How Data May (Mis-)Represent Outcomes for Philosophy Majors and What You Can Do About It (updated, 12/9/2014)
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Three significant sources of data used by researchers studying U.S. higher education and outcomes for undergraduate majors are
- • the American Community Survey (**ACS**),
- • the National Center for Education Statistics (**NCES)** Degree Completions and Baccalaureate and Beyond,
- • the National Survey of College Graduates (**NSCG**).

In these data sets, philosophy majors are often aggregated with religious studies majors.[1] This aggregating is not necessarily accurate or advantageous for philosophy.

Following is a brief overview of the data sources and the impact of aggregating. At the end are some **action items**, one of which is time-sensitive with a **deadline of Dec. 30, 2014**.

> A caveat and disclaimer! I'm a philosopher, not a social scientist and have no training in social science research. I have only paid some attention to reports about philosophy and to how data is used, done a bit of digging on my own, and asked questions of researchers to help me understand a little better how the data is collected and used. So this post represents my best understanding at the moment, which admittedly is not that of an expert in the field.

ACS Data
ACS, or the American Community Survey of a sample of the U.S. population, is conducted by the Census Bureau. Question 12 asks the respondent what, if any, was the respondent's college major. The respondent handwrites an answer.

> **NOTE:** Question 12 was included on the ACS starting in 2009 at the behest of the National Science Foundation (**NSF**).[2] Prior to that the NSF conducted its own data collection (and still does conduct the NSCG, see below).

ACS processes responses based on NCES Classification of Instructional Program codes (CIP).[3] CIP has two general categories "philosophy and religious studies" and "theology and religious vocations." Under "philosophy and religious studies" CIP

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[1] Theology and religious vocations or pastoral care are treated as a separate category by NCES, although not by NSCG. See discussion in text.

[2] See Mervis, Can Question 12 Survive? at AAAS's Science Magazine, 13 November 2014 http://Mervis/CanQu12

[3] If link doesn't work: http://nces.ed.gov/ipeds/cipcode/browse.aspx?y=55

includes a distinct subfield, "philosophy." ***However***, ACS processes and reports responses using the broad category, "philosophy and religious studies" ***combining*** philosophy, religious studies and theology majors.[4] ***Update, 12/9/2014***: The census bureau combines philosophy and religious studies under one code and theology under another, as in CIP.[5]

The *federally* designated use of Question 12 is defined as follows:

> "The National Science Foundation (NSF) uses field of degree estimates to assess information women, minorities and persons with disabilities in the science and engineering workforce. NSF also uses these estimates as an indicator of the state of science and engineering in the United States."

http://www.census.gov/acs/www/Downloads/QbyQfact/degree.pdf

However, the State and County, and Private sector uses of ACS data as defined by ACS are considerably broader than the federal use and an appropriate distinction among fields of study would be helpful for these uses even if of lesser interest to NSF.

> "State and County Uses:
> States analyze field of degree statistics to understand the distribution of college graduates in their states, and the degrees they hold. This information may also encourage programs or other opportunities for underrepresented groups or fields of study.
>
> Private Sector Uses:
> College administrators, educators, students, parents and professional societies use these estimates to assess how graduates in various fields are faring in the job market. These statistics might also be used to determine the kinds of training that may be needed for the jobs available. "

http://www.census.gov/acs/www/Downloads/QbyQfact/degree.pdf

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[4] ACS's response to my question about this: "It looks like the main questions are whether or not we break down "Philosophy and Religious Studies" (4801) into further subcategories and if so, what forms we make those data available. For ACS, we do not break down that category into further subcategories during any of our processing steps, therefore we would not have those data available. Any respondent who wrote "Philosophy", "Religious Studies", "Theology" etc. would all be coded to one category (4801)." (received Dec. 4, 2014)

[5] ACS's response to my follow up query: Thank you for your interest in the field of degree data. I wanted to follow up with your questions regarding how we classify "Philosophy", "Religious Studies", and "Theology". In an earlier email, I provided a reply that they were all coded to 4801.
However, after reviewing our classifications again, I realized I made an error. While "Philosophy" and "Religious Studies" are classified as 4801, "Theology" is coded as 4901. These are all in line with the CIP classifications as you stated. Feel free to let us know if you have further questions. (received Dec. 5, 2014)

Thus, there are many public and private uses for the data collected. Ensuring that the appropriate distinctions between philosophy, religion and theology are consistently made is both appropriate and should not be difficult to accomplish.

Now there is a new wrinkle, which offers an opportunity to comment on the need to distinguish between philosophy and religious studies (see **Action Items** at the end).

The Census Bureau has conducted a review of the ACS survey and is proposing to *eliminate* a number of questions including Question 12. As reported in Mervis (footnote 2) researchers think that eliminating question 12 is a very bad idea.

There are two issues associated with ACS:
1) possible elimination of question 12 about undergraduate college major.
> Social science/higher education researchers think this is a bad idea. And on the principle that more data/knowledge is better than less, that may be true. Since I'm not such a researcher, it is unclear to me what the effects of the elimination of this question would be. This is a distinct issue from the data aggregation issue.

2) disaggregation of philosophy from religious studies, religion, theology majors.
> If question 12 is retained, philosophy majors and religious studies majors should be processed and coded separately.

In any case, see the first **Action Item** at the end for an opportunity to submit a comment to ACS. You must do so before **December 30, 2014.**

NSCG Data
The National Survey of College Graduates (NSCG) is a survey conducted by NSF and its focus is on science and engineering graduates. You can read about NSCG at http://www.nsf.gov/statistics/srvygrads/, and in Mervis (footnote 2).

NSCG does *not* distinguish between philosophy, religion and theology; all three are lumped together under a single code, with the exception of the philosophy of science, which has a distinct code. For a sample survey with the codes go to http://www.nsf.gov/statistics/srvygrads/#qs

In addition to NSCG, NSF uses data from ACS Question 12 (see discussion above).

NCES Data
NCES is the National Center for Education Statistics and it collects data from institutions of higher education on degree completions. NCES has a system of classification of instructional program (CIP).[6] NCES's CIP does allow for

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[6] Url in case link doesn't work: http://nces.ed.gov/ipeds/cipcode/browse.aspx?y=55
According to http://www.humanitiesindicators.org NCES introduced the ability to

distinguishing philosophy and religious studies, but it also has an aggregate category that, as noted above, is used by ACS. NCES runs and maintains **IPEDS**, the Integrated Post-Secondary Education Data System, a system of interrelated annual surveys that gathers information from every post-secondary institution that participates in the federal student financial aid programs (http://nces.ed.gov/ipeds/about/).The NCES Baccalaureate and Beyond is a survey of a sample of graduates combined with course transcripts.

However, here's the problem:
1. Sometimes researchers use only the broad CIP category "philosophy and religious studies" even though NCES does allow for breaking out philosophy majors.

2. When researchers use *other* data sets or *compare* across data sets (e.g., ACS, NSCG, NCES), they may combine philosophy & religious studies, even when a source data has been disaggregated or has the capability of disaggregation (as in NCES), because when comparing across data sets researchers want consistency, they want to be comparing apples to apples. Hence, the result is studies that often combine philosophy and religious studies.

> **NOTE:** As an aside, the NCES CIP categories are still kind of funky (my own non-technical term!). For example, it has a category "philosophy & religious studies general" and multiple additional, specific categories (philosophy; logic; ethics; applied and professional ethics; philosophy other; philosophy and religious studies, other) each with its own code. Most institutions report the vast majority of majors as falling under "philosophy" with a smattering of majors in some of the specific areas, and then a relatively small number in the philosophy and religious studies category. (By the way, the separate NCES religion category is even more strange with duplicate categories and codes.) The fine-tuning of subcategories by NCES is probably not as germane to an undergraduate philosophy major as it might be for graduate study.

What's the Issue with Aggregated Data?
Research that is based on these aggregated data sets is regularly reported on in the media. But, philosophy and religion are very different disciplines, and aggregating may not accurately represent and may even be distorting or underestimating outcomes for philosophy majors.

While at one time it may have been appropriate to lump philosophy and religious studies together, given how the disciplines have developed and diverged, the aggregation is an anachronism -- even if a philosophy of religion course may be part of a philosophy curriculum and even if for bureaucratic reasons (consolidating administrative overhead) philosophy and religion departments are combined.

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distinguish philosophy from religious studies majors in 1987. In data prior to 1987, they are lumped together.

Moreover, there are other sources that suggest that philosophy majors fare considerably better than religion and many other majors, for instance, payscale.com* report on mid-career salaries and philosophy students' performance on GREs. Even if GRE-takers is a self-select group of high achievers, it is one possible indicator that philosophy majors may have different outcomes from religious studies majors.

> ***NOTE**: One possible issue with payscale.com is knowing what population it represents. While payscale.com may serve a useful purpose, there are debates about the accuracy of its data, and whether conclusions drawn from payscale.com analyses have rigorous empirical support.[7]

Examples of Philosophy's Poor Representation in the Media
Just two recent examples of the poor light in which philosophy gets publicly represented and where that representation depends on aggregated data:

1. November 21, 2014 NY Times article by David Leonhardt[8] on student debt: philosophy is specifically identified as a major for which student debt burden is a relatively high percentage of income. The article does not clarify that the research cited[9] used an aggregated ACS data category "philosophy and religious studies," but simply names "philosophy" as among the majors with a high debt burden.

2. In June 2014, the NYTimes ran a piece , "A College Major Matters Even More in a Recession," by Claire Cain Miller[10] with a graphic in it showing philosophy and religious studies majors at the very bottom, that is, as faring worst, among the majors compared, in the job market in a recession. The research to which this article referred used data from all three sources identified at the beginning of this post. I communicated with the authors of this article, and their response was judicious and took the point about distinguishing philosophy majors. That was heartening, but the basic problem persists. Prof. Joseph Altonji's response was posted[11] on Leiter.

Why care about this?
Philosophers should care about this because the aggregated data is used in research that is widely disseminated, reported on publicly, and affects both student (and parent) perception of desirable or acceptable major *and* how university administrations and funding agencies decide funding and program priorities.

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[7] Here are urls for two articles about payscale, one from Around Learning (http://aroundlearning.com/2013/09/8-problems-with-payscale-coms-college-rankings-and-one-solution/) and one from Forbes, "How To Know What That Job Pays" by Susan Adams (http://onforb.es/1Ah8kw2)

[8] Here's the url to the Leonhardt article http://nyti.ms/1xtFOYI

[9] Research was conducted by the Hamilton Project. Here's the url in case the link in the text doesn't work: http://bit.ly/1v2TV6g

[10] Here's the url to the Miller piece http://nyti.ms/UTN8h9

[11] Here's the url for the post at Leiter http://bit.ly/1Ahc3tx

Sometimes a positive outcome for philosophy is reported such as in the recent *Forbes* piece by Dorfman, "Humanities Degrees great return on investment"[12] (using payscale data; see comment above and footnote 7 about payscale data). Whatever one thinks about this particular analysis or others that look at economic and financial outcomes as a measure of the value of a major, the point is that it portrays philosophy as a distinct major in a positive light.

But, the reports and the data are not consistent -- sometimes philosophy is treated as distinct from religion, and sometimes it is combined with religion, and thus reporting is inconsistent and cognitively dissonant for the reader. A positive message from something like the Dorfman piece is weakened by the negative message from something like the Leonhardt and Miller pieces. Thus, philosophy may still seem risky as an undergraduate major to students and their parents. The negative outcomes reported may even be more salient at least in part in so far as they resonate with people's stereotypes about philosophy or perhaps because perceived downside risk can have greater salience than upside risk.

As philosophers we may think philosophy is valuable to study for many reasons, not only economic, and in the context of many different kinds of employment and life situations. But it is important, whatever the outcomes and value, that they be accurate and be *consistently* demonstrable to the public and to university administrations. Hopefully, they are better than some of the reports relying on aggregated data suggest. For better or worse, those outcomes will probably play some role in decisions about philosophy programs and thus whether there are going to be full-time jobs teaching philosophy at the many undergraduate programs throughout the country where most philosophy Ph.D.s, or at least those who remain in academia, are likely to end up.

Philosophers have to be prepared for the possibility that philosophy majors fare poorly on some of these measures. If those are the facts, then that is what the profession would have to deal with. But as long as the data is aggregated, no one really has any idea. At least one problem is at the source, with how the data is processed and reported. Another problem is how researchers use and aggregate data. If data are going to play a role in deciding the future fate of programs and how students select majors, it should at least be accurate. Most undergraduate philosophy majors do not themselves become professional philosophers, and how they fare in a variety of ways should be of interest and concern to philosophers.

Action Items:
Possible things one can do --

1. Make a comment about Question 12 on the American Community Survey during the Public Comment Period, ***which ends on Dec. 30, 2014***. Mervis (see

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[12] Here's the url for the Dorfman piece http://onforb.es/1BUC06J

footnote 2), "Can Question No. 12 Survive?" lays out the issues regarding Question 12.The main issue for philosophers is to advocate for *disaggregating* philosophy and religious studies.

Here's where you go to comment no later than Dec. 30, 2014:
Direct all written comments to Jennifer Jessup, Departmental Paperwork Clearance Officer, Department of Commerce, Room 6616, 14th and Constitution Avenue NW., Washington, DC 20230 (or via the Internet at *jjessup@doc.gov*)

If the url below is broken, try typing it in manually if you want to look at the federal register page itself:
https://www.federalregister.gov/articles/2014/10/31/2014-25912/proposed-information-collection-comment-request-the-american-community-survey-content-review-results

2. Contact NSF about distinguishing philosophy as a field of study from religion and theology on its own surveys and studies. The NSCG project director is **John Finamore, jfinamor@nsf.gov**. Maybe even ask your science colleagues to do the same!

3. Ask the APA how you can help it, as a national organization, to address the issue of accurate and meaningful categories of information with the agencies that collect and distribute the source data

4. Counter reports in the media. Comment on the article or write a letter to the editor of the local newspaper or to the reporter. Contact the researchers mentioned in an article, etc. to raise a question about or point out the potential problem with aggregated data

5. Talk and/or write to social science and higher education researchers about the issue; maybe there are researchers at your own institution who work on higher education; maybe your institution has an institutional research office -- how does it collect data, e.g., how are surveys of alumni worded to distinguish between majors? how does it aggregate (or not) data that it collects and reports? Is your institution, your department doing a good job of accurately gathering, compiling and disseminating data?

6. Check out Humanities Indictors[13] of the American Academy of Arts and Sciences to familiarize yourself with some of the trends in the humanities. In addition to using public data mentioned in this post, HI also conducts its own department survey of humanities departments.[14] Philosophy did not participate in the first survey in 2007-08, but did participate in the second one in 2012-13.

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[13] http://www.humanitiesindicators.org
[14] http://www.humanitiesindicators.org/content/indicatordoc.aspx?i=457