program are very supportive, both from a strictly professional and from an emotional point of view. The program offers plenty of opportunity for high-quality philosophical interaction and students are usually encouraged to take an active role in department life."

### 7. University of North Carolina at Chapel Hill (n = 10, 4.70)

Analytic(7), Contemporary(3), Epistemology(5), Ethics(6), Historical(3), History and Philosophy of Science(6), Metaphysics(6)

• "Overall strength of the program; congeniality of the faculty; positive atmosphere among the graduate students; adequate funding; good location; lots of structure to the program; ample teaching opportunities"

### 8. Rutgers University (n = 12, 4.67)

Analytic(8), Cognitive Science(6), Epistemology(8), Ethics(4), Language(7), Metaphysics(4), Mind(4)

- "The amazingly high quality of the faculty and graduate students; the collaborative feeling of the environment among grad students and faculty (not competitive; lots of generous discussion); and huge institutional support, from both the faculty and the graduate school. Also, we have a great placement record, and a department (and former faculty, including my advisor) that supported me getting to a TT job long after I had graduated."
- "Amazing professors and fellow grad students, great academic culture, good funding, many professional opportunities, etc."
- "The graduate community was supportive and non-competitive. I felt my philosophical training was excellent, particularly in philosophy of language."

### 9. University of Pittsburgh, HPS (n = 9, 4.67)

Analytic(3), Biology(3), Cognitive Science(5), History and Philosophy of Science(7), Physics(6)

• "This program is appropriate for students interested in technical work in philosophy of science, with secondary historical interests. Students without background in a science should be prepared to get up to speed during their PhD."

- "The faculty and placement record speak for themselves. For philosophy of science students two of the most valuable features of Pitt HPS that may not be immediately apparent were (i) the numbers of visitors passing through the Center for Philosophy of Science (ii) a decent size and friendly graduate student body working on philosophy of science at various stages of the program (say 20-30 people) with whom you take graduate classes, learn from and bounce ideas off (and get career advice from older students)."
- "Quality of the faculty was high; quality of fellow graduate students was high; collegiality among graduate students was high; support from faculty and faculty advisers while in the program was high; support while on the job market was good; Pittsburgh is a pleasant and affordable city. However, some of these advantages are fragile and can change with time as faculty and graduate students come and go."
- "Support for students, even after graduation. Superb visiting scholars program at the Center for Philosophy of Science."

### 10. University of Wisconsin-Madison (n = 9, 4.67)

Analytic(5), Ethics(4), History and Philosophy of Science(5), Mind(4)

- "Good, consistent placement record over the past 10 to 20 years, large and well-publishing faculty with many areas of specialization, well-regarded by peers, in a very desirable location in a vibrant little city from which one can easily connect to other cities."
- "The department was incredibly supportive, particularly of the job search. The placement director works hard with students to be sure their materials will set them apart in the application process."
- "Very supportive environment amongst graduate students. Most faculty are interested in mentoring graduate students. Great placement mentorship."

## 11. University of California, Irvine, LPS (n = 6, 4.67)

Logic(5), History and Philosophy of Science(4), Naturalist(6), Physics(3), Social Science(3)

- "Excellent and supportive intellectual community; high standards for academic work; strong placement support and record."
- "My program emphasized self-directed research from early in graduate school, which I found empowering, and also was extremely helpful when it came to publishing and jobs. There was a lot of focus

on interdisciplinary work, including coursework in other departments. I found the graduate advising to be very good - each of my main graduate papers was read by 4-6 faculty members who gave helpful comments, without which I could never have managed to start publishing in early graduate school. I also enjoyed the climate, both graduate and faculty."

### 12. University of Colorado at Boulder (n = 8, 4.63)

Analytic(6), Applied(5), Ethics(5), Gender/Feminist(4), Metaphysics(3)

• "The program which which I received my PhD does an exceptionally good job training its doctoral candidates to become excellent teachers. The program has a broad research emphasis that spans applied ethics, value theory, political philosophy, metaphysics and epistemology. Although its strengths and weaknesses in this respect have changed a good deal since I graduated, it remains in the top 30 on the strength of faculty research and standing in the profession. Guidance for graduate students in how to proceed to find productive, interesting work in academic philosophy is particularly good in this program. I recommend it without reservation."

#### 13. Yale University (n = 12, 4.58)

Analytic(8), Early Modern(6), Epistemology(3), Ethics(5), Experimental Philosophy(3), Historical(5)

- "Financial support and extracurricular quality of life while in grad school was high. Influence of faculty in the discipline at large was great and consequently placement record was strong. It was a good place to learn how to teach philosophy."
- "For students interested in research at the intersection of philosophy and psychology, the program at Yale has no real comparison. There is now a formal program for pursuing a combined PhD in philosophy and psychology, and members of both departments are actively engaged in this kind of interdisciplinary work. It is also typical to combine this kind of research with classes/work in formal semantics."

## 14. University of Michigan (n = 15, 4.53)

Analytic(9), Epistemology(5), Ethics(7), Language(3), Naturalist(4), Physics(3)

- "The student body is always outstanding. Professors are extraordinary philosophers and great human beings. Both elements make of UofM an extraordinary place to learn and do philosophy. The only huge problem is the weather, which does in fact become a great obstacle on the way to graduation."
- "A rich intellectual environment; incredibly supportive and thoughtful faculty"
- "Michigan philosophy PhD students need to be highly motivated to advance through the program and develop professional contacts and skills, as there is little support from the faculty in either."

#### 15. **Baylor University** (n = 10, 4.50)

Analytic(7), Epistemology(5), Ethics(5), Historical(6), Metaphysics(8), Religion(9)

- "Excellent faculty. Warm, caring, and non-competitive personal relationships between graduate students as well as between graduate students and faculty. Historically oriented comprehensive exams which have made me a better philosopher and teacher."
- "The PhD program at Baylor has an extremely supportive and collegial graduate community and the faculty provide first-rate training in both philosophical research/scholarship and undergraduate teaching."
- "I wanted to teach at a Christian liberal arts institution. Baylor situates you to enter this world as well as any program in the country. The historical comprehensive exams gave me a broad knowledge of the tradition that complemented the more contemporary analytic focus of the classes. The program taught me how to teach, not just how to research. Professors genuinely care about the students and go above and beyond to assist them in fulfilling their goals. Students care about and support one another."
- "In terms of academics: Gave me world-class instruction and guidance in whatever fields of study that interested me, with no politics or camps. In terms of job preparation: Fully prepared me to teach, to understand and maintain or even create an entire BA curriculum, to find and grow a community and support system. In terms of the experience of graduate school itself: Extremely supportive, joyful, enthusiastic, experience. Huge growth intellectually and spiritually. Best years of my life as a student. Unparalleled community and collegiality among students and faculty/staff; there is no other graduate program like it that I have seen or heard of. Faculty and student colloquia, potlucks, poker nights, trips to the rodeo and the zoo, shared church life, vibrant discussion of academic and non-academic

matters inside and outside the classroom. I became the man I am today, grown in knowledge, virtue and holiness, because of the people in and around that program and school."

#### 16. Indiana University Bloomington (n = 8, 4.50)

Analytic(5), Epistemology(3), History and Philosophy of Science(3)

- "The faculty and students at Indiana were amazing. Bloomington is a terrifically vibrant and welcoming community, and the university is electric with ideas and activity. The department has strong relationships with other academic programs and departments, which encourages and promotes collaborative and interdisciplinary work. The faculty are attentive and caring, supportive and friendly, and easy to work with. They are terrific teacher/scholars, and do a wonderful job preparing graduate students to carry on that tradition. Studying at IU was a transformative experience, both personally and philosophically, and I would strongly recommend the department to prospective students, especially students interested in philosophy of science (including cognitive science), history of analytic philosophy, and epistemology."
- "I found the culture of the department to be very friendly and supportive. While placement is difficult for every department in the current market, they are very committed to helping their graduates find positions."

## 17. University of Oxford (n = 7, 4.43)

Analytic(5), Ancient(4), Epistemology(4), Ethics(4), Metaphysics(5)

• "The academic discussions to which we were exposed were fantastic, conducted by world-leading philosophers at the highest level. The program of optional seminars and lectures available was very extensive, and one could easily spend far too much time attending them! The atmosphere was generally good, though not suited to everyone, especially to people with low confidence levels. Some students experienced high stress and some isolation; others thrived in the high-pressure environment and made numerous good friends. Academic bad behaviour in Q&A sessions was fairly widespread, and this attitude was absorbed to some degree by the students. As a result the discussions could become macho and confrontational at times, although this varied widely from setting to setting and has improved in recent years. Careers advice was somewhat patchy and half-hearted but good enough, backed up by pedigree,

for most students to end up with jobs of some kind. Supervision quality and quantity varied greatly from supervisor to supervisor, but could be absolutely exceptional, especially for students supervised by named chairs with much more time on their hands."

## 18. **Boston College** (n = 13, 4.38)

Ancient(5), Continental(10), Critical Theory(6), German(4), Historical(9), Medieval(4), Phenomenology(8), Religion(3)

- "Great top- and junior-level professors; great mentoring; strong graduate student community."
- "Boston College has one of the best philosophy programs in the country. Its excellence in the History of philosophy, the European/Continental tradition, metaphysics, epistemology is remarkable and the faculty is excellent."

## 19. Vanderbilt University (n = 8, 4.38)

Continental(3), Gender/Feminist(3), Historical(4), Pluralist(5), Political(6), Pragmatism(3)

• "I had a very good experience at Vanderbilt. There was a thriving feminist philosophy community there, and broader departmental interest in social/political work from a variety of perspectives. Pluralism was encouraged, which I think is important, especially as philosophy as a discipline grows more diverse and begins to overcome the (supposed) analytic/continental split. From a practical perspective, I also thought Vanderbilt was a great choice because it was very well funded, and graduate students were much better supported than in many other programs. My only hesitation in recommending is that the department has undergone some significant changes since I left, and I am unsure of how much of the good I remember remains."

## 20. Macquarie University\*<sup>11</sup> (n = 6, 4.33)

• "The research expertise of advisory faculty. The friendliness and amiability of the advisory faculty."

<sup>&</sup>lt;sup>11</sup>An asterisk indicates a program with no known placement page.

## 21. **New York University** (n = 10, 4.30)

Analytic(9), Contemporary(3), Epistemology(7), Ethics(5), Language(6), Logic(4), Metaphysics(7), Mind(8)

- "Very good instruction and advising. Extremely helpful and supportive advisors after graduation (on the job market, applying for fellowships, etc.). Met great students who have been helpful colleagues and good friends."
- "Excellent faculty, excellent fellow students."
- "The intellectual qualities of the faculty and the other grad students. Also the city is fabulous."

## 22. University of California, Los Angeles (n = 7, 4.29)

Analytic(5), Ethics(3), Language(3)

## 23. St Andrews and Stirling Graduate Programme in Philosophy (n = 8, 4.25)

Analytic(7), Contemporary(3), Epistemology(5), Logic(4), Metaphysics(5), Mind(3)

• "Supportive collegiate community. Very high academic standard. Excellent supervision."

#### 24. Syracuse University (n = 8, 4.25)

Analytic(8), Ethics(5), Metaphysics(7)

• "A very strong teacher training program, which provides a leg up when it comes to syllabus construction, assignment design, etc."

## 25. Princeton University (n = 9, 4.22)

Analytic(4), Ancient(3), Metaphysics(3)

## 26. University of Arizona (n = 9, 4.22)

Analytic(4), Ancient(4), Cognitive Science(3), Ethics(4), Experimental Philosophy(4), Mind(3), Political(5), Social Science(3)

## 27. Michigan State University (n = 10, 4.20)

Applied(7), Bioethics/Medical Ethics(6), Ethics(4), Gender/Feminist(7), Pluralist(3)

## 28. The University of Melbourne\* (n = 5, 4.20)

Analytic(4), Applied(3), Ethics(3),

• "My doctoral studies in philosophy allow me to work on sftimulating questions in practical philosophy, especially concerning the relation between human beings and the planet, with a particular focus on climate change. At the same time, I also work on issues of climate policy with leading climate scientists, in this way hoping to bring philosophical reflection into closer discourse with important policy issues. My doctoral studies encouraged me to pursue interdisciplinary collaboration, and to consider the practical importance of philosophical argument and analysis."

## 29. **University of Iowa** (n = 5, 4.20)

Analytic(4), Early Modern(3), Epistemology(3)

• "The faculty do an amazing job at meeting the individual needs/schedules of each grad student as well as helping students learn how to become good instructors. I have not heard of another program that does quite as much to explicitly focus on teaching pedagogy, instructional strategies, resources, etc."

## 30. Johns Hopkins University (n = 6, 4.17)

Cognitive Science(3), Epistemology(4), History and Philosophy of Science(3), Pragmatism(3)

## 31. University of Connecticut (n = 6, 4.17)

Language(3), Logic(4), Mind(4)

## 32. University of Toronto (n = 13, 4.15)

Analytic(3), Ancient(4), Ethics(3), Medieval(4)

- "It depends enormously on which area you work in: except for ancient/medieval or political philosophy, you have to be lucky to get a decent perm. job soon enough not to despair..."
- "The U of T Department of Philosophy is known for its large faculty. This is a major resource. For those who come into graduate school with a less-defined sense of what we want to work on, the size of the U of T faculty offers ample opportunity to learn about different areas from world-leading experts.

This means that you might start out in Ethics, get tempted by Ancient or Early Modern, and then end up doing something in Mind or Language or Metaphysics. I also found the departmental culture very conducive to getting good work done. The graduate student community is supportive, but not suffocating. Students are largely left to figure out their own path, both philosophically and socially, yet with the clear expectation that help will be there for them if they ask for it. The department also provided ample opportunity to acquire teaching experience, both as a TA and as an instructor. Yet the teaching demands were relatively light, and it is possible to go many semesters without teaching if you so desire. Toronto is also a fabulous city in which to live. Large, but not overwhelming, it provides a life outside of school."

## 33. University of Sheffield (n = 7, 4.14)

Analytic(3), Gender/Feminist(3)

- "Fantastic supervisors Supportive community of phd students"
- "There is a strong post-graduate community and a supportive and collaborative research environment. The supervision was focused on producing a PhD thesis, but the overall program aimed to build your broad knowledge, and to make you competitive on the job market. It was an excellent environment in which to grow as a philosopher and researcher."

## 34. University of California, San Diego (n = 8, 4.13)

Analytic(4), Ethics(3), History and Philosophy of Science(3)

• "The maddeningly serious-but-superficial problem with my program is that it is not a top 10 Leiterranked program. Academic philosophy is dying and it deserves to die for its long-running failure to engage significantly with other fields and other concerns at the college and university level. Most programs have been scraping by based on the teaching loads for courses in critical thinking, logic, analytical/argumentative writing, and basic ethics. This is not a sustainable practice, and we are training too many Ph.Ds. Under the current climate, hiring departments are risk-averse, and maddeningly the Leiter-rankings have become a way to manage risk. It is imprudent for anyone to attend a Ph.D program in the current climate unless it is a top-ranked program."

• "During my phd studies I have not been encouraged to publish and to participate in conferences. Networking for the job market did not help either. The department was friendly, but not oriented towards the main goal: getting graduate students a TT job"

## 35. **Purdue University** (n = 9, 4.11)

Analytic(5), Continental(4), Epistemology(3), Historical(3), Interdisciplinary(3), Metaphysics(5)

### 36. University of California, Davis (n = 9, 4.11)

Analytic(5), History and Philosophy of Science(4), Logic(3)

- "The most important thing was the level of interest faculty showed in graduate students. They were very concerned about ensuring that their graduate students had good research projects that would give them the best prospects possible (given the institutional pedigree) in their early careers."
- "UC Davis has excellent, helpful faculty who are actually interested in the success of their graduate students. There is a healthy and friendly environment there, with several opportunities for interaction and intellectual engagement."

## 37. Villanova University (n = 13, 4.08)

Ancient(3), Continental(11), Critical Theory(4), French(5), Gender/Feminist(3), Historical(7), Phenomenology(5)

- "The program is unique in emphasizing the history of philosophy alongside continental philosophy. The program also boasts a strong student community."
- "Strong mentorship program both for teaching and research; Generous travel funding; Faculty deeply invested in grad student success; One of the top programs in the US for Continental Philosophy"

### 4.2.2 Program Specific Placement Rates

Placement rate in this report is calculated by taking all of the graduates in a specific time range and looking at their most recent reported placement type-permanent academic, temporary academic, nonacademic, or unknown. Note that this is a departure from earlier reports, which had to estimate the total number of graduates from each

program based on multiple sources of graduation data. Due to our extensive data checks (see section 2.6), we now take our database to be complete for 135 programs for the time period covered: 2012-2016. For that reason, we do not need to estimate the number of graduates using external sources.

The permanent academic placement rate for a particular program would be the number of graduates in that time period who are now in a permanent academic position divided by the total number of graduates, of any placement type. The denominator includes those of unknown placement. For the time range covered in this section, 2012-2016, it is very unlikely that anyone listed as having unknown placement is in fact in a permanent academic position. This is because of the number and types of data checks that were performed over the past year (see section 2.6, above), which included researching anyone with unknown placement status. Those with permanent academic positions are nearly always listed on the websites of their home institutions, and most often also on the placement website of their PhD-granting program. Thus, those with unknown placement should be assumed to be in a temporary position, in a nonacademic position, continuing their education, or unemployed.

The permanent academic placement rate into known PhD-granting programs is the number of 2012-2016 graduates who we know to be placed at one of 195 (primarily English-language) philosophy PhD-granting programs. These programs are listed in Appendix A.

Below is the list of philosophy PhD programs with a permanent placement rate for 2012-2016 graduates that is higher than the overall rate for the 135 included programs. This list includes 63 programs, organized first by permanent placement rate ("Permanent Rate") and then by permanent placement rate into known PhD-granting programs ("PhD Rate"):

- 1. University of California, Irvine (LPS): Permanent Rate: 82%; PhD Rate: 36%
- 2. University of California, Riverside: Permanent Rate: 76%; PhD Rate: 18%
- 3. **University of Virginia:** Permanent Rate: 76%; PhD Rate: 0%
- 4. University of Cincinnati: Permanent Rate: 75%; PhD Rate: 13%
- 5. Baylor University: Permanent Rate: 73%; PhD Rate: 5%
- 6. **University of California, Berkeley:** Permanent Rate: 68%; PhD Rate: 59%

- 7. **University of Florida:** Permanent Rate: 67%; PhD Rate: 0%
- 8. **University of Oregon:** Permanent Rate: 65%; PhD Rate: 6%
- 9. Indiana University Bloomington: Permanent Rate: 64%; PhD Rate: 9%
- 10. **University of Tennessee:** Permanent Rate: 63%; PhD Rate: 0%
- 11. University of Pittsburgh (HPS): Permanent Rate: 62%; PhD Rate: 43%
- 12. **Georgetown University:** Permanent Rate: 61%; PhD Rate: 4%
- 13. University of Michigan: Permanent Rate: 60%; PhD Rate: 20%
- 14. **Princeton University:** Permanent Rate: 60%; PhD Rate: 36%
- 15. University of North Carolina at Chapel Hill: Permanent Rate: 59%; PhD Rate: 26%
- 16. **Rutgers University:** Permanent Rate: 59%; PhD Rate: 38%
- 17. Villanova University: Permanent Rate: 57%; PhD Rate: 6%
- 18. **Pennsylvania State University:** Permanent Rate: 57%; PhD Rate: 17%
- 19. **DePaul University:** Permanent Rate: 57%; PhD Rate: 4%
- 20. University of Pennsylvania: Permanent Rate: 56%; PhD Rate: 25%
- 21. University of Southern California: Permanent Rate: 56%; PhD Rate: 20%
- 22. University of Chicago: Permanent Rate: 55%; PhD Rate: 24%
- 23. University of Calgary: Permanent Rate: 55%; PhD Rate: 18%
- 24. University of California, Davis: Permanent Rate: 55%; PhD Rate: 9%

- 25. **University of Arizona:** Permanent Rate: 54%; PhD Rate: 21%
- 26. University of Pittsburgh: Permanent Rate: 54%; PhD Rate: 18%
- 27. The Catholic University of America\*: Permanent Rate: 54%; PhD Rate: 14%
- 28. **The University of Sydney:** Permanent Rate: 53%; PhD Rate: 40%
- 29. Vanderbilt University: Permanent Rate: 52%; PhD Rate: 5%
- 30. Yale University: Permanent Rate: 52%; PhD Rate: 24%
- 31. University of Notre Dame: Permanent Rate: 51%; PhD Rate: 14%
- 32. Harvard University: Permanent Rate: 50%; PhD Rate: 31%
- 33. **New York University:** Permanent Rate: 50%; PhD Rate: 31%
- 34. **Stanford University:** Permanent Rate: 50%; PhD Rate: 21%
- 35. Northwestern University: Permanent Rate: 50%; PhD Rate: 10%
- 36. University of New Mexico: Permanent Rate: 50%; PhD Rate: 0%
- 37. Columbia University: Permanent Rate: 49%; PhD Rate: 23%
- 38. **Emory University:** Permanent Rate: 48%; PhD Rate: 3%
- 39. **University of Miami:** Permanent Rate: 47%; PhD Rate: 0%
- 40. **Johns Hopkins University:** Permanent Rate: 47%; PhD Rate: 6%
- 41. **University of Washington:** Permanent Rate: 47%; PhD Rate: 0%
- 42. University of Nebraska, Lincoln: Permanent Rate: 45%; PhD Rate: 9%

- 43. Saint Louis University: Permanent Rate: 45%; PhD Rate: 6%
- 44. **Syracuse University:** Permanent Rate: 44%; PhD Rate: 4%
- 45. **Fordham University:** Permanent Rate: 44%; PhD Rate: 6%
- 46. University of Oxford: Permanent Rate: 43%; PhD Rate: 28%
- 47. **University of Cambridge:** Permanent Rate: 43%; PhD Rate: 36%
- 48. **State University of New York at Stony Brook:** Permanent Rate: 43%; PhD Rate: 9%
- 49. University of California, San Diego: Permanent Rate: 42%; PhD Rate: 15%
- 50. University of Texas at Austin: Permanent Rate: 42%; PhD Rate: 15%
- 51. Washington University in St. Louis: Permanent Rate: 41%; PhD Rate: 6%
- 52. University of Illinois at Chicago: Permanent Rate: 41%; PhD Rate: 6%
- 53. Massachusetts Institute of Technology: Permanent Rate: 40%; PhD Rate: 35%
- 54. Carnegie Mellon University: Permanent Rate: 40%; PhD Rate: 33%
- 55. University of Wisconsin-Madison: Permanent Rate: 40%; PhD Rate: 9%
- 56. **Duquesne University:** Permanent Rate: 40%; PhD Rate: 3%
- 57. **Cornell University:** Permanent Rate: 39%; PhD Rate: 7%
- 58. **Boston University:** Permanent Rate: 38%; PhD Rate: 10%
- 59. **University of Georgia:** Permanent Rate: 38%; PhD Rate: 0%
- 60. **University of South Florida:** Permanent Rate: 38%; PhD Rate: 0%

- 61. University of York: Permanent Rate: 38%; PhD Rate: 24%
- 62. Indiana University Bloomington (HPS): Permanent Rate: 38%; PhD Rate: 13%
- 63. University of Iowa: Permanent Rate: 38%; PhD Rate: 0%

The total number of graduates in this period for the 135 included programs is 3,166. The number in permanent academic placements is 1,180 (37%). The number in temporary academic placements is 1,322 (42%). The number in nonacademic placements is 300 (9%). The number with unknown placement is 364 (11%). Finally, the number in permanent academic placement in known philosophy PhD-granting programs is 372 (11%).

## 4.2.3 Faculty and Graduate Student Profile

A final program-level analysis might take account of the faculty and graduate student profiles of a program, both in terms of area of specialization and in terms of diversity. Using data gathered from the program review described in section 2.5, we can get a sense of the full-time faculty at each program. Using the data in the APDA database, we can get a sense of its past graduate students. Note: the program review was performed by a single Undergraduate Research Assistant and the results of that review have not yet been verified by a second coder. Moreover, the percentage of women faculty and faculty of color were determined as best judged by that Undergraduate Research Assistant. We hope to verify this data with a second coder in the coming year, as we perform "program highlights" (see Section 5: Future Directions).

Starting with area of specialization, the overall percentage of faculty in each field are as follows: 29% in LEMM, 29% in Value Theory, 24% in History and Traditions, and 17% in Science, Logic, and Math. To measure the difference between this overall distribution and the distributions of individual programs, we used the sum of squared differences, sorting programs by those with the lowest sum to those with the highest sum. Those with lower sums will be those that have a faculty area of specialization distribution which is the closest to the overall distribution. One might think of this as a measure of eccentricity—the higher a program is on the list, the less eccentric it is, in terms of area of specialization. Using this list, the top ten programs (those with the least eccentric distribu-

<sup>&</sup>lt;sup>12</sup>Note that the number of faculty in each area will not affect its distribution, since the difference is between the proportion of faculty in each area of specialization. Yet the number of faculty in a program could make a difference in this measure, since it is a comparison to overall distribution, rather than average distribution.

tions) are: Duke University; University at Albany; University of Wisconsin-Madison; University of Calgary; Yale University; William Marsh Rice University; University of California, Los Angeles; New York University; Florida State University; and University of Toronto. The bottom ten programs (those with the most eccentric distributions) are: University of Chicago (CHSS); University of Kent\*; Carnegie Mellon University; The University of Manchester; Indiana University Bloomington (HPS); University of Cincinnati; Southern Illinois University; University of California, Irvine (LPS); University of Cambridge (HPS); and Arizona State University (HPS)\*. (Both of these groups are ordered from least to most eccentric.)

Similarly, the overall percentage of 2012-2016 graduates in each field are as follows: 28% in LEMM, 33% in Value Theory, 23% in History and Traditions, and 16% in Science, Logic, and Math. Using the same method for sorting programs, the top ten programs (the least eccentric in terms of its recent graduates) are: University of Oxford; University of Virginia; University of Colorado at Boulder; University of Pittsburgh; Harvard University; Katholieke Universiteit Leuven; University of Oklahoma; York University; University of Illinois at Urbana-Champaign; and University of California, Berkeley. The bottom ten programs (the most eccentric in terms of its recent graduates) are: Institut Jean Nicod; Indiana University Bloomington (HPS); University of New Mexico; University of Hawai'i at Manoa; University of Kent\*; University of Cambridge (HPS); Carnegie Mellon University; Tilburg University; University of California, Irvine (LPS); and Arizona State University (HPS)\*.

Note that the language of "top" and "bottom" here is relative to one's interests. If a graduate student is seeking a focused program, more eccentric programs might be the best fit. If, on the other hand, a graduate student is seeking a well-rounded program that is most similar to other programs, a less eccentric program might be the best fit. Note also that for the most part the programs with less eccentric faculty distributions also have less eccentric graduate student distributions.

Some students may also be interested in larger programs. According to our program review, the ten programs with the largest number of full-time faculty are: University of Toronto; New York University; St Andrews and Stirling Graduate Programme in Philosophy; Katholieke Universiteit Leuven; Fordham University; Loyola University Chicago; University of Notre Dame; Michigan State University; University of Pennsylvania; and Princeton University. The ten programs with the largest number of philosophy PhD graduates 2012-2016 are: Katholieke Universiteit Leuven; University of Oxford; University of Toronto; University of Minnesota Twin Cities\*; Princeton University; Columbia University; Graduate Center of the City University of New York; The New School; University of Edinburgh; and Western University.

In addition to area of specialization and overall size, one might look at the diversity profile of each program, both in terms of its faculty and in terms of its past graduates. The following list orders programs by those with the highest percentage faculty of color ("FoC," 5% overall), then by those with the highest percentage of women faculty ("WF," 26% overall). The percentage graduates of color ("GoC," 13% overall)<sup>13</sup> and women graduates ("WG," 29% overall) of all years are listed to the right:

- 1. University of Hawai'i at Manoa 50% FoC; 20% WF; 0% GoC; 35% WG
- 2. Vanderbilt University 27% FoC; 27% WF; 13% GoC; 43% WG
- 3. University of Michigan 22% FoC; 35% WF; 13% GoC; 27% WG
- 4. Pennsylvania State University 20% FoC; 33% WF; 43% GoC; 35% WG
- 5. University College London 20% FoC; 20% WF; 26% WG
- 6. Arizona State University 18% FoC; 27% WF; 0% GoC; 31% WG
- 7. Michigan State University 17% FoC; 33% WF; 0% GoC; 48% WG
- 8. University of Colorado at Boulder 16% FoC; 21% WF; 0% GoC; 31% WG
- 9. University of Oregon 15% FoC; 54% WF; 44% WG
- 10. Harvard University 15% FoC; 30% WF; 43% GoC; 38% WG
- 11. Ohio State University 15% FoC; 25% WF; 0% GoC; 25% WG
- 12. University of California, Davis 14% FoC; 43% WF; 20% GoC; 25% WG
- 13. University of California, San Diego 14% FoC; 24% WF; 10% GoC; 25% WG
- 14. University of Kentucky 13% FoC; 40% WF; 12% WG

<sup>&</sup>lt;sup>13</sup>Percentage GoC are listed only for programs where at least three graduates selected a race or ethnicity in the APDA database.

- 15. University of Massachusetts Amherst 13% FoC; 33% WF; 25% WG
- 16. **Emory University** 13% FoC; 31% WF; 25% GoC; 36% WG
- 17. Stanford University 13% FoC; 29% WF; 0% GoC; 28% WG
- 18. Wayne State University 13% FoC; 25% WF; 0% WG
- 19. **DePaul University** 12% FoC; 41% WF; 25% GoC; 52% WG
- 20. Stony Brook University 12% FoC; 35% WF; 45% WG
- 21. Rutgers University 12% FoC; 23% WF; 14% GoC; 27% WG
- 22. **Syracuse University** 12% FoC; 18% WF; 14% GoC; 23% WG
- 23. University of Pittsburgh (HPS) 11% FoC; 22% WF; 13% GoC; 29% WG
- 24. University of Pittsburgh 11% FoC; 21% WF; 25% GoC; 25% WG
- 25. University of California, Berkeley 11% FoC; 17% WF; 17% GoC; 28% WG
- 26. Graduate Center of the City University of New York 11% FoC; 16% WF; 0% GoC; 33% WG
- 27. **Duke University** 10% FoC; 30% WF; 33% GoC; 23% WG
- 28. University of Calgary 10% FoC; 30% WF; 20% GoC; 25% WG
- 29. University of Pennsylvania 10% FoC; 27% WF; 17% GoC; 38% WG
- 30. University of Florida 10% FoC; 20% WF; 30% WG
- 31. **University of Chicago** 10% FoC; 19% WF; 6% GoC; 24% WG
- 32. McGill University 9% FoC; 39% WF; 33% WG

- 33. William Marsh Rice University 9% FoC; 18% WF; 28% WG
- 34. University of New Mexico 8% FoC; 38% WF; 25% GoC; 46% WG
- 35. University of Arizona 8% FoC; 27% WF; 20% GoC; 25% WG
- 36. Marquette University\* 8% FoC; 25% WF; 30% WG
- 37. University of Southern California 8% FoC; 20% WF; 29% GoC; 25% WG
- 38. Tulane University 8% FoC; 15% WF; 11% WG
- 39. University of Nebraska, Lincoln 8% FoC; 15% WF; 24% WG
- 40. Yale University 8% FoC; 15% WF; 23% GoC; 29% WG
- 41. Indiana University Bloomington 7% FoC; 40% WF; 0% GoC; 22% WG
- 42. Villanova University 7% FoC; 33% WF; 14% GoC; 29% WG
- 43. University of Cambridge (HPS) 7% FoC; 33% WF; 57% WG
- 44. University of Miami 7% FoC; 27% WF; 15% WG
- 45. **Princeton University** 7% FoC; 17% WF; 17% GoC; 32% WG
- 46. London School of Economics and Political Science 7% FoC; 13% WF; 0% GoC; 21% WG
- 47. Florida State University 7% FoC; 13% WF; 0% GoC; 27% WG
- 48. University of Utah 6% FoC; 50% WF; 33% GoC; 27% WG
- 49. University of Guelph 6% FoC; 38% WF; 22% WG
- 50. University of Alberta 6% FoC; 35% WF; 21% WG

- 51. University of Illinois at Chicago 6% FoC; 31% WF; 32% WG
- 52. University of Virginia 6% FoC; 29% WF; 20% WG
- 53. University of Toronto 6% FoC; 29% WF; 0% GoC; 35% WG
- 54. **Purdue University** 6% FoC; 22% WF; 33% GoC; 21% WG
- 55. New York University 6% FoC; 20% WF; 0% GoC; 24% WG
- 56. University of South Florida 6% FoC; 18% WF; 22% WG
- 57. University at Buffalo 6% FoC; 13% WF; 13% GoC; 28% WG
- 58. Saint Louis University 6% FoC; 12% WF; 18% WG
- 59. York University 5% FoC; 33% WF; 38% WG
- 60. The Catholic University of America\* 5% FoC; 24% WF; 18% WG
- 61. Boston University 5% FoC; 23% WF; 0% GoC; 29% WG
- 62. Carnegie Mellon University 5% FoC; 14% WF; 24% WG
- 63. Columbia University 4% FoC; 39% WF; 20% GoC; 35% WG
- 64. Georgetown University 4% FoC; 38% WF; 0% GoC; 36% WG
- 65. **Boston College** 4% FoC; 20% WF; 29% GoC; 21% WG
- 66. Fordham University 3% FoC; 37% WF; 17% GoC; 19% WG
- 67. **Western University** 3% FoC; 24% WF; 0% GoC; 33% WG
- 68. Katholieke Universiteit Leuven 3% FoC; 12% WF; 24% WG

- 69. University of Chicago (CHSS) 0% FoC; 67% WF; 44% WG
- 70. **University of Iowa** 0% FoC; 54% WF; 0% GoC; 16% WG
- 71. McMaster University 0% FoC; 50% WF; 0% GoC; 27% WG
- 72. Macquarie University\* 0% FoC; 50% WF; 25% GoC; 40% WG
- 73. University of Georgia 0% FoC; 46% WF; 24% WG
- 74. University of South Carolina 0% FoC; 44% WF; 32% WG
- 75. University of Waterloo 0% FoC; 44% WF; 50% WG
- 76. Binghamton University 0% FoC; 43% WF; 100% GoC; 38% WG
- 77. University of Washington 0% FoC; 43% WF; 0% GoC; 41% WG
- 78. Kingston University 0% FoC; 43% WF; 43% WG
- 79. Birkbeck, University of London 0% FoC; 38% WF; 18% WG
- 80. **The New School** 0% FoC; 36% WF; 26% WG
- 81. University of Cincinnati 0% FoC; 36% WF; 33% GoC; 31% WG
- 82. University of Cambridge 0% FoC; 36% WF; 0% GoC; 33% WG
- 83. Northwestern University 0% FoC; 33% WF; 8% GoC; 20% WG
- 84. Australian National University 0% FoC; 33% WF; 0% GoC; 25% WG
- 85. University of Illinois at Urbana-Champaign 0% FoC; 31% WF; 33% GoC; 22% WG
- 86. University of Kansas 0% FoC; 30% WF; 13% WG

- 87. The University of Melbourne\* 0% FoC; 30% WF; 0% GoC; 23% WG
- 88. **Brown University** 0% FoC; 27% WF; 14% GoC; 19% WG
- 89. Loyola University Chicago 0% FoC; 27% WF; 28% WG
- 90. Institut Jean Nicod 0% FoC; 27% WF; 37% WG
- 91. University of Minnesota Twin Cities\* 0% FoC; 27% WF; 14% GoC; 40% WG
- 92. University of Memphis 0% FoC; 27% WF; 0% GoC; 50% WG
- 93. University of British Columbia 0% FoC; 26% WF; 27% WG
- 94. Washington University in St. Louis 0% FoC; 26% WF; 0% GoC; 27% WG
- 95. University of California, Los Angeles 0% FoC; 26% WF; 33% GoC; 33% WG
- 96. University of Rochester 0% FoC; 25% WF; 18% WG
- 97. University at Albany 0% FoC; 25% WF; 21% WG
- 98. University of California, Irvine 0% FoC; 25% WF; 0% GoC; 27% WG
- 99. Cornell University 0% FoC; 25% WF; 28% WG
- 100. University of North Carolina at Chapel Hill 0% FoC; 25% WF; 0% GoC; 41% WG
- 101. Arizona State University (HPS)\* 0% FoC; 25% WF; 67% WG
- 102. **Duquesne University** 0% FoC; 24% WF; 0% GoC; 22% WG
- 103. University of Connecticut 0% FoC; 24% WF; 17% GoC; 24% WG
- 104. Indiana University Bloomington (HPS) 0% FoC; 23% WF; 17% WG

- 105. St Andrews and Stirling Graduate Programme in Philosophy 0% FoC; 23% WF; 0% GoC; 26% WG
- 106. University of Notre Dame 0% FoC; 23% WF; 8% GoC; 28% WG
- 107. Bowling Green State University 0% FoC; 22% WF; 17% GoC; 33% WG
- 108. Temple University 0% FoC; 22% WF; 41% WG
- 109. University of Texas at Austin 0% FoC; 21% WF; 0% GoC; 16% WG
- 110. University of Tennessee 0% FoC; 20% WF; 7% WG
- 111. The University of Manchester 0% FoC; 20% WF; 12% WG
- 112. University of California, Santa Barbara 0% FoC; 20% WF; 22% GoC; 13% WG
- 113. University of Wisconsin-Madison 0% FoC; 20% WF; 0% GoC; 28% WG
- 114. University of Sheffield 0% FoC; 20% WF; 25% GoC; 34% WG
- 115. Victoria University of Wellington 0% FoC; 20% WF; 25% WG
- 116. **Baylor University** 0% FoC; 18% WF; 20% GoC; 13% WG
- 117. University of California, Riverside 0% FoC; 18% WF; 33% GoC; 20% WG
- 118. University of Maryland, College Park 0% FoC; 18% WF; 21% WG
- 119. Johns Hopkins University 0% FoC; 18% WF; 25% GoC; 27% WG
- 120. University of California, Santa Cruz 0% FoC; 18% WF; 33% GoC; 35% WG
- 121. University of Oklahoma 0% FoC; 17% WF; 11% WG
- 122. University of California, Irvine (LPS) 0% FoC; 17% WF; 17% GoC; 21% WG

- 123. University of Missouri 0% FoC; 15% WF; 0% GoC; 18% WG
- 124. University of Dallas\* 0% FoC; 14% WF; 13% WG
- 125. The University of Sydney 0% FoC; 14% WF; 22% WG
- 126. University of Edinburgh 0% FoC; 14% WF; 0% GoC; 25% WG
- 127. University of Otago 0% FoC; 14% WF; 31% WG
- 128. **University of Oxford** 0% FoC; 13% WF; 20% GoC; 20% WG
- 129. University of Arkansas 0% FoC; 11% WF; 0% WG
- 130. Southern Illinois University 0% FoC; 10% WF; 25% GoC; 24% WG
- 131. King's College London 0% FoC; 10% WF; 36% WG
- 132. Massachusetts Institute of Technology 0% FoC; 8% WF; 33% GoC; 48% WG
- 133. Tilburg University 0% FoC; 6% WF; 22% WG
- 134. University of Kent\* 0% FoC; 0% WF; 25% WG
- 135. University of York 0% FoC; 0% WF; 41% WG

## 4.3 Discipline-Level Analyses

Some of our results can be used to tentatively explore different trends in the discipline as a whole. In this section, we will show different ways in which this can be done.

## 4.3.1 Changes in AOS over Time

One possible discipline-level analysis concerns the number of graduates for each area of specialization, the numbers for which vary over time. We looked at the correlation between the number of graduates in a given year and the year itself, for the years 2011 to 2016. The top 8 areas of specialization, in terms of a high positive correlation between the number of graduates and the graduation year, are (in alphabetical order): Biology (incl Environmental) (0.59), Comparative (0.60), Decision Theory (0.81), Epistemology (0.56), Gender / Race / Sexuality / Disability Studies (0.97), Physics (0.65), Religion (0.75), and Technology (0.84). (See Figure 5.)

The bottom 8 areas of specialization, in terms of a high negative correlation between the number of graduates and the graduation year, are (in alphabetical order): African (-0.65), Asian (-0.68), Economics (-0.83), Law (-0.38), Meta-Ethics (-0.37), Metaphysics (-0.36), Mind (-0.43), and Modern (-0.37). (See Figure 6.)

In terms of AOS categories, the share of graduates in Value Theory of all known AOS categories has changed from 34% in 2006 to 31% in 2016 with a clear downward trend, but the share of graduates in LEMM has gone up in the same period, from 25% in 2006 to 30% in 2016. Yet, since this and the above includes a relatively small sample of years, and the number of graduates in a particular area of specialization in a given year is relatively small, it is unclear whether these should be treated as trends.

## 4.3.2 Program Keyword Clustering

Another avenue for exploring this level lies in the keywords provided by the respondents of *Question 3* of our survey. More specifically, we attempted to use these keywords to measure how similar different programs are among themselves, and if there is any degree of meaningful and easily interpretable clustering. For this analysis, we will use only keyword counts higher than 2. If a program did not have any keyword with a frequency higher than 2, it was excluded from the analysis.

To compare the programs, we built a *vector space model* of the programs: each program is represented as a vector in an *n* dimensional space, where each dimension is one of the keywords presented in the survey. Thus, if, for example, the graduates of a program provide the keyword *Analytic* 7 times, *Epistemology* 4 times, and *Ancient* 3 times, then the program is represented as a vector of value 7 in the *Analytic* dimension, 4 in the *Epistemology* dimension, 3 in the *Ancient* dimension, and 0 in all other dimensions. This specific mode of representation allows us to measure the similarity in the keywords of two programs by calculating the *cosine* generated by the two vectors.

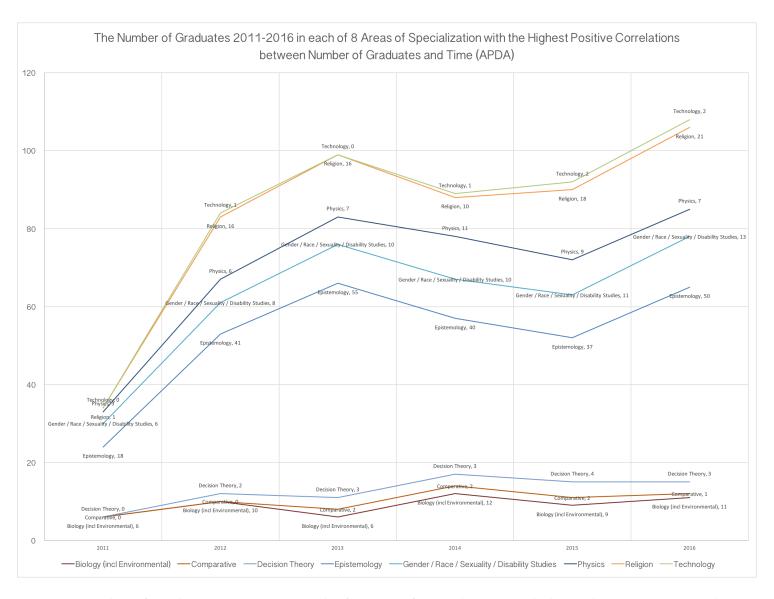


Figure 5: Number of Graduates 2011-2016 in each of 8 Areas of Specialization with the Highest Positive Correlations between Number and Time, Stacked 59

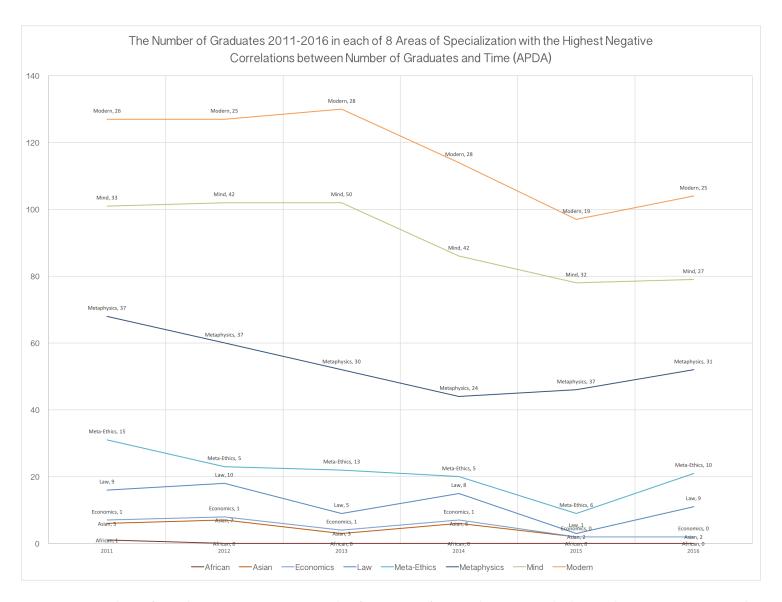


Figure 6: Number of Graduates 2011-2016 in each of 8 Areas of Specialization with the Highest Negative Correlations between Number and Time, Stacked  $\phantom{000}60$ 

The cosine between two angles ranges from values 1 if they are identical, and -1 if they are opposite. The closer the cosine between two programs is, the more similar they are. Using this methodology on every possible pair of programs, it is possible to build a similarity matrix similar to the one shown in Table 6. The complete table includes 80 programs. Note, for illustration purposes, that the cosine between each program and itself is 1. Moreover, as the University of South Florida does not share any keywords with Syracuse, UCLA, UC Irvine and NYU, their cosines are 0.

	Syracuse	UCLA	UC Irvine	South Florida	Pittsburgh	NYU	Boston College
Syracuse	1.0	0.71	0.78	0	0.54	0.68	0
UCLA	0.71	1.0	0.86	0	0.6	0.65	0
UC Irvine	0.78	0.86	1.0	0	0.56	0.56	0
South Florida	0	0	0	1.0	0.2	0	0.59
Pittsburgh	0.54	0.6	0.56	0.2	1.0	0.39	0
NYU	0.68	0.65	0.54	0	0.39	1.0	0
Boston College	0	0	0	0.59	0	0	1

Table 6: Examples of cosine similarity between different programs.

In turn, it is possible to use this similarity matrix in a *hierarchical cluster analysis* of the relationships between programs, and visualize them via a dendrogram. For this analysis, we used the *hclust* function in R. Moreover, to identify the different clusters, we used the *hclustplot* function of the  $bio3d^{14}$  R package with the "hybrid" treecutting algorithm of the *Dynamic Tree Cut* R library<sup>15</sup>. The result of this cluster analysis can be visualized in the dendrogram in Figure 7. Each color marks a different cluster identified by the tree-cutting algorithm as significantly different from the others, and the y axis marks the distance between each of the branches being united at that point. Thus, Cluster2 and Cluster3 are at a distance of 2.5 as measured by the clustering method used,  $complete-linkage\ clustering$ . As can be observed in Figure 7, preliminary analysis shows that the programs can be divided

<sup>14</sup> Grant, B., Rodrigues, A., ElSawy, K., McCammon, J. A. & Caves, L. (2006) "Bio3D: An R package for the comparative analysis of protein structures." *Bioinformatics* 22, 2695-2696

<sup>&</sup>lt;sup>15</sup>Langfelder, P., Zhang B., Horvath, S. (2007). "Defining clusters from a hierarchical cluster tree: the Dynamic Tree Cut package for R". *Bioinformatics* 2008 24(5):719-720

into 8 different clusters. Apart from these, there are also two major clusters whose characterization weighs seem intuitive. The determinants of the similarity can be assessed later by using the keywords of each of the programs in the cluster. In this case, we display the average number of times that a keyword appears in a cluster. We count the number of times each keyword appears as a one of the 10 terms with highest frequency counts in each program of the cluster. This count is then divided by the number of programs in the cluster. Thus, a rating of 1.0 means that the keyword in question was one of the top 10 keywords in all of the programs in the cluster, and a rating of 0.1 in a cluster of 10 programs means that the keyword appeared only in one of them. The details of the clusters and the highest rated keywords in them are presented below. We show only the top 5 keyword ratings, unless there are fewer than 5 keywords that appeared in more than 1 program in the cluster, in which case we only present only those that did.

#### **Main Cluster 1**

- *Cluster 1*: Cambridge University; Columbia University; Graduate Center of the City University of New York; McMaster University; University of Sheffield; State University of New York at Buffalo; University of Texas, Austin; University of California, Riverside; University College London.
  - *Top 5 keyword ratings*: Analytic (1.0), Mind (1.0), Bioethics (0.2), Continental (0.2), Language (0.2), Metaphysics (0.2).
- *Cluster 2*: University of Minnesota, Twin Cities; University of California, Davis; University of California, San Diego; University of Pittsburgh; University of Washington; University of Wisconsin-Madison.
  - *Top 5 keyword ratings*: Analytic (1.0), History and Philosophy of Science (1.0), Ethics (0.5), Gender/Feminist (0.33), Logic (0.33).
- Cluster 3: Australian National University; Brown University; Florida State University; Harvard University; University of Iowa; Indiana University, Bloomington; University of Melbourne; University of Michigan; Massachusetts Institute of Technology; University of Nebraska, Lincoln; New York University; Oxford University; Princeton University; Rutgers University; University of Saint Andrews; Syracuse University; University of California, Berkeley; University of California, Irvine; University of California, Los Angeles; University of Col-

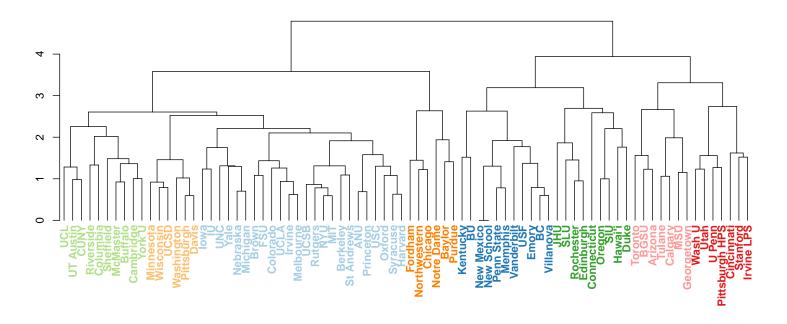


Figure 7: Dendrogram of Programs

orado, Boulder; University of California, Santa Barbara; University of North Carolina, Chapel Hill; University of Southern California; Yale University.

Top 5 keyword ratings: Analytic (1.0), Ethics (0.75), Metaphysics (0.58), Epistemology (0.54), Language (0.33).

• *Cluster 4*: Baylor University; Fordham University; Northwestern University; University of Notre Dame; Purdue University; University of Chicago.

*Top 5 keyword ratings*: Analytic (1.0), Historical (1.0), Continental (0.66), Epistemology (0.5), Metaphysics (0.5).

#### **Main Cluster 2**

- *Cluster 5*: Boston College; Boston University; Emory University; University of Kentucky; University of Memphis; The New School; Pennsylvania State University; University of New Mexico; University of South Florida; Vanderbilt University; Villanova University.
  - Top 5 keyword ratings: Continental (0.81), Historical (0.6), Phenomenology (0.45), Gender/Feminist (0.36), Ancient (0.27), German (0.27).
- Cluster 6: University of Connecticut; Duke University; University of Edinburgh; University of Hawai'i, Manoa; Johns Hopkins University; University of Oregon; Rochester University; Saint Louis University; Southern Illinois University.
  - *Top 5 keyword ratings*: Epistemology (0.44), Pragmatism (0.33), Cognitive Science (0.22). (Other keywords were omitted for having an average frequency of 1 per program).
- Cluster 7: University of Arizona; Bowling Green State University; University of Calgary; Georgetown University; Michigan State University; University of Toronto; Tulane University.
  - Top 5 keyword ratings: Ethics (1.0), Analytic (0.42), Political (0.42), Ancient (0.28), Applied (0.28), Bioethics (0.28), Pluralist (0,28).

• Cluster 8: University of Pittsburgh (History and Philosophy of Science); Stanford University; University of Cincinnati; University of California, Irvine (Logic and Philosophy of Science); University of Pennsylvania; University of Utah; Washington University in St. Louis.

*Top 5 keyword ratings*: History and Philosophy of Science (1.0), Analytic (0.57), Biology (0.42), Cognitive Science (0.42), Interdisciplinary (0.28), Naturalist (0.28), Physics (0.28), Social Science (0.28).

The previous results are mostly exploratory. They could be improved upon by complementing the raw data with a version of it with extremely common terms (e.g., *Analytic*) weighted down to let less frequent terms mark the differences. Moreover, a better way to determine which terms in the cluster are preponderant could better show the different ways in which the programs cluster. Nevertheless, the previous analysis is able to uncover some of these patterns in a way that could be useful for those trying to get an idea of the distribution of specializations in the discipline.

#### 4.3.3 Placement Networks

Finally, we began to experiment with visualizing placement networks in philosophy, inspired by correspondence with Dan Hicks. Using Google's Fusion Tables, we created a table with all graduates from the APDA database now in a permanent academic or postdoctoral placements at known philosophy PhD-granting programs: Fusion Table. We then created a geographic heat map of all the graduates who went into such positions, so that we can visualize where these graduates were largely based prior to placement. As you can see in the "Map of Graduates" tab, most graduates were based in the Northeastern United States and Southern England. The "Map of Placements" is only somewhat more globally distributed. (See Figures 8 and 9.)

Also in the Fusion Table is a "Placement Networks" tab, which depicts connections between programs, with orange arrows going out depicting graduates from that program going to a postdoctoral or permanent academic position at another PhD-granting program, and blue arrows going in depicting the hiring of graduates from other programs. All nodes are currently blue. One way of interacting with this network is to include all nodes and explore all possible connections by hovering over or clicking on specific nodes. Another is to restrict the number of nodes, to discover the core hiring networks in the field. Restricting the nodes to 10, for example, reveals a core hiring network between Berkeley, Cambridge, NYU, Oxford, Pittsburgh, Princeton, Rutgers, Stanford, Toronto, and UNC (see Figure 10). Restricting the nodes to 20 reveals a network between Berkeley, Cambridge, Chicago, Columbia,

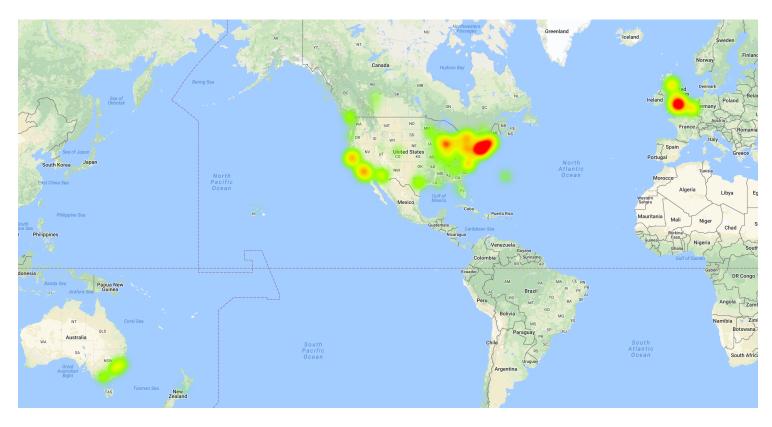


Figure 8: Geographic Heat Map of Graduates of All Years Now Placed in Postdoctoral or Permanent Positions at PhD-Granting Programs, Weighted by Number

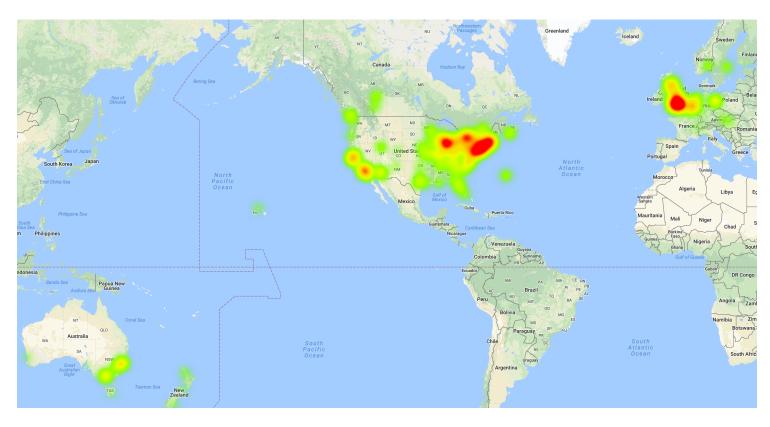


Figure 9: Geographic Heat Map of Current Permanent Academic or Postdoctoral Placements for Graduates of All Years, Weighted by Number

Harvard, Northwestern, Notre Dame, NYU, Oxford, Pittsburgh, Pittsburgh (HPS), Princeton, Rutgers, Stanford, Toronto, UCLA, UCSD, UNC, U Penn, and Yale (see Figure 11). Finally, one can use the filter to look at networks for or between specific programs.

## 5 Future Directions

As APDA has now had three years of funding through the APA small grants scheme, it is no longer eligible to apply for such grants. It is thus in the process of seeking long-term funding, while also trying to put itself in a state where relatively low maintenance is required.

This funding could be used in some bigger upgrades to our website. For instance, we hope to update the website to include program specific pages, so that programs can link to their placement data rather than maintaining their own placement page. These pages might also include graphics or Infograms. We created two program-specific Infograms as examples<sup>16</sup>: Arizona State University and Baylor University. Program highlights could be posted to our blog: <a href="http://placementdata.com/blog/">http://placementdata.com/blog/</a>. More generally, we hope to include more graphics, tables, and applications on our website that will aid in the user experience. Furthermore, we would like to make use of a new pair of domain names-philosophydata.org and phildata.org-which can serve as a repository for tables and charts from the APDA project that cover issues beyond placement. (The files linked to these domains are currently hosted on the UC Merced faculty server, but will be moved to the APDA server in the near future.)

In addition to the public-facing improvements listed above, there is also a need to develop web interfaces for internal APDA use. We already have user interfaces for sending out email to all program officers, or all graduates we have on record, but there are still many tasks that APDA team members are performing by manually interacting with database tables, or dumping data into spreadsheets, manipulating it there, and manually putting it back into the database. This introduces the danger of contaminating or losing data as a result of human error. Developing web interfaces for these tasks will not only result in significant labor savings for our team members, but will also prevent errors with potentially catastrophic consequences.<sup>17</sup>

<sup>&</sup>lt;sup>16</sup>Arizona State University was chosen because it was the first in alphabetical order, and Baylor University was chosen because it was the first in alphabetical order with public comments.

<sup>&</sup>lt;sup>17</sup>APDA has automated backups that occur every hour, but when multiple people are working on the database at once and one makes an error, there is no current method for removing that error without removing the work that others have put in over that same time

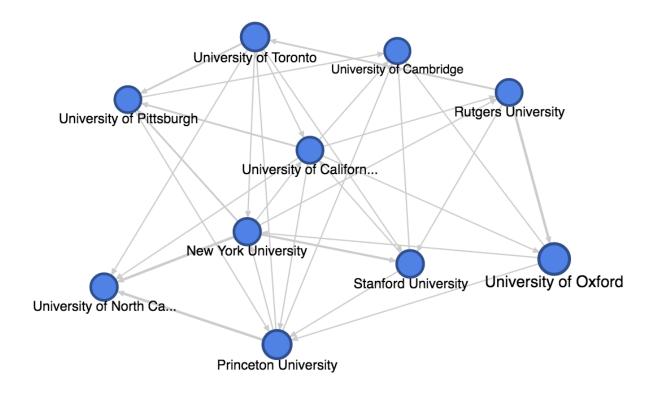


Figure 10: Network Map of All Current Permanent and Postdoctoral Placements between PhD Programs in Philosophy, 10 Nodes

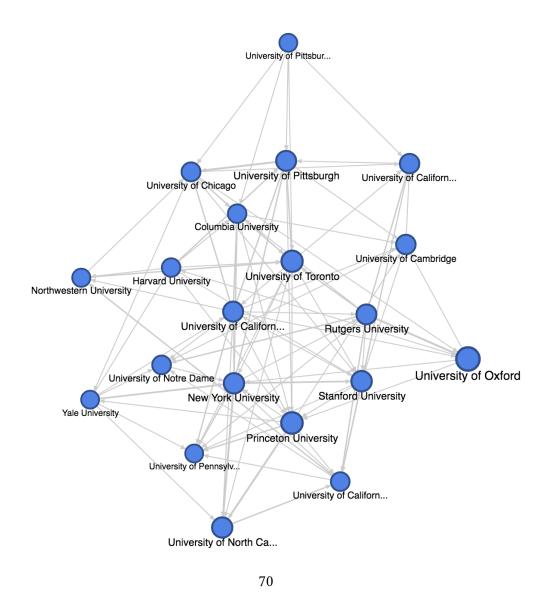


Figure 11: Network Map of All Current Permanent and Postdoctoral Placements between PhD Programs in Philosophy, 20 Nodes

Our database and placement information could also be improved upon and expanded. One proposed expansion includes our plan to compare graduation numbers and types of job ads listed on PhilJobs to determine whether the job market has tightened over time for philosophy graduates (see this graph that shows a tightening of the academic job market for scientists and engineers). One proposed improvement would be to allow individuals not currently in the database to add records, or to claim existing records if we do not yet have an email address on file for them. The process of adding nonacademic employment could be facilitated by creating a dropdown list for different kind of occupations, based on the work Contreras Kallens put in to categorize these jobs.

In addition to these improvements to our database and website, there are still improvements to be made in our data collection methods and instruments, and in our analyses of the results obtained through them. Firstly, there are still relationships and interactions in our data that we have not been able to explore fully. As an example, we would like to perform a detailed analysis of university-level indicators like the Carnegie Classification, and their effects on the placement of their graduates. In the same vein, we would like to review and extract key terms from the non-public comments provided by the survey participants. The results of this analysis could then be covered in the program highlights. Moreover, although it proved promising in its current exploratory form, we would like to expand on the clustering analysis of the programs. A more accurate and polished version of it could be a useful tool in visualizing the different fields of the discipline, especially as a data-driven support for prospective students.

The survey itself can also be improved upon. For instance, the questions regarding distribution of labor suffered from some issues that we would like to address as an improvement to our survey for the future. An example of one such issue is that the default amount of hours worked for the week was set to 40, which makes it difficult to distinguish between those participants who responded that they worked 40 hours a week, and those who did not provide an answer to the question. Of course, our analyses of the field would be much more informative and complete if we could enhance the number of respondents. Particularly, the number of respondents of the survey who currently have nonacademic employment was lower than we had hoped. In part, this is due to their contact information not being as easily available as the information of people who work in academia. Thus, in future iterations of the survey we would like to strengthen our efforts in contacting these graduates.

Our current plan is to polish some of this work further over the next couple of years, aiming for its publication. This would be accompanied by public access to the anonymized data that we have been able to collect until now.

period. This very issue was confronted by the APDA team this year.

Thanks are due to the American Philosophical Association and University of California, Merced for supporting this work.

# **Appendix A** 2017 Survey Keywords

• Aesthetics	<ul> <li>Continental</li> </ul>	History and Philoso-	• Mind
• African	• Critical Theory	phy of Science	• Naturalist/Empirical
<ul> <li>Analytic</li> </ul>	• Early Modern	<ul> <li>Interdisciplinary</li> </ul>	• Non-Western
• Ancient	Epistemology	• Islamic	<ul> <li>Phenomenology</li> </ul>
<ul> <li>Applied</li> </ul>	• Ethics	• Language	• Physics
••		• Latin American	<ul> <li>Pluralist</li> </ul>
• Asian	<ul> <li>Experimental Philos- ophy</li> </ul>	• Law	• Political
<ul> <li>Bioethics/Medical Ethics</li> </ul>	• French	• Logic/Formal	• Pragmatism
• Biology	• Gender/Feminist	<ul> <li>Mathematics</li> </ul>	• Race
Cognitive Science	• German	<ul> <li>Medieval</li> </ul>	Religion
Contemporary	Historical	<ul> <li>Metaphysics</li> </ul>	Social Science

# Appendix B Included and Non-Included Programs with Check Dates

Status	University Name (Program)	Program Page	ProQuest	Final Check	Added
Included	Arizona State University	1/23/17 CDJ	1/23/17 CDJ	9/21/2017 PCK	18
Included	Arizona State University (HPS)*			9/21/17 CDJ	0
Included	Australian National University	9/14/17 CDJ	3/8/17 BDM		8
Included	Baylor University	4/7/2017 JI	4/10/17 BDM	5/15/2017 YL	12
Not Included	Bielefeld University*				0
Included	Binghamton University	9/12/17 CDJ	9/12/17 CDJ		4
Included	Birkbeck, University of London	9/11/17 CDJ	9/11/17 CDJ		5
Included	Boston College	4/7/2017 JI	4/10/17 BDM	4/29/17 CDJ	83
Included	Boston University	1/6/2017 JI	1/30/17 BDM	5/28/2017 YL	17
Included	<b>Bowling Green State University</b>	12/8/2016 JI	1/30/17 BDM	5/15/2017 YL	4
Included	Brown University	9/13/17 CDJ	9/13/17 CDJ		8
Not Included	Cardiff University*				0
Included	Carnegie Mellon University	12/16/2016 JI	1/30/17 BDM	9/22/2017 PCK	3
Not Included	Central European University*		4/12/17 BDM		0
Not Included	Claremont Graduate University*		4/4/17 BDM		0
Included	Columbia University	12/30/2016 JI	1/30/17 BDM	5/22/2017 YL	5
Included	Cornell University	4/7/2017 JI	4/10/17 BDM	5/13/2017 YL	15
Not Included	Dalhousie University*		4/12/17 BDM		0
Not Included	Deakin University*		4/4/17 BDM		0
Not Included	Delft University of Technology*				0
Included	DePaul University	9/11/17 CDJ	9/11/17 CDJ		1
Included	Duke University	1/6/2017 JI	2/2/17 BDM	5/25/2017 YL	19
Included	Duquesne University	12/15/2016 JI	2/2/17 BDM	5/15/2017 YL	4
Not Included	Durham University	2/17/2017 JI	3/2/17 BDM		19
Not Included	Eindhoven University of Technology*				0
Included	Emory University	1/19/2017 JI	2/10/17 BDM	6/2/2017 YL	3
Included	Florida State University	3/17/2017 JI	4/3/17 BDM	9/22/2017 PCK	24
(continued)					

Status	University Name (Program)	Program Page	ProQuest	Final Check	Added
Included	Fordham University	12/9/2016 JI	2/10/17 BDM	5/15/2017 YL	24
Not Included	Free University of Berlin*				0
Included	Georgetown University	1/19/2017 JI	2/10/17 BDM	6/3/2017 YL	17
Not Included	Goethe University Frankfurt*				0
Included	Graduate Center of the City University of New York	12/30/2016 JI	2/10/17 BDM	5/19/2017 YL	35
Included	Harvard University	2/17/2017 JI	3/2/17 BDM	9/21/17 CDJ	2
Not Included	Humboldt University of Berlin*				0
Included	Indiana University Bloomington	9/15/17 CDJ	9/15/17 CDJ	5/30/2017 YL	8
Included	Indiana University Bloomington (HPS)	9/13/2017 CDJ	9/13/17 CDJ		3
Included	Institut Jean Nicod	9/12/17 CDJ	9/12/17 CDJ		7
Not Included	Iowa State University*		4/4/17 BDM		0
Not Included	Johannes Gutenberg University of Mainz*				0
Included	Johns Hopkins University	1/12/2017 JI	2/10/17 BDM	5/30/2017 YL	23
Included	Katholieke Universiteit Leuven	9/19/17 CDJ	9/19/17 CDJ		31
Included	King's College London	1/19/2017 JI	2/10/17 BDM	9/5/2017 YL	52
Included	Kingston University	9/19/17 CDJ	9/19/17 CDJ		20
Not Included	La Trobe University*				0
Not Included	Leipzig University*				0
Included	London School of Economics and Political Science	1/19/2017 JI	3/19/17 BDM	9/5/2017 YL	24
Included	Loyola University Chicago	12/15/2016 JI	2/10/17 BDM	5/15/2017 YL	7
Included	Macquarie University*	9/17/17 CDJ	9/17/17 CDJ		7
Included	Marquette University*	9/15/17 CDJ	4/4/17 BDM		19
Included	Massachusetts Institute of Technology	9/13/17 CDJ	9/13/17 CDJ		11
Included	McGill University	2/3/2017 JI	3/2/17 BDM	9/20/17 CDJ	12
Included	McMaster University	9/15/17 CDJ	9/15/17 CDJ	9/5/2017 YL	23
Included (continued)	Michigan State University	12/8/2016 JI	3/21/17 BDM	5/15/2017 YL	20

Status	University Name (Program)	Program Page	ProQuest	Final Check	Added
Not Included	Monash University*		4/4/17 BDM		0
Not Included	Montclair State University*		4/4/17 BDM		0
Included	New York University	12/1/2016 JI	3/21/17 BDM	4/29/17 CDJ	6
Included	Northwestern University	12/8/2016 JI	2/10/17 BDM	9/21/2017 PCK	4
Included	Ohio State University	12/1/2016 JI	2/10/17 BDM	5/3/2017 YL	2
Not Included	Pantheon-Sorbonne University*				0
Included	Pennsylvania State University	9/13/17 CDJ	9/13/17 CDJ	5/15/2017 YL	25
Included	Princeton University	9/12/17 CDJ	9/12/17 CDJ		5
Included	Purdue University	3/24/2017 JI	4/4/17 BDM		55
Not Included	Royal Holloway, University of London*				0
Included	Rutgers University	3/24/2017 JI	4/4/17 BDM		4
Included	Saint Louis University	9/11/17 CDJ	9/11/2017 CDJ		6
Not Included	Scuola Normale Superiore di Pisa*				0
Not Included	Simon Fraser University*				0
Included	Southern Illinois University	2/24/2017 JI	3/16/17 BDM	9/22/17 CDJ	45
Included	St Andrews and Stirling Graduate Pro-	3/10/2017 JI	4/10/17 BDM	9/20/17 CDJ	57
	gramme in Philosophy				
Included	Stanford University	12/16/2016 JI	9/15/17 CDJ	5/15/2017 YL	22
Not Included	Stockholm University*				0
Included	Stony Brook University	2/3/2017 JI	3/2/17 BDM	9/22/2017 PCK	39
Included	Syracuse University	11/30/2016 JI	2/10/17 BDM	4/29/17, CDJ	25
Included	Temple University	9/11/17 CDJ	4/4/17 BDM		13
Not Included	Texas State University*				0
Included	The Catholic University of America*		4/12/17 BDM	9/22/17 CDJ	25
Included	The New School	2/3/2017 JI	4/10/17 BDM	9/22/17 CDJ	39
Not Included	The University of Adelaide*		4/12/17 BDM		0
Included	The University of Manchester	9/13/17 CDJ	9/19/17 CDJ		5
Included	The University of Melbourne*	9/19/17 CDJ	9/19/17 CDJ		0
Included	The University of Sydney	9/14/17 CDJ	9/14/17 CDJ		5
(continued)					

Status	University Name (Program)	Program Page	ProQuest	Final Check	Added
Not Included	The University of Western Australia*		4/12/17 BDM		0
Included	Tilburg University	9/19/17 CDJ	9/19/17 CDJ		2
Not Included	Trinity College, Dublin*		4/12/17 BDM		0
Not Included	TU Bergakademie Freiberg*				0
Included	Tulane University	12/1/2016 JI	2/10/17 BDM	4/29/17 CDJ	11
Not Included	Universite de Montreal*				0
Included	University at Albany	9/13/17 CDJ	9/13/17 CDJ		17
Included	University at Buffalo	3/24/2017 JI	4/4/17 BDM		38
Included	University College London	9/12/17 CDJ	9/12/2017 CDJ		21
Not Included	University of Aberdeen*		4/4/17 BDM	9/22/17 CDJ	5
Included	University of Alberta	3/2/2017 JI	3/8/17 BDM	9/22/17 CDJ	23
Not Included	University of Amsterdam*		4/12/17 BDM		0
Included	University of Arizona	1/12/2017 JI	2/10/17 BDM	5/30/2017 YL	28
Included	University of Arkansas	9/11/17 CDJ	9/11/17 CDJ		10
Not Included	University of Auckland*		4/12/17 BDM		0
Not Included	University of Bristol*		4/12/17 BDM	9/22/17 CDJ	1
Included	University of British Columbia	9/14/17 CDJ	9/14/17 CDJ		5
Included	University of Calgary	3/2/2017 JI	3/8/17 BDM	9/21/2017 PCK	8
Included	University of California, Berkeley	12/16/2016 JI	2/10/17 BDM	9/21/2017 PCK	3
Included	University of California, Davis	1/12/2017 JI	2/10/17 BDM	5/30/2017 YL	3
Included	University of California, Irvine	11/30/2016 JI	2/10/17 BDM	4/29/17 CDJ	12
Included	University of California, Irvine (LPS)	9/11/17 CDJ	9/11/2017 CDJ		0
Included	University of California, Los Angeles	11/30/2016 JI	3/8/17 BDM	4/21/17 CDJ	3
Included	University of California, Riverside	12/9/2016 JI	2/11/17 BDM	9/21/2017 PCK	1
Included	University of California, San Diego	1/12/2017 JI	2/11/17 BDM	5/30/2017 YL	27
Included	University of California, Santa Barbara	12/30/2016 JI	2/11/17 BDM	5/20/2017 YL	1
Included	University of California, Santa Cruz	12/30/2016 JI	2/11/17 BDM	5/22/2017 YL	2
Included	University of Cambridge	9/22/17 CDJ	3/8/17 BDM	9/22/17 CDJ	23
Included	University of Cambridge (HPS)	9/13/17 CDJ	9/13/17 CDJ		25
(continued)					

Status	University Name (Program)	Program Page	ProQuest	Final Check	Added
Included	University of Chicago	1/12/2017 JI	3/20/17 BDM	5/30/2017 YL	7
Included	University of Chicago (CHSS)	9/11/17 CDJ	9/11/17 CDJ		10
Included	University of Cincinnati	12/8/2016 JI	2/11/17 BDM	9/21/2017 PCK	2
Not Included	University of Cologne*				0
Included	University of Colorado at Boulder	9/12/2017 CDJ	9/12/17 CDJ		7
Included	University of Connecticut	9/12/17 CDJ	9/12/2017 CDJ		8
Included	University of Dallas*	9/15/17 CDJ	9/15/17 CDJ		8
Not Included	University of Dundee*		4/12/17 BDM		5
Not Included	University of East Anglia*		4/10/17 BDM		20
Included	University of Edinburgh	2/11/2017 JI	3/19/17 BDM	9/22/17 CDJ	37
Not Included	University of Erfurt*				0
Included	University of Florida	3/17/2017 JI	4/4/17 BDM	5/19/2017 YL	17
Not Included	University of Geneva*				0
Included	University of Georgia	1/6/2017 JI	4/10/17 BDM	9/15/17 CDJ	24
Not Included	University of Glasgow*		4/10/17 BDM		0
Not Included	University of Graz*				0
Not Included	University of Groningen*		4/10/17 BDM		0
Included	University of Guelph	9/14/17 CDJ	9/14/17 CDJ		16
Included	University of Hawai'i at Manoa	12/30/2016 JI	2/11/17 BDM	5/19/2017 YL	5
Not Included	University of Helsinki*				0
Included	University of Illinois at Chicago	11/30/2016 JI	2/11/17 BDM	4/29/17 CDJ	5
Included	University of Illinois at Urbana-	1/6/2017 JI	2/11/17 BDM	5/28/2017 YL	23
	Champaign				
Included	University of Iowa	9/11/17 CDJ	9/11/2017 CDJ		5
Included	University of Kansas	9/12/17 CDJ	9/12/2017 CDJ		0
Included	University of Kent*		9/19/17 CDJ		1
Included	University of Kentucky	12/30/2016 JI	2/15/17 BDM	5/19/2017 YL	11
Not Included	University of Leeds*		4/10/17 BDM		85
Included	University of Maryland, College Park	12/30/2016 JI	2/15/17 BDM	5/16/2017 YL	31
(continued)					

Status	University Name (Program)	Program Page	ProQuest	Final Check	Added
Included	University of Massachusetts Amherst	9/12/17 CDJ	9/12/2017 CDJ		0
Included	University of Memphis	2/11/2017 JI	3/2/17 BDM	9/22/17 CDJ	6
Included	University of Miami	3/17/2017 JI	4/4/17 BDM	5/30/2017 YL	12
Included	University of Michigan	3/17/2017 JI	4/4/17 BDM	5/28/2017 YL	13
Not Included	University of Milan*				0
Included	University of Minnesota Twin Cities*	3/10/2017 JI	9/13/17 CDJ		28
Included	University of Missouri	3/17/2017 JI	4/4/17 BDM	9/20/17 CDJ	43
Not Included	University of Modena*				0
Included	University of Nebraska, Lincoln	12/16/2016 JI	2/15/17 BDM	5/15/2017 YL	9
Included	University of New Mexico	1/12/2017 JI	2/16/17 BDM	6/2/2017 YL	5
Not Included	University of New South Wales*		4/12/17 BDM		0
Included	University of North Carolina at Chapel	1/12/2017 JI	2/16/17 BDM	5/30/2017 YL	28
	Hill				
Included	University of Notre Dame	9/12/17 CDJ	9/12/2017		16
Included	University of Oklahoma	9/13/17 CDJ	9/13/17 CDJ		17
Included	University of Oregon	12/30/2016 JI	2/16/17 BDM	5/22/2017 YL	1
Not Included	University of Oslo*				0
Included	University of Otago	9/13/17 CDJ	9/13/17 CDJ		8
Not Included	University of Ottawa*		4/12/17 BDM		5
Included	University of Oxford	2/17/2017 JI	3/19/17 BDM	9/22/17 CDJ	79
Not Included	University of Padua*				0
Included	University of Pennsylvania	12/15/2016 JI	2/16/17 BDM	5/15/2017 YL	20
Included	University of Pittsburgh	12/1/2016 JI	2/16/17 BDM	4/29/17 CDJ	24
Included	University of Pittsburgh (HPS)	3/10/2017 JI	4/10/17 BDM	9/20/17 CDJ	26
Not Included	University of Reading	3/2/2017 JI	3/16/17 BDM		29
Included	University of Rochester	12/9/2016 JI	3/20/17 BDM	5/15/2017 YL	16
Included	University of Sheffield	9/13/17 CDJ	9/13/17 CDJ		7
Included	University of South Carolina	4/7/2017 JI	4/10/17 BDM	4/29/17 CDJ	26
Included	University of South Florida	4/7/2017 JI	4/10/17 BDM	5/13/2017 YL	44
(continued)					

Status	University Name (Program)	Program Page	ProQuest	Final Check	Added
Included	University of Southern California	12/15/2016 JI	2/21/17 BDM	5/16/2017 YL	7
Not Included	University of Sussex*		4/10/17 BDM		14
Not Included	University of Tubingen*				0
Not Included	University of Tasmania*		4/12/17 BDM		0
Not Included	University of Tehran*				0
Included	University of Tennessee	9/12/17 CDJ	9/12/17 CDJ		3
Included	University of Texas at Austin	9/10/17 CDJ	9/10/17 CDJ		12
Included	University of Toronto	3/3/2017 JI	3/8/17 BDM	9/20/2017 CDJ	70
Included	University of Utah	12/16/2016 JI	2/21/17 BDM	5/16/2017 YL	1
Not Included	University of Vienna*				0
Included	University of Virginia	1/12/2017 JI	2/21/17 BDM	5/30/2017 YL	9
Not Included	University of Waikato*		4/12/17 BDM		0
Not Included	University of Warwick*		4/10/17 BDM		24
Included	University of Washington	9/13/17 CDJ	9/13/17 CDJ		1
Included	University of Waterloo	9/13/17 CDJ	9/13/17 CDJ		0
Included	University of Wisconsin-Madison	12/8/2016 JI	2/21/17 BDM	5/15/2017 YL	35
Included	University of York	3/3/2017 JI	3/16/17 BDM	9/20/17 CDJ	33
Not Included	Uppsala University*				0
Included	Vanderbilt University	12/1/2016 JI	2/21/17 BDM	9/21/2017 PCK	13
Included	Victoria University of Wellington	9/14/17 CDJ	9/14/17 CDJ		3
Included	Villanova University	12/16/2016 JI	2/21/17 BDM	5/18/2017 YL	2
Included	Washington University in St. Louis	12/1/2016 JI	2/21/17 BDM	4/29/17 CDJ	22
Included	Wayne State University		4/12/17 BDM	9/20/17 CDJ	5
Included	Western University	9/14/17 CDJ	9/14/17 CDJ		39
Included	William Marsh Rice University	9/14/17 CDJ	9/14/17 CDJ		1
Included	Yale University	2/11/2017 JI	3/2/17 BDM	9/21/17 CDJ	3
Included	York University	9/13/2017 CDJ	9/13/17 CDJ		10

# **Appendix C** Experimental AOS Organization

Core, Western	Applied, Interdisciplinary, Non-Western
19th / 20th	Aesthetics
Action	African
American (incl Latin American)	Applied Ethics (incl Bio and Medical)
Analytic (History of)	Asian
Ancient	Biology (incl Environmental)
Continental (incl Phenomenology)	Cognitive Science / Psychology / Neuroscience / Linguistics
Epistemology	Comparative
Ethics	Decision Theory
German (incl Kant)	Economics
History (General)	Education
Language	Gender / Race / Sexuality / Disability Studies
Logic	Law
Medieval / Renaissance	Math
Meta-Ethics	Metaphilosophy (incl Experimental)
Metaphysics	Physics
Mind	Social / Political
Modern	Technology
Religion	
Science (General)	
Value (General)	