

# Perceptions of Philosophical Inquiry:

## A Survey

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*Abstract:* Six hundred and three people completed a survey measuring perceptions of traditional areas of philosophical inquiry and their relationship to empirical science. The ten areas studied were: aesthetics, epistemology, ethics, history of philosophy, logic, metaphysics, philosophy of language, philosophy of mind, philosophy of science, and political philosophy. For each area, participants rated whether it is currently central to philosophy (centrality), whether its centrality depends on integration with science (dependence), and whether work in the area is sufficiently integrated with science (integration). Centrality judgments tended to be high. Participants viewed nine of the ten areas as central to philosophy (the exception being aesthetics), although they made this judgment more confidently for some areas. Dependence judgments were more varied, ranging from clear disagreement (for logic and history of philosophy) to clear agreement (for philosophies of science, mind, and language). Integration judgments were also varied but exhibited more uncertainty. Some areas whose centrality depended on integration were judged to be well integrated (philosophies of science and mind), but a central tendency for all other areas was ambivalence. Demographic factors had small but statistically significant effects on all three sorts of judgment. Higher age predicted higher centrality judgments and higher integration judgments. Higher socioeconomic status predicted lower dependence judgments and higher integration judgments. Men recorded higher integration judgments.

## Introduction

An academic discipline is a complex social institution composed of agents and their activities organized into formal and informal structures. Formal structures include professional societies, journals, and departments at various universities. Informal structures include research networks, citation networks, and the shared norms, values, and beliefs that loosely define the discipline's ethos. The present research contributes to our understanding of some norms and beliefs that help constitute contemporary philosophy's ethos. Toward that end, I conducted a survey to improve our understanding of people's perceptions of the traditional areas of philosophical inquiry and their relationship to empirical science. More specifically, the survey was designed to measure people's perceptions of how central certain research areas are to philosophy, how much their centrality depends on integration with science, and whether they are sufficiently integrated with science. The findings will be of interests to philosophers because they contribute toward an understanding of their discipline's ethos. The findings will also be of interest to researchers studying the psychology and culture of academic disciplines (e.g. Biglan 1973, Becher 1981, Krishnan 2009).

This research was motivated by three things. First, it was motivated by recent efforts to informally survey related issues on the most widely read professional weblog in philosophy (<http://leiterreports.typepad.com/blog/2014/07/the-reader-polls-so-far-a-summary-of-the-results.html>). Given the level of interest this incited among philosophers, I judged it worthwhile to investigate the matter more rigorously. Second, it was motivated by concerns raised by many philosophers that prevailing opinion on these issues contributes to the marginalization or exclusion of people

working in certain areas, in which case philosophy's ethos could contribute to its lack of diversity. Third, and relatedly, it was motivated by an interest in whether demographic variables — especially gender, age, and socioeconomic status — affect opinion on these issues.

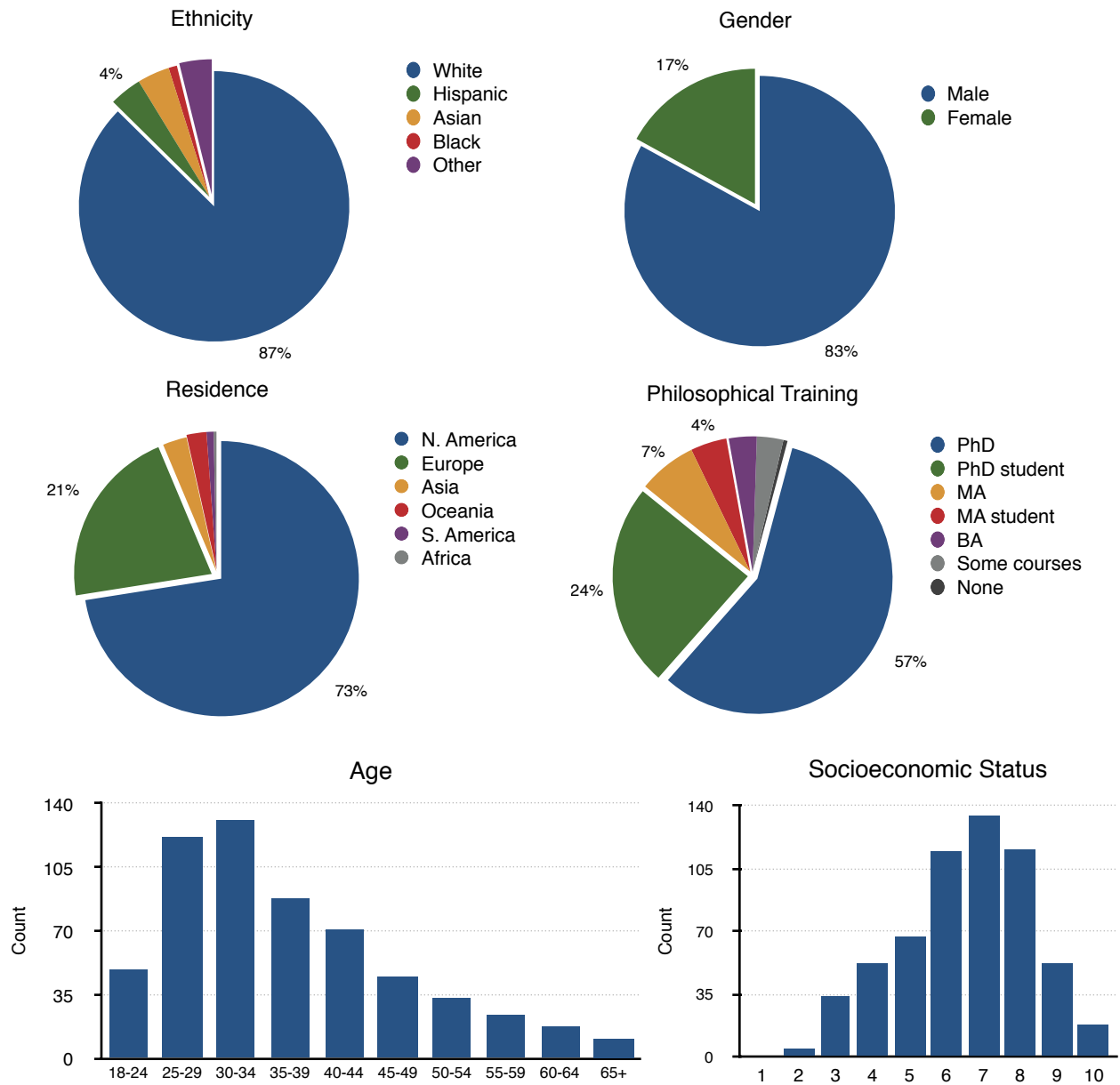
## Survey

### Method

#### Participants

Six hundred sixty-two people were recruited to participate. Participants were recruited primarily through an announcement on two mainstream professional philosophy weblogs, Leiter Reports (<http://leiterreports.typepad.com>) and Feminist Philosophers (<http://feministphilosophers.wordpress.com>). Some participants arrived at the survey from links on other weblogs, social media and email. The survey was administered online using Qualtrics software (<http://www.qualtrics.com>) and remained open for the first two weeks of September 2014. Average survey completion time was approximately 5-6 minutes. Participation was voluntary and uncompensated. Data were not collected from 14 recruits who refused to sign an informed-consent form. Data were excluded from forty-five people who did not complete the survey. This left data from 603 participants for analysis. Eighty-two percent reported native competence in English. Mean age was 37 years (SD = 11 years) and median age was 34 years. The sample was largely white, wealthy, Western, male, and highly educated. (See Fig. 1.) This is consistent with recent reports on the demographics of professional philosophy (Calhoun 2009; Paxton, Figdor & Tiberius 2012; Buckwalter &

Stich 2014; Botts, Bright, Cherry, Mallarangeng & Spencer 2014).



**Fig. 1.** Descriptive demographic statistics for the survey sample.

## Materials and Procedure

All participants rated their agreement with thirty evaluative statements and then completed a demographic questionnaire. Participants were not required to answer any particular item, though

they were asked to select the “neutral” option if they did not have enough information to respond.

On the first page of the survey, participants were instructed, “For each area of research, please rate your agreement with this statement:”

**(centrality measure)** This area is currently central to the discipline of philosophy.

Beneath the statement was a matrix table with ten areas of philosophy listed vertically: aesthetics, epistemology, ethics, history of philosophy, logic, metaphysics, philosophy of language, philosophy of mind, philosophy of science, and political philosophy. The areas were listed in random order to avoid order effects. Responses were collected on a standard 7-point Likert scale, 1 (“completely disagree”) – 7 (“completely agree”), left-to-right across the participant’s screen. Participants then advanced to a new page.

The second and third pages of the survey were the same as the first, except that participants were asked to rate, for each of the ten areas, their agreement with a different statement. These were the second and third statements:

**(dependence measure)** To the extent that this area is currently central to philosophy, it depends on being integrated with the relevant natural, cognitive or social sciences.

**(integration measure)** Current work in this area is sufficiently integrated with the relevant natural, cognitive or social sciences.

Participants were unable to return to a previous page. After testing, participants were asked to report their gender (male, female), age (numeric text entry), ethnicity (Black/African American, Hispanic/Latino, Asian/Pacific Islander, White, Other), socioeconomic status (on a 1-10 scale,

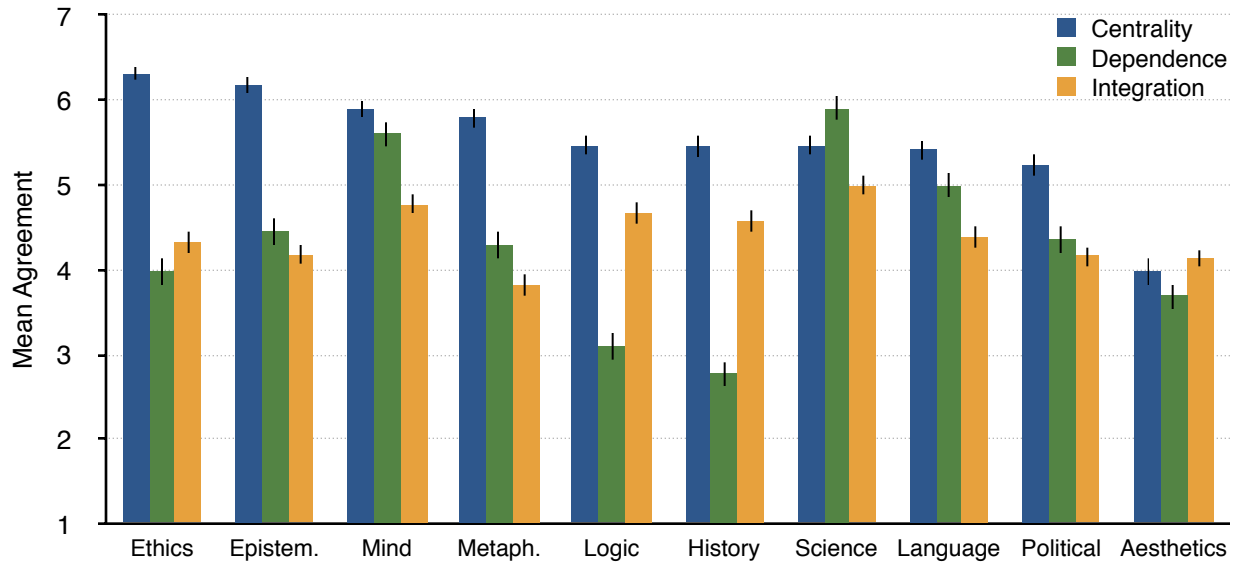
low to high), place of residence (North America, South America, Europe, Asia, Africa, Oceania), highest level of philosophical training (none, some undergraduate courses, completed BA, current MA student, completed MA, current PhD student, completed PhD), where they were educated (North America, South America, Europe, Asia, Africa, Oceania), and whether English was a native language for them. Figure 1 shows the demographic statistics for the sample.

The wording of the centrality, dependence, and integration measures was developed in consultation with professional philosophers with whom I was acquainted and members of my lab, all of whom were graduate and undergraduate philosophy students. A balance had to be struck between clarity, naturalness, precision, and length. Prior to conducting the actual survey, I recruited thirty people through Amazon Mechanical Turk (<http://www.mturk.com>) to rate whether the final wording, as described above, was natural and comprehensible. The overwhelming majority (> 90%) judged the wording as natural and comprehensible.

## **Results**

Figure 2 visualizes the mean scores and Table 1 reports descriptive statistics for the three dependent measures across the ten areas. I will discuss the measures in the following order: centrality, dependence, then integration. For each measure, I begin by reporting the results of a repeated measure analysis of variance (ANOVA) to determine whether participants rated the ten areas significantly differently, followed by pairwise comparisons to determine whether participants rated one specific area significantly higher than another. The data were not normally distributed but I decided to report the results from parametric tests because they are robust against the violation of

the normality assumption with large samples and the same basic pattern emerged when using nonparametric tests.



**Fig. 2.** Mean agreement for the three test statements for the ten areas. Scales ran 1 (completely disagree) – 7 (completely agree). Error bars represent 95% confidence intervals.

**Table 1.** Descriptive statistics for the three dependent measures across the ten areas.

		Ethics	Epistem.	Mind	Metaph.	Logic	History	Science	Language	Political	Aesthetics
<b>Centrality</b>	<b>Mode</b>	7	7	6	7	6	7	6	6	6	2
	<b>Median</b>	7	6	6	6	6	6	6	6	6	4
	<b>Mean</b>	6.31	6.18	5.89	5.79	5.47	5.46	5.46	5.42	5.24	3.97
	<b>SD</b>	1.05	1.15	1.20	1.52	1.51	1.55	1.38	1.44	1.54	1.81
<b>Dependence</b>	<b>Mode</b>	5	5	7	6, 7	1	1	7	6	5	4
	<b>Median</b>	4	5	6	5	3	2	7	5	5	4
	<b>Mean</b>	3.98	4.45	5.60	4.29	3.10	2.77	5.91	5.00	4.35	3.68
	<b>SD</b>	1.99	1.85	1.64	2.06	1.93	1.82	1.61	1.70	1.90	1.78
<b>Integration</b>	<b>Mode</b>	4	4	6	4	4	4	6	4	4	4
	<b>Median</b>	4	4	5	4	4	4	5	4	4	4
	<b>Mean</b>	4.32	4.18	4.78	3.82	4.68	4.57	5.00	4.39	4.16	4.13
	<b>SD</b>	1.56	1.49	1.49	1.67	1.53	1.54	1.43	1.41	1.39	1.30

## Centrality

Centrality ratings differed significantly across the ten areas, Wilks' Lambda = .37,  $F(9, 594) = 112.35$ ,  $p < .001$  (all reported tests two-tailed). Following the guidelines outlined by Ellis (2010), the effect size was extremely large, multivariate partial eta square = .630. Table 2 reports pairwise comparisons of mean centrality scores. One sample t-tests revealed that mean centrality score was significantly above the midpoint for all areas ( $ps < .001$ ) except for aesthetics, which was insignificantly below the midpoint ( $p = .686$ ). The mode response for all areas was either 6 ("agree") or 7 ("completely agree"), except for aesthetics, for which the mode response was 2 ("disagree"). (See Table 1.)



**Table 2.** p-values for pairwise comparisons of mean centrality scores (using Bonferroni adjustment for multiple comparisons).

	Ethics	Epistem.	Mind	Metaph.	Logic	History	Science	Language	Political	Aesthetics
Ethics	.									
Epistem.	.351	.								
Mind	< .001	< .001	.							
Metaph.	< .001	< .001	1	.						
Logic	< .001	< 0.001	< .001	.001	.					
History	< .001	< 0.001	< .001	.003	1	.				
Science	< .001	< 0.001	< .001	.003	1	1	.			
Language	< .001	< 0.001	< .001	< .001	1	1	1	.		
Political	< .001	< 0.001	< .001	< .001	.193	.080	.046	1	.	
Aesthetics	< .001	< 0.001	< .001	< .001	< .001	< .001	< .001	< .001	< .001	.

## Dependence

Dependence ratings differed significantly across the ten areas, Wilks' Lambda = .27,  $F(9, 594) = 180.58$ ,  $p < .001$ . The effect size was extremely large, multivariate partial eta square = .732. Table 3 reports pairwise comparisons of mean dependence scores. One sample t-tests revealed that mean dependence score was significantly above the midpoint for philosophy of science, philosophy of mind, philosophy of language, epistemology, political philosophy, and metaphysics ( $ps < .001$ ); it was no different from the midpoint for ethics ( $p = .790$ ); it was significantly below the midpoint for aesthetics, logic and history of philosophy ( $ps < .001$ ). The mode response varied widely across the areas, from 1 ("completely disagree") for logic and history of philosophy, to 7 ("completely agree") for philosophy of science and philosophy of mind. (See Table 1.)

**Table 3.** p-values for pairwise comparisons of mean dependence scores (using Bonferroni adjustment for multiple comparisons).

	Science	Mind	Language	Epistem.	Political	Metaph.	Ethics	Aesthetics	Logic	History
Science	.									
Mind	< .001	.								
Language	< .001	< .001	.							
Epistem.	< .001	< .001	< .001	.						
Political	< .001	< .001	< .001	1	.					
Metaph.	< .001	< .001	< .001	.780	1	.				
Ethics	< .001	< .001	< .001	< .001	< .001	.007	.			
Aesthetics	< .001	< .001	< .001	< .001	< .001	< .001	< .001	.		
Logic	< .001	< .001	< .001	< .001	< .001	< .001	< .001	< .001	.	
History	< .001	< .001	< .001	< .001	< .001	< .001	< .001	< .001	< .001	.

## Integration

Integration ratings differed significantly across the ten areas, Wilks' Lambda = .60,  $F(9, 592) = 43.63$ ,  $p < .001$ . The effect size was extremely large, multivariate partial eta square = .399. Table 4 reports pairwise comparisons of mean integration scores. One sample t-tests revealed that mean integration score was significantly above the midpoint for all areas ( $ps < .001$ ) except for metaphysics, which was significantly below the midpoint ( $p < .007$ ). The mode response for all areas was 4 ("neutral"), except for philosophy of science and philosophy of mind, for which it was 6 ("agree"). (See Table 1.)

**Table 4.** p-values for pairwise comparisons of mean integration scores (using Bonferroni adjustment for multiple comparisons).

	Science	Mind	Logic	History	Language	Ethics	Epistem.	Political	Aesthetics	Metaph
Science	.									
Mind	.005	.								

	Science	Mind	Logic	History	Language	Ethics	Epistem.	Political	Aesthetics	Metaph
Logic	.002	1	.							
History	< .001	.525	1	.						
Language	< .001	< .001	.001	.865	.					
Ethics	< .001	< .001	< .001	.009	1	.				
Epistem.	< .001	< .001	< .001	< .001	.017	1	.			
Political	< .001	< .001	< .001	< .001	.011	.158	1	.		
Aesthetics	< .001	< .001	< .001	< .001	.002	.062	1	1	.	
Metaph.	< .001	< .001	< .001	< .001	< .001	< .001	< .001	< .001	< .001	.

### Scales: regression analyses

For each of the three qualities measured (centrality, dependence and integration), participant ratings of the ten areas were highly internally consistent, suggesting that they measure the same underlying construct (DeVellis 2003). The Cronbach’s alpha coefficients for the three ten-item scales were as follows: centrality = .768; dependence = .899; integration = .868. Accordingly, for each participant, I calculated a centrality scale score (“CSS”), dependence scale score (“DSS”), and integration scale score (“ISS”). For each scale, a participant’s score was the mean of the values for ten items in the scale.<sup>1</sup> I conducted multiple linear regression to look for relationships between three demographic variables — participant gender, age, and socioeconomic status — and each scale. This approach might overlook potentially interesting differences on individual items but it has the advantages of simplicity and reducing the chance of Type 1 errors.

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<sup>1</sup> For the integration scale, two participants only recorded nine responses. Initially I overlooked these two missing responses when inspecting the data set. Instead of recalculating all of the earlier statistics and analyses, I simply retained the data from these two participants.

Linear regression is a statistical technique for investigating the strength of the relationship between an outcome variable and one or more predictor variables. Linear regression is “unquestionably the most widely used statistical technique in the social sciences” (Allison 1999, p. 1). It allows researchers to estimate the unique contribution that each predictor makes to the outcome, controlling for the influence of other predictors. In the present case, the outcomes are ratings of centrality, dependence, and integration, as measured by the scale scores. The predictors are the three demographic variables of gender, age, and socioeconomic status.

Preliminary analyses revealed no violations of the assumptions of multicollinearity, normality, linearity, or homoscedasticity. Centrality scale scores were significantly predicted by age but not by gender or socioeconomic status. Increased age predicted higher centrality scores. Dependence scale scores were significantly predicted by socioeconomic status but not by gender or age. Higher socioeconomic status predicted lower dependence scores. Integration scale scores were significantly predicted by socioeconomic status and gender. Higher socioeconomic status predicted higher integration scores and females tended to record lower integration scores. There was a borderline trend whereby higher age predicted higher integration scores. All of the significant relationships detected were small. Tables 5-7 show the results of the regression analyses.

Table 5. Multiple linear regression predicting CSS.

<b>Predictor</b>	<b>b</b>	<b>SE</b>	<b>Beta</b>	<b>t</b>	<b>p</b>
<b>gender</b>	-0.01	0.18	-.005	-0.11	.912
<b>age</b>	0.01	0.09	.125	2.87	.004
<b>SES</b>	0.013	0.02	.028	0.64	.521
<b>constant</b>	5.11	0.18		28.60	< .001

N = 584; R<sup>2</sup> = .02, p = .012. b = unstandardized regression coefficient; SE = standard error of b; Beta =

standardized regression coefficient. Reference class for gender is male.

Table 6. Multiple linear regression predicting DSS.

Predictor	b	SE	Beta	t	p
gender	0.194	0.150	.054	1.31	.193
age	0.01	0.01	.053	1.21	.226
SES	-0.09	0.03	-.124	-2.85	.005
constant	4.45	0.29		15.33	< .001

N = 584;  $R^2 = .02$ ,  $p = .023$ .

Table 7. Multiple linear regression predicting ISS.

Predictor	b	SE	Beta	t	p
gender	-0.31	0.11	-.113	-2.77	.006
age	0.01	0.01	.069	1.60	.111
SES	0.05	0.02	.095	2.18	.030
constant	4.18	0.22		19.19	< .001

N = 584;  $R^2 = .03$ ,  $p = < .001$ .

## Conclusion

The survey results provide some evidence for several conclusions. First, with the exception of aesthetics, people view all of the traditional areas of philosophy as currently central to the discipline. This judgment is more confidently held for some areas than others, so people were not responding indiscriminately. They do draw distinctions. Nevertheless, overall, people working in all these areas can find encouragement in the fact that their specialization is generally viewed as central to philosophy. It is unclear why the findings were different for aesthetics. At least in my own case, questions about beauty, taste, and art are paradigmatically philosophical. Perhaps aes-

thetics' lower rating reflected people's sense that aesthetics is, as a matter of fact, not currently very influential in the discipline, rather than a normative assessment of aesthetics' rightful place in philosophical inquiry.

Second, and quite sensibly, people view the relationship between empirical science and different areas of philosophy very differently. For some areas, such as the philosophies of science, mind, and language, people agreed that its centrality depends on being integrated with relevant natural, cognitive, or social science. For other areas, such as logic and history of philosophy, people disagreed. For yet other areas, such as ethics and aesthetics, people were ambivalent. Some of these results are unsurprising. For instance, philosophy of science surely must depend on input from science, and formal logic studies abstract relations that are mostly independent of scientific inquiry, even if logicians' findings can be useful to science. However, other results were at least somewhat surprising. For instance, I was surprised that ethics was not viewed as depending on integration with cognitive and social science, because I think that, to the extent that it is central to philosophy, ethical theory should be informed by facts about the welfare, psychology, and social relations of humans and other animals. For similar reasons, I was surprised that political philosophy was not more widely viewed as depending on scientific integration. I was also somewhat surprised that people thought the history of philosophy did not depend on integration with social science, because I think that the history of philosophy should be informed by history, and history is a discipline bridging the humanities and social sciences. However, this is clearly a minority position and it would be interesting to learn whether philosophers tend to reject the view that the history of philosophy should be informed by history, or that history is a so-

cial science.

Third, and perhaps most intriguingly, people are ambivalent on whether work in most of the traditional areas of philosophy is sufficiently integrated with science. The exceptions here were the philosophies of science and mind, which people tended to view as sufficiently integrated. Otherwise, the central tendency was neutrality on whether the work was sufficiently integrated with science. This suggests that, even by philosophers' own lights, philosophical research would benefit from closer engagement with empirical science. People were most dissatisfied with metaphysics' level of scientific integration, rating it significantly lower than the next lowest area and, overall, rating it slightly but significantly below the midpoint. Metaphysics was the only area for which, on average, people recorded the following combination of judgments: its centrality depends on scientific integration but it is insufficiently integrated. Despite that, people still strongly judged metaphysics to be a central area of philosophy.

Fourth, there was no systematic relationship between centrality ratings and the "normative" or "evaluative" areas of philosophy. The two most centrally rated areas were ethics and epistemology, and the two least centrally rated areas were political philosophy and aesthetics. (Note: although political philosophy had the second lowest mean rating, it was not rated significantly lower than philosophy of language, philosophy of science, or the history of philosophy.) Yet all four of these areas deal principally with normative matters, such as morality, knowledge, rationality, justice, fairness, and beauty.

Fifth, demographic factors exerted small but statistically significant effects on judgments of centrality, dependence, and integration. Higher age predicted higher centrality judgments and

higher integration judgments. Men recorded higher integration judgments. Higher socioeconomic status predicted lower dependence judgments and higher integration judgments. I did not look for potential interactions between demographic variables on the dependent measures, but this is a potentially fruitful avenue for future work to pursue.

The current study has several limitations. First, as noted above, the sample is largely white, wealthy, Western, male, and highly educated, which reflects the current state of professional philosophy. A more diverse sample might produce noticeably different patterns or greater demographic differences than seen here. Second, participants performed a very abstract task, namely, passing judgment on entire areas of philosophy. However, people's evaluative judgments can be affected by the abstractness or concreteness of a task (Nichols & Knobe 2007; Sinnott-Armstrong 2008; Mandelbaum & Ripley 2012). We might observe very different patterns, or more pronounced demographic effects, if people passed judgment on more specific research programs, questions, or topics.

One might criticize the way some of the dependent measures were worded. For instance, given the wording of the integration measure, participants could not straightforwardly register the opinion that current research in a particular area was *too* integrated with empirical science. Future work should avoid this shortcoming. To take another example, as suggested above, it is possible that the dependence measure was read as a descriptive statement by some, but as a normative or prescriptive statement by others. Perhaps future work could include two measures of centrality that would allow participants to clearly distinguish the two readings and register an opinion about both.



Finally, the current findings suggest a possible tactical lesson. People who work on topics in the philosophy of gender, race, class, and other categories related to social justice report that their work is often marginalized or dismissed as not “real” philosophy (e.g. Botts et al. 2014; see also Gines 2011; Dotson 2011). Although these are issues of justice, and hence of political philosophy, they are clearly ethical too. Often times they also involve a heavy epistemological component (e.g. Harstock 1998; Fricker 1999). Given that ethics and epistemology are perceived as the most central of all philosophical areas, it might be expedient to situate these, first and foremost, as ethical and epistemological issues in order to help diminish the tendency to marginalize them (compare Fricker 2012). I hasten to add that this is no more than a tentative and partial counsel of expedience: there is nothing intrinsically problematic with situating these exclusively as topics in the philosophy of gender, race, class, or other categories.

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*word count*: 3518

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