# How do philosophers and nonphilosophers think about philosophy? And does personality make a difference?\*

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Accepted: 8/2/22

Abstract Recent metaphilosophical debates have focused on the methods/epistemology of philosophy (e.g., the role of intuitions), and the structure of the discipline (e.g., which subfields are considered central to philosophy). The paper reports the results of an exploratory study examining the relationship between personality and both kinds of metaphilosophical view. The findings reported are (a) No important link between personality and attitudes to intuitions, (b) Apparent differences between experts and non-experts as to which subfields are considered central, (c) Only limited evidence that perceptions of centrality are related to personality in minor ways. Although no dramatic relationships between personality and metaphilosophical view are found, the results nonetheless prompt some reflection about the role played by judgements about the centrality of subfields within the discipline.

## Keywords

## 1 Introduction

This paper explores the relationship between personality and metaphilosophical views, reporting the results of a new exploratory study. Inspired by thinkers such as William James, there have been plenty of studies exploring possible correlations between personality and first-order philosophical judgements, and their implications for the discipline. However, as William James recognised, correlations between personality and metaphilosophical outlook also have interesting potential implications for the discipline. This paper presents the first study exploring possible correlations between personality and metaphilosophical outlook. It focuses on two kinds of metaphilosophical view of significance in contemporary metaphilosophical discussions: views about

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<sup>\*</sup> Thanks to audiences in Buffalo and Madrid. Thanks particularly to Ivar Hannikainen, Aurélien Allard, Eugen Fischer, and Aimie Hope for helpful conversations. This is the deanonymised accepted version of a paper accepted at Synthese. Please refer to the final published version.

By 'metaphilosophical views' I mean descriptive and normative views about philosophy, philosophers, and philosophical methods.

the role of intuition in philosophy; views about the centrality of various philosophical subfields. Correlations between personality and such views would potentially have significance for metaphilosophical discussions about the epistemology/methodology of philosophy, and about the organisation of the discipline, including calls for greater diversity.

The paper is structured as follows. §2 provides a historical introduction to research on correlations between philosophical judgment and personality: from William James and an early experimental philosophy study (in the 1940s), to the results of recent studies into personality and first-order philosophical judgments. §3 then provides the background to relevant contemporary metaphilosophical discussions including a relationship between views about centrality of philosophical subfields and calls for greater diversity in the discipline. §4 then summarises the motivation for the precise design of the current study, emphasising the study's exploratory nature and elaborating on the way that past work on personality and philosophical judgement, and the recent metaphilosophical discussions shaped the design of the study. §5 presents the empirical study and findings. As then discussed in §6, the findings reported are largely negative—no dramatic relationships between personality and metaphilosophical view are found—but nonetheless prompt some reflection about the role played by judgements about the centrality of subfields within the discipline.

## 2 Philosophical judgment and personality

## $2.1~\mathrm{A}$ study in the $1940\mathrm{s}$

The first empirical study (known to me) of the relationship between philosophical judgment and personality was conducted in the 1940s. Eysenck and Gilmour (1944) recruited participants through an advert in the journal *Philosophy*. This study's participants are reported to include 'some of the best-known English and German (refugee) philosophers' (p.291). Participants responded to items intended to gauge their general philosophical stance ('Do you believe in the existence of a priori knowledge?') and a personality inventory. Who knows whether this study's results are to be believed as Eysenck's research seems to have involved many instances of research practices beyond questionable, including likely fabrication of data.<sup>2</sup>

Eysenck and Gilmour's paper didn't attract much attention in the philosophical community either at the time or since, but their study had deep philosophical roots. The study is explicitly presented in the context of William James's ideas, in his Pragmatism, that (a) there is an interesting story to be told about the psychology of philosophical judgment, and that (b) this might have profound metaphilosophical consequences. James thinks of philosophers as having varying 'temperaments' with some being more 'Tender-minded' and others more 'Tough-minded.' James thinks this distinction underlies many of the philosophical differences of his day, e.g., tough-minded philosophers tend towards empiricism while tender-minded philosophers tend

Much of his work can be safely ignored, including work on Race and IQ, parapsychology, astrology, and more. But his early work on personality played a big role in establishing research on personality, and traces of his three factor model of personality can be found in all subsequent dimensional models of personality (such as the Big Five) (for some perspectives on his career see Buchanan, 2011; Corr, 2016; Graves, 2013; Rose, 2010; Schatzman, 1997). For an account of the Big Five model that provides some historical context, see Digman (1990, 1996).

towards rationalism.<sup>3</sup> The precise hypothesis tested in Eysenck and Gilmour's study was inspired by James's work but wasn't exactly the one James articulated. Instead, it was that 'a person's philosophy...depends on his temperament' and in particular that an 'idealistic philosophy' was positively correlated with an 'introverted type of temperament.'

Part of the reason why the results of Eysenck and Gilmour didn't make much of a splash in philosophy was perhaps because the main reported finding is a null result:

In none of the temperamental qualities investigated – introversion, social shyness, emotionality, nervousness, general drive, depression – was there any significant or even suggestive difference between ...idealists and ...materialists.

But, as I say, it is unclear to what extent we should believe these results.

## 2.2 Recent empirical work

William James thought of philosophical and psychological questions being closely connected. Such a conception of philosophy has been enjoying something of a renaissance in recent decades. Experimental philosophy has been described as return to a conception of philosophy that might have been more familiar to figures such as William James (Knobe et al., 2012). And experimental philosophy is just one of a number of fields which have seen a surge of interest in the psychology of philosophical judgments.

Researchers have investigated the extent to which, for example, philosophical judgment is influenced by intrapersonal factors such as framing (Petrinovich and O'Neill, 1996), order (Wiegmann and Waldmann, 2014), and disgust (Landy and Goodwin, 2015, whose meta-analysis suggests no strong effect), and correlated with alcohol consumption (Duke and Bègue, 2015, although Paruzel-Czachura et al. 2021 fail to replicate the effect). The results of this research would doubtless have been of great interest to both William James and Eysenck and Gilmour, particularly because there are results that concern the influence of interpersonal factors. Studies have asked whether philosophical judgments vary with culture (Sarkissian et al., 2010, who report 'a striking degree of cross-cultural convergence'), birth cohort (Hannikainen et al., 2018), as well as gender, politics and religion (Banerjee et al., 2010, who report that moral judgments are robust across these factors). And, most relevantly for the purposes of this paper, researchers have also returned to the question that Eysenck and Gilmour investigated: the relationship between first-order philosophical judgments and personality.

The concepts and methods of personality research have developed since the 1940s. However, many of the basics remain the same. Personality is understood as "the coherent patterning of affect, behaviors, cognition, and desires (goals) over time and space" (Revelle and Scherer 2009, quoted in Feltz and Cokely 2016). Personality is

<sup>&</sup>lt;sup>3</sup> This distinction played a role in the history of personality research. A James-inspired personality dimension, tender-minded to tough-minded, appears elsewhere in Eysenck's work (e.g., Eysenck, 1954), or it is bundled up as part of introversion-extraversion which is still a familiar part of multidimensional personality measures.

<sup>4</sup> These are illustrative examples rather than complete overview. See Machery (2017) for a broader survey of research relevant to empirical challenges to armchair philosophy.

typically understood and measured in terms of traits: "dimensions of individual differences in tendencies to show consistent patterns fo thoughts, feelings, and actions.... Characterising traits...as dimensions of individual differences means that people can be ranked or ordered by the degree to which they show these traits" (McCrae and Costa, 2003). One widely used model of personality, the Big Five model (McCrae and Costa, 1999), describes an individual on a five-dimensional scale corresponding to five global personality traits: openness to experience; conscientiousness; extraversion; agreeableness; neuroticism. Personality traits, such as those of the Big Five model, are measured using questionnaires in which participants rate a series of statements about themselves (in much the same way as Eysenck and Gilmour 1944 measured introversion). For example, scales measuring the five personality factors of the Big Five model include NEO-PI-3 (McCrae et al., 2005).

The Big Five model is a very popular and widely used model of personality traits. However, it has been argued a model including additional traits – alongside the Big Five – can provide a more complete model of human personality. It has been argued, for example, that autistic traits might be considered a sixth independent personality dimension (Wakabayashi et al., 2006). Researchers interested in the darker side of personality traits have also talked about the 'dark triad' of three personality traits associated with undesirable behavior – Machiavellianism, Narcissism and Psychopathy (see, e.g., Paulhus and Williams, 2002) – traits which are also intended to be largely non-overlapping with the five traits of the big five model.<sup>5</sup>

Recent studies looking at the relation between personality and philosophical judgment have found certain philosophical judgments to be correlated with various personality traits. Importantly, associations between personality traits and philosophical judgments have been reported both for traits that are part of the Big Five model, as well as for Dark Triad traits and autistic traits. Feltz and Cokely (2016) and Machery (2017) provide useful surveys of some of this research. Here I'll just detail a couple of illustrative findings. Extraversion has been found to be associated with more 'compatibilist' judgments in the literature on experimental philosophy of free will (e.g., Feltz and Cokely, 2009), and with a greater 'Knobe effect' (Cokely and Feltz, 2009). Openness to experience has been found to be correlated with moral nonobjectivism (Feltz, 2008). Links between anti-social traits, such as machiavellianism and psychopathy, and moral judgments has been explored (Arvan, 2013; Bartels and Pizarro, 2011; Djeriouat and Trémolière, 2014; Schönegger, 2021). There have also been a number of studies examining the relation between autistic traits (and the related alexithymia) and moral judgments (e.g., Brewer et al., 2015; Patil et al., 2016).

### 2.3 A gap in the recent literature

William James's hypothesis about the relationship between philosophical viewpoint and personality wasn't simply that certain personality traits were associated with certain first order philosophical views. Although the relevant passages are perhaps a

 $<sup>^5</sup>$   $\,$  See also HEXACO, a six-factor with some overlap with the Big Five (Lee and Ashton, 2018).

See also Yaden and Anderson (2021) which came out while this paper was under review which reports "limited to no support for the notion that personality or demographics predict philosophical views."

little tongue-in-cheek, it is clear that James took seriously the idea that personality had a much more profound influence over how philosophers think about philosophy.

The rationalist...will be of dogmatic temper in his affirmations, while the empiricist may be more skeptical and open to discussion (James, 2000, 10)

Their antagonism...has formed in all ages a part of the philosophic atmosphere of the time. It forms part of the philosophic atmosphere to-day. The tough think of the tender as sentimentalists and soft-heads. The tender feel the tough to be unrefined, callous, or brutal...Each type believes the other to be inferior to itself...(James, 2000, 11)

[a professional philosopher's] temperament...gives him a stronger bias than any of his more strictly objective premises....He feels men of opposite temper to be out of key with the world's character, and in his heart considers them incompetent and 'not in it,' in the philosophical business, even though they may far excel him in dialectical ability. (James, 2000, 9)

In James's view, personality affects one's whole philosophical outlook including ideas about how to do philosophy and one's perception of the merits of alternative philosophical approaches. Eysenck himself wasn't unaware of this broader aspect to James's claim; in a later book, *Dimensions of Personality*, he links the Eysenck and Gilmour study explicitly to the idea that temperament might determine a person's *Weltanschauung* (Eysenck, 1947, p.202).

While, to the best of my knowledge, no research has examined the relation between philosophers' personality traits and such metaphilosophical issues, there has been some limited recent research which suggests (contra Eysenck and Gilmour 1944) a link between personality and first-order philosophical judgments among those who are experts in particular philosophical domains (Holtzman, 2013; Schulz et al., 2011). Schulz et al. (2011) find that "philosophical expertise in the free will debate...does not eliminate the influence of ...extraversion...on judgments concerning freedom and moral responsibility." Various studies have examined the extent to which the judgment of experts about philosophically significant matters are subject to similar kinds of effect as the judgments of lay people (Kneer and Bourgeois-Gironde, 2017; Schwitzgebel and Cushman, 2012).

# 3 Metaphilosophical judgment and personality

The empirical study reported in this paper begins to look at the aspect of James's hypothesis which has not yet been examined: the idea that there is a relation between the personality and *metaphilosophical* views of philosophers. There many potential interesting links between personality and metaphilosophy. In this section, I highlight three connections that help provide context for the empirical findings reported later. In short they are that (a) effects of personality present a potential challenge to the epistemic status of philosophical intuitions, (b) personality traits may influence how one does philosophy, (c) differences in personality may underlie disagreements about the status of various philosophical subfields.

Other researchers have been interested in potential differences in personality traits between the lay population and experts in philosophy, e.g., Livengood et al. (2010) observe that experts in philosophy tend to be more reflective than lay people.

#### 3.1 The epistemic status of armchair philosophy

It is commonly claimed that traditional philosophical methods rely upon armchair judgments about cases (such as thought experiments) (e.g., Feltz and Bishop, 2010). If a theory delivers a particular verdict about a case which is intuitively false, it is claimed, philosophers take this to count against the relevant theory. If the theory delivers intuitively correct verdicts about a variety of cases, this at least provides defeasible support for the relevant theory. At the heart of one important methodological challenge to standard philosophical methodology is that idea that if philosophers' armchair judgments about cases are influenced by irrelevant or distorting factors, this brings the reliability of such judgments into doubt (see, e.g., Machery, 2017).

The recent empirical literature on the psychology of philosophical judgment has provided plenty of material for such a challenge to work with. Many factors that have been empirically linked to philosophical judgments are arguably unrelated to truth. Whether one has been drinking alcohol doesn't seem specifically connected to the truth of utilitarianism. One's culture doesn't seem relevant to which account of semantic reference is correct. And, one's personality—whether one is an extravert or introvert—seems unrelated to whether free will is compatible with a deterministic physics (see Feltz and Cokely, 2012, for a version of the methodological challenge that focuses on personality effects). Evidence of associations between such factors and lay people's judgments can be used to make an indirect challenge to the reliability of philosophers' judgments, and evidence of associations between such factors and philosophers' judgments can be used to make the challenge a little more directly.

Without getting into the specifics of any particular version of this argument, I hope it is clear how associations between philosophical judgment and irrelevant personality traits might lead one to question the standing of one's own philosophical judgments. If I believe p, but the likelihood that I would come to believe that p given my personality is much higher than if I had a different personality, various difficult questions are raised. Should I suspend belief about whether p? Should I reduce my credence in p? Should I take a different view of the evidence and arguments I previously took to speak in favour of p? The answers to such questions aren't completely straightforward. However, the idea that I should not be as comfortable in my philosophical opinions as I was before the relevant evidence came to light, is one many take seriously (see, e.g., Machery, 2017).

An empirical challenge to the epistemic status of armchair philosophy might be taken in a few directions. The status of one's own philosophical beliefs might be challenged, but one might also think there are implications for the way one should view the field of philosophy as a whole. If armchair methods allow philosophers' views to be influenced to any great extent by their personalities, various questions are raised. How confident are we that armchair based philosophy as a field is making progress over time? How confident are we that philosophical debates concern matters of substance rather than clashing personalities? Again, the answers to such questions aren't straightforward. But, again, the empirical findings raise important doubts that deserve to be taken seriously. Some have even gone so far as to ask questions such as "Do Personality Effects Mean Philosophy is Intrinsically Subjective?" (Holtzman, 2013). Holtzman's thought went something like the following: How can

<sup>8</sup> Although, the relevant study here, Duke and Bègue (2015), is only correlational so it is possible the results reflect no causal relation (or that utilitarians drink more!).

philosophy claim to have objective answers to questions such as "What sort of life should I lead?" or "Is the universe infinite?" if the answers philosophers have reached are influenced by their contingent personalities? Even if you don't want to go as far as suspecting that philosophy is intrinsically subjective, it should be clear that correlations with factors such as personality pose challenges to the epistemic status of armchair philosophy that deserve to be taken seriously.

## 3.2 The descriptive status of armchair philosophy

Much of the literature on traditional armchair methods has focused on the use of intuitive judgments in philosophy (see, e.g., Pust, 2014). Within that literature a certain picture has been largely taken for granted (at least until recently). This picture is that (a) traditional armchair methods involve relying on intuitions as evidence, and (b) philosophers commonly think of their methodology as relying on intuitions. This descriptive picture has recently been challenged in various ways.

Is there a 'traditional methodology' of relying on intuitions or is this a more recent development? The apparent ubiquity of discussion of hypothetical cases and the use of the word 'intuition' within philosophy certainly lend a plausibility to the idea that philosophers rely on intuitions as evidence and think of themselves as doing so (Goldman, 2007). Quantitative studies confirm that philosophers use words like 'intuition' a lot (Andow, 2015; Ashton and Mizrahi, 2018). However, interestingly, the frequency of the use of such words in philosophy has not been constant over time. These studies show the use of the word 'intuition' saw a large increase during the twentieth century. This might be a purely terminological change. However, some have argued that the data suggest a methodological shift such that the reliance on intuitions as evidence may not be as 'traditional' as some might assume (Ashton and Mizrahi, 2018).

Does even recent armchair philosophy really involve relying on intuitions as evidence? While acknowledging that philosophers use the word 'intuition' a lot, a number of philosophers have recently argued that this doesn't betray a reliance on intuitions as evidence at all. The number of philosophers who challenge the descriptive claim that philosophers do in fact rely on intuitive judgments about cases in this way has been growing (see Cappelen, 2012; Deutsch, 2015; Molyneux, 2014, and see Nado 2016 for discussion). In Andow (2015) I argued that the quantitative data we have on the use of 'intuition' lend some credence to this view since use of these words has increased across large swathes of both academic and non-academic writing, so it

The form of the argument of this challenge might take various forms. In this case, it might be a form of what Ichikawa (2014) calls the arbitrariness critique. For one recent articulation of the empirical challenge to armchair philosophy that takes into account the full scope of the evidence of interpersonal and intrapersonal factors associated with philosophical judgement, see Machery (2017). See Yaden and Anderson (2021) for some further enriching discussion emphasizing that the devil is in the details, recognising that an association with a psychological trait such as personality could be undermining, vindicating, or irrelevant for a philosophical belief depending on the details. Note that in all cases it is going to matter what, if any, causal relationship underlies observed correlations between personality traits and philosophical judgement. Such a correlation could betray that having certain opinions shapes one's personality, and that wouldn't suggest any concerns about the reliability of the formation process of those opinions. Note also that any such argument depends on evidence of correlations between personality and first order philosophical beliefs being robust and replicable.

would be implausible to link the prevalence of the use of the word in philosophy with some philosophy-specific methodology (although, see Ashton and Mizrahi, 2018).

Is any of this surprising? Do philosophers actually think of their methodology as relying on intuitions? The assumption that philosophers commonly think of themselves as relying on intuitions has also been challenged empirically. Kuntz and Kuntz (2011) provide evidence that many in the wider philosophical community do not themselves conceive of their methods in this way. The survey by Kuntz and Kuntz reveals a striking amount of individual difference among philosophers as to their opinions about the nature of the methodology of their field. Kuntz and Kuntz asked their participants (all philosophers) about the extent to which intuitions were essential/useful to discovery and justification in philosophy. The results are reported thus:

Results show that 50.9% of the participants agreed that intuitions are useful to justification in philosophical methods, 83.3% agreed that intuitions are useful to discovery in philosophical methods, and 57% agreed that intuitions are essential to discovery ...Conversely, nearly 70% of the study participants considered that intuitions are not essential to justification.

What should we take away from these various empirical contributions to descriptive philosophical methodology? There are remaining questions about how to interpret the evidence available on the use of 'intuition', and philosophers' opinions about the role of intuitions in philosophy (see, e.g., Buckwalter, 2012). And, ultimately, more empirical research will be required to achieve a conclusive picture. However, the possibility of a connection with personality traits raises its head in both cases. First, the most natural interpretation of the Kuntz and Kuntz (2011) data is that there is a sizable amount of interpersonal difference in opinion among philosophers as to intuition's place in philosophy. Such differences may well be the result of personality differences (as one might imagine William James hypothesizing), although, of course, that is not the only difference between individuals that might account for the patterns observed. It might be, for example, that scholars trained in different schools or different philosophical subfields have different meta-philosophical outlooks (Kuntz and Kuntz, 2011, report some influence of the latter). Second, the most natural interpretation of the Andow (2015) data is that changes in the use of 'intuition' are due to broader non-philosophy-specific and non-academia-specific factors. There have been some attempts to link use of the word 'intuition' with personality traits. In Andow (2015) I speculated about a link between a rise in the use of the word 'intuition' and a documented rise in traits such as narcissism and extraversion over a similar period (see, e.g., Twenge and Campbell, 2010; Twenge and Foster, 2010) (the idea perhaps being that a greater focus on the self, and a greater willingness to throw oneself into social situations might be expected to lead to a greater willingness to talk about one's own mental states). And, elsewhere, Andow (2017), I have suggested a potential link with politeness and humility (the idea being that the hedging of assertions is linked with these traits and use of 'intuition' often serves a hedging role).

## 3.3 Diversity and inclusiveness in philosophy

Contemporary anglophone philosophy is judged by many to have a diversity problem. The lack of diversity manifests in many ways. Here are two different ones: (a) a lack of demographic diversity among philosophy faculty, and (b) a lack of diversity as to the types of research focus and expertise that enjoy prestige. <sup>10</sup> It is the latter which is most important for the rest of this paper. Although, for some context, I'll say something about the former.

Philosophy has an issue of diversity when it comes to the demographics of the people with jobs in philosophy departments (see American Philosophical Association, 2018b,d), who get hired (Solomon and Clarke, 2009), who publish (Botts et al., 2014; Haslanger, 2008; Healy, 2015; Weisberg, 2017; Wilhelm et al., 2017), who are cited (Schwitzgebel, 2014, although see Healy 2015), and whose work features on syllabuses and in textbooks (Thompson et al., 2016). Women and minority groups are under-represented in philosophy. Looking at gender in particular, Healy (2011) shows that the issue of under-representation of women in philosophy is worse than all other humanities subjects. Others present data, for example, that the representation of women in the profession is pretty much as you'd expect, close to 50%, at the undergraduate level, but that by the time you look at people with tenure or on tenuretrack the proportion has dropped considerably, close to 23% (e.g., Van Camp, 2010). Numerous researchers have been involved in the attempt to better understand the nature and causes of this lack of diversity (see, e.g., Benétreau-Dupin and Beaulac, 2015; Dougherty et al., 2015; Paxton et al., 2012; Peña-Guzmán and Spera, 2017; Thompson et al., 2016). <sup>11</sup>

Various efforts exist to help improve the representation of women and minority groups within philosophy. Efforts to help make philosophy a more demographically diverse profession are themselves diverse. The gendered conference campaign aims to 'raise awareness of the prevalence of all-male conferences (and volumes, and summer schools)' (Gendered Conference Campaign, 2018). Resources have been compiled to make it easy to include work by underrepresented groups on undergraduate syllabuses, and to develop more inclusive undergraduate classrooms (Australasian Association of Philosophy and Macquarie University, 2009; Minorites and Philosophy, 2018; UPDirectory, 2018). Mentoring programs help to support underrepresented groups at pre-tenure stages (Antony and Cudd, 2012; The Job Candidate Mentoring Program for Women in Philosophy, 2018; University of Kanvas, 2018). Guidelines have been established to help avoid bias in hiring decisions (BPA/SWIP, 2011). Groups have been set up to 'examine and address issues of minority participation in academic philosophy' (Minorities and Philosophy, 2018). Recommendations of Good Practice have been formulated and widely circulated (BPA/SWIP, 2018; Rutgers School of Arts and Sciences, 2018). Guidelines have been published to help ensure philosophical discussions are 'respectful, constructive, and inclusive' (NYU Department of Philosophy, 2018).

The fact that philosophy has diversity problem concerning who is involved in philosophy is likely not unrelated to the lack of diversity as to which areas of the discipline are considered to be important, even if that relationship is a long way from straightforward (see Best Practices for the Inclusive Philosophy Classroom, 2018; Brynjarsdóttir, 2018, for some discussion and information). This is one motivation behind an ongoing effort to diversify, e.g., syllabuses for undergraduate philosophy courses, in terms of the topics that are included and prioritized in philosophy. It is an

 $<sup>^{10}</sup>$   $\,$  See American Philosophical Association (2018c) for information and resources relating to both diversity problems.

Also of relevance here is work on expectations of brilliance and diversity across disciplines (Leslie et al., 2015; Storage et al., 2016).

important motivation, but only one among many reasons to shake up the status quo: that philosophy has not been a very diverse place when it comes to which areas of philosophy are accorded 'core', 'central' or 'mainstream' status. There seems to be a prevalent picture of philosophy—perpetuated in part by the structure of undergraduate philosophy courses—which accords some areas of philosophy 'core', 'central' or 'mainstream' status (theoretical ethics, logic, epistemology, among others) and treats other areas as having a lesser status (engagement with non-western philosophy, feminist philosophy, applied philosophy, philosophy of race, among others).

Dotson (2013) expresses a similar thought (and offers an interesting analysis of the various aspects of what she calls philosophy's 'culture of justification' and mode of 'disciplinary validation):

My cluster of concerns about the environment of professional philosophy and constrictive definitions of philosophy can be viewed by interrogating the question, 'How is this paper philosophy?'...I am concerned with the kind of disciplinary culture that renders such a question of paramount importance...It points to the prevalence of a culture of justification. Typified in the question, 'how is this paper philosophy,' is a presumption of a set of commonly held, univocally relevant, historical precedents that one could and should use to evaluate answers to the question. (p.5)

And offers, as part of a proposed remedy, a move toward a philosophical culture that includes 'Recognition and encouragement of multiple canons and multiple ways of understanding disciplinary validation' (p.17).<sup>12</sup>

There has been some empirical work that examines perceptions of the centrality of various subfields in philosophy. Turri (2016)'s study was explicitly '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' p.806). Turri (2016) finds that philosophers tended to rated all subfields they were asked about as 'currently central to the discipline of philosophy' (except Aesthetics). However, Turri's survey only asked about the following subfields (in descending order of mean centrality rating): Ethics, Epistemology, Mind, Metaphysics, Logic, History, Science, Language, Political, and Aesthetics. It doesn't, therefore, empirically speak to the extent to which these traditionally esteemed areas are perceived as being more central than other potentially marginalised areas. There has also been empirical work that examines philosopher's perceptions of the relative prominence of first order philosophical positions among philosophers (e.g., theism vs atheism). Bourget and Chalmers (2014) report that 'philosophers as a whole have quite inaccurate beliefs about the distribution of philosophical views in the profession.<sup>14</sup>

There are many reasons that one might want to interrogate the fixed ideas some philosophers seem to have about what counts as philosophy, good philosophy, or important philosophy. The reason I want to focus on is that skewed or overly restricted

See Jenkins (2014) for some proposals about how to respond to a culture in which projects on the metaphysics of gender categories are simply not recognisable as a philosophical enterprise to some philosophers.

Turri (2016) also focused on the relation between science and philosophical subfields.

Bourget and Chalmers (2014) use a similar factor analysis method as that used in the current studies. They use it to identify five factors underlying the variation in philosophers' first order positions: "anti-naturalism," "objectivism/Platonism," "rationalism," "anti-realism," and "externalism."

perceptions of what is central in this sense would leave the discipline impoverished in the sense that it would miss out on a lot of interesting and important discussions. One thought might be that such perceptions of centrality might skew the trajectory of philosophical enquiry leading to certain objectively important or interesting questions being overlooked or ignored. This could happen in a direct way, through shaping individual researchers' preferences such that they independently choose not to focus their efforts on those questions, or in a more indirect way, through the structure of the profession disincentivising or punishing specialization in particular subfields.

Recently there have been various efforts to encourage diversification in philosophy in terms of what is considered central. Various resources have been compiled to aid philosophers in diversifying their syllabuses (American Philosophical Association, 2018a; APA Committee on the Status of Women, 2018; Diversifying Syllabi, 2018; The Deviant Philosopher, 2018). There have also been various efforts to encourage a more pluralistic approach to philosophy in various prestigious philosophy journals. Journals such as Journal of the American Philosophical Association, Analysis and Mind have been established or re-branded with an explicit ambition to publish "papers on topics that draw from and appeal to diverse philosophical constituencies and traditions" (Journal of the American Philosophical Association, 2018), or "in a change to traditional ...policy...to publish excellent short papers on any area of philosophy" (Daly and Liggins, 2016), or "to enrich and broaden" (Moore and O'Brien, 2016) the previously limited scope.

There are interesting questions about how personality might intersect with both aspect of philosophy's diversity problem that I've highlighted here. Since part of the problem with underrepresentation of women and minorities is a problematic culture within philosophy, e.g., of unchecked bias, harassment and bullying, one might expect personality to play a role. Connections have been explored between various personality traits and prejudice (Sibley and Duckitt, 2008), proclivity for sexual harassment (Lee et al., 2003; Zeigler-Hill et al., 2016), and bullying behavior (Baughman et al., 2012). Likewise, one might expect personality to play a role in attitudes towards more pluralistic approaches to philosophy syllabuses or journal remits. Correlations between an antagonism towards the unfamiliar and the trait of openness to experience would not be surprising. Neither would a connection between the trait of narcissism and a failure to recognize that in which one is not personally invested. Acceptance to change has been found to correlate particularly with openness to experience (Di Fabio and Gori, 2016).

What would findings of correlations between personality and metaphilosophical outlook, in particular, those concerning perceptions of centrality, mean for concerns about a lack of diversity in philosophy in terms of which types of research focus and expertise enjoy prestige? The issue is complicated; the details of the argument would need to be worked out carefully, and the conclusions warranted would certainly depend on the precise nature of any such findings. I'll consider the issue further later in the paper. But the potential for illumination should be clear. Suppose the perception of the centrality of subfields was correlated with apparently irrelevant personality traits (traits which there is no reason to think would be associated with greater reliability with respect to such matters). Although the details would have

See also Yaden and Anderson 2021, §4.3 for an exploration of some options in analogous discussions concerning first order philosophical beliefs

to be worked through carefully, such a finding would lend prima facie support to a case for re-examining the extent to which some subfields are treated as being more central and afforded greater prestige than others.

#### 4 Rationale for current study

In light of the above, let me summarize the rationale for the following empirical study. William James hypothesised that personality affects one's whole philosophical outlook including metaphilosophical views. In the previous section, I surveyed three ways personality might intersect with contemporary metaphilosophical issues: influence of personality on philosophy is arguably epistemically deleterious; personality may influence the methods a philosopher uses, particularly relating to the use of intuitions; personality may influence what topics philosophers do and do not research, particularly as mediated by perceptions of which topics are central to philosophy.

The current study is exploratory. It explores whether personality traits are related to these metaphilosophical issues. The study is exploratory in the sense that it did not set out to test a discrete set of theory-driven hypotheses linking specific traits with specific metaphilosophical issues. The starting point was instead (i) existing empirical work on metaphilosophical issues, and (ii) existing work on personality differences in philosophical judgement (both surveyed above). Recent studies, highlighted in the above, have explored attitudes towards the use of intuitions in philosophy and concerning the centrality of subfields within philosophy to the discipline of philosophy. Recent studies, highlighted above, have found that certain personality traits are associated with various first order philosophical views: certain Big Five traits, Dark triad traits, and Autistic traits. So, the question asked by the study was whether the personality traits which have been found to be related to first order philosophical judgement would also be found to be related to judgements about the metaphilosophical issues which have already been explored empirically.

Although the current study is exploratory, it wouldn't be impossible to generate some speculative hypotheses on the basis of an understanding of the relevant personality constructs. So let's quickly take a look at the relevant constructs. First consider the traits of the Big Five model. Costa and McCrae's five factor model associates each of the five traits with a number of facets (see, e.g., McCrae et al., 2005). The facets of Neuroticism (the inverse of emotional stability) are: anxiety, angry hostility, depression, self-consciousness, impulsiveness, and vulnerability. The facets of Extraversion are: warmth, gregariousness, assertiveness, activity, excitement-seeking, and positive emotions. The facets of Openness to experience are: fantasy, aesthetics, feelings, actions, ideas, and values. The facets of Agreeableness are trust, straightforwardness, altruism, compliance, modesty, and tender-mindedness. The facets of Conscientiousness are competence, order, dutifulness, achievement striving, self-discipline, deliberation. Second consider the Dark Triad traits. Pechorro et al. (2019) summarise these traits (as measured by the SD3 scale, see Jones and Paulhus, 2013) as follows: "Machiavellianism is uniquely characterized by the use of other people to achieve planned goals through manipulation, exploitation, and deceit"; "Narcissism is characterized by an exaggerated sense of grandiosity, entitlement, dominance, and superiority: an excessive need for admiration that often occurs at the expense of others"; "Psychopathy is characterized by high levels of reckless impulsivity and thrill-seeking behavior, and low empathy." Third, consider autistic traits as measured

by the Autism-Spectrum Quotient (Baron-Cohen et al., 2001). A higher autism-spectrum quotient being related to "poor social skill, poor communication skill, poor imagination, exceptional attention to detail, poor attention-switching/strong focus of attention."

The empirical study focuses on two metaphilosophical issues identified in the above: (i) the role of intuitions in philosophical methods; and (ii) judgments of centrality. These two metaphilosophical issues have already been studied empirically in a way that can provide a model for the current study. To study whether personality affects whether philosophers actually use intuitions in their work directly would be very onerous. Instead this study focuses, like Kuntz and Kuntz (2011), on measuring attitudes to the role of intuitions in philosophy. Similarly, it would be difficult to directly study the extent to which philosophers' personalities leads them to treat some subfields as more central than others in their behaviour. Instead, like Turri (2016), this study focuses on measuring perceptions of the centrality of philosophical subfields to philosophy.

Why think that any of these personality traits might be associated with metaphilosophical views about intuitions? Exactly what it means to 'rely on intuitions' in philosophy is a matter of some debate. Using intuitions could be understood as relying on your own personal instinct, first impression, or gut feeling when weighing up evidence for and against competing philosophical theories. A connection between narcissism or extraversion and endorsement of such a method would not be implausible, e.g., a greater self-importance or assertiveness might incline a philosopher to feel it is okay for them to rely on intuitions so understood. Using intuitions could also be a matter of deferring to the intuitive judgments of ordinary concept users when analysing concepts; a connection between agreeableness, with its facets of trust, compliance, and modesty, and endorsement of this method is not implausible either.

Why think any of these personality traits might be associated with metaphilosophical views about centrality? There are various potential dimensions to judgments about centrality, as Turri (2016) recognises. Judgements about centrality might relate primarily to current descriptive features of the discipline, e.g., number of people working in a subfield. They might also be something like prototypicality judgments or influenced by familiarity or fluency effects. Judgements about centrality might also be idealistic, e.g., reflecting ideas about what the descriptive features of an ideal discipline would be. Judgements about centrality might also be more evaluative or normative, e.g., reflecting ideas about what philosophy should be, or about what constitutes good or important philosophy. For the sake of the initial exploratory study below, it is not feasible to break down all these various potential contributing factors.<sup>17</sup>

The question of whether any relation between personality and these issues should be considered epistemically deleterious will be taken up in discussion.

Although, I echo Turri in recommending that some future work addresses this. Nonetheless, we are now in a position to see how someone might expect links between personality traits and perceptions of centrality. Above, I speculated about links between openness to experience or narcissism, and attitudes to centrality. Again, such links are not implausible given the nature of the constructs. Higher narcissism is related to entitlement which one might expect to see correlated with a stronger dismissal of emerging or underrepresented subfields as not as important as established fields (within which most philosophers work) for example. On the other hand, openness to experience being related to aesthetics, feelings and values, you might expect to correlate with a sense that value theory is where the prototypically philosophical questions are tackled. However, again, one might also gen-

While one can generate speculative hypotheses such as the above, the current study was genuinely exploratory. The theoretical basis for any of these speculative hypotheses one might make is weak and tenuous, and many more hypotheses of equal standing might be generated very easily. The two metaphilosophical issues focused on in the current study are selected because they have been explored in the extant empirical literature on metaphilosophical views. The various personality traits focused on are selected because there are some findings in the extant empirical literature on personality and first order philosophical views that suggest these traits are a good place to start.

Finally, what is the relevant population of interest? The main interest, given the metaphilosophical issues at stake, is in looking to see whether the metaphilosophical views of professional philosophers are associated with personality. However, it is also of interest to compare philosophers to a lay population. The reason is that in the event of any evidence that personality is related to metaphilosophical views among philosophers it would be important to know to what extent this is present in the lay population or whether it is somehow an association produced during the process of philosophical training and experience.<sup>18</sup>

### 5 Study

The following study examines the relationship between metaphilosophical views and personality for philosophers. Two types of metaphilosophical views are considered: (a) views about the role of intuitions in philosophy; and (b) views about the centrality of various subareas of philosophy to the discipline. Nine personality traits are considered: (a) openness to experience; (b) conscientiousness; (c) extraversion; (d) agreeableness; (e) neuroticism; (f) autism quotient; (g) machiavellianism; (h) narcissism; and (i) psychopathy.

# 5.1 Participants

Participants were invited to take part in an online survey constructed using Testable (testable.org). Participants were recruited from an expert population and from a lay population.

Philosophers The experts were invited to take part in the survey using email lists that are popular among academic philosophers (Philos-l and Aphil-l). The total number of participants recruited via this method was 270. The number of these who had a PhD in philosophy was 174 (64%). The number of participants who identified as professional philosophers was 227 (84%). Following the exclusion of

erate any number of hypotheses about potential connections. For example, high autism quotient – being related to poor social skill, poor communication skill, but exceptional attention to detail – might be predicted to relate to a lower sense of the centrality of fields relating to social and normative philosophy, and to a higher sense of the centrality of technical fields such as logic through some kind of fluency effect. And so on.

Obviously, the lay population likely have few involved metaphilosophical views. However, one doesn't need experience in philosophy to have ideas about what philosophy is and about what is central to philosophy.

all participants who neither identified as a professional philosopher nor as having a PhD in philosophy 238 remained. Responses from another 20 participants were excluded which included response times to one or more question of under 300ms. Of the remaining 218 participants, 156 (72%) claimed to have a research interest in philosophical methodology. The mean age of the remaining expert participants was 41.37 (SD = 13.01). The sample was predominantly male (67.9% male, 28.9% female, 3.2% other).

Nonphilosophers The lay participants were recruited to a very similar survey. They were recruited using Testable Minds (reward \$0.80 @ \$6/h based on estimated completion time of 8 minutes, Testable Minds is a similar tool to MTurk or Prolific). Participation was restricted to those whose first language was English, who were at least 18 years old, and who had an approval rate on Testable of over 90%. The total number of participants recruited using this method was 162. The number of these who had studied philosophy at undergraduate level was 56 (34.6%). The number who had studied philosophy at postgraduate level was 5 (3.1%). Following the exclusion of all participants who had studied philosophy at postgraduate level 157 remained. Responses from another 7 participants were excluded which included response times to one or more question of under 300ms. Of the remaining 150 participants, 51 (34%) had studied philosophy at undergraduate level. As declared in the protocol submitted to IRB, these participants were included in the analysis. The mean age of participants was 39.14 (SD = 13.29). The sample had a slight majority of female students (44% male, 54.7% female, 1.3% other).

Overall The total number of participants following exclusions was 368. The majority of participants were Male (58.2%, Female 39.4%, Other 2.4%). The mean age of participants was 40.46.

## 5.2 Procedure

After reading an information sheet and consenting to take part, the participants responded to two blocks of questions. The order of blocks was randomized. Each question displayed on a separate page. One block contained metaphilosophical questions. For the philosophers, this contained two sets of questions: one relating to the role of intuitions in philosophy and the other relating to the centrality of subfields. The order of these sets was randomized and the order of presentation within sets was randomized. For the nonphilosophers, the questions on intuitions were omitted. The other block contained basic demographic questions followed by the personality scales.

#### 5.3 Measures

Attitudes to intuitions For the philosophers only, attitudes to the role of intuitions in philosophy were assessed using a measure from Kuntz and Kuntz (2011). This comprised four items:

- 1. INT1 Intuitions are useful to justification in philosophical methods.
- 2. INT2 Intuitions are useful to discovery in philosophical methods.

- 3. INT3 Intuitions are essential to justification in philosophical methods.
- 4. INT4 Intuitions are essential to discovery in philosophical methods.

Participants were asked to indicate the extent to with they agree or disagree with each item. They responded on a scale from 1 to 7 with explicit anchors at 1 (strongly disagree), 4 (neither agree nor disagree), and 7 (strongly agree). The survey software presented these options vertically with 1 at the bottom and 7 at the top. Each participant responded to 47 items in total. The order of items was randomized.

Perceptions of centrality of subdisciplines For the philosophers, perceptions of the centrality of subfields to philosophy were assessed using a similar measure to that developed by Turri (2016). Participants rated the centrality of various areas of philosophy to the discipline of philosophy. The areas presented were taken from the structure of PhilPapers which is a popular archive of published works in philosophy (philpapers.org). PhilPapers's second level of categorization was used omitting any 'miscellaneous' sections or sections for works from other disciplines. In total there were 32 subareas for participants to rate (see Table 8 for a full list). They responded on a similar seven-point scale to that used above, with anchors at 1 (Peripheral), 4 (Neither Central nor Peripheral), and 7 (Central). The wording of the prompt was "We want to know the extent to which you think each area is 'central' or 'peripheral' to the discipline of philosophy."

For the nonphilosophers, the perceptions of the centrality of subfields to philosophy were assessed using a similar but adapted measure. The adaptations are necessary because those without prior experience in philosophy would not be familiar with many of the subfields. The questions about centrality were preceded by the following blurb: 'On the following pages you will be asked some questions about philosophy. These questions do not suppose you are an expert in philosophy or have any knowledge about philosophy. We are interested in how philosophy is perceived by those who are not very familiar. If you don't know the answer to one of the following questions, please provide your best guess.' Participants were then presented with thirty-two items in a random order and asked to rate each on a scale from 1 (This is a minor, peripheral topic in philosophy) to 7 (This is an important, central topic in philosophy). The full items are shown in Table 1 (the PhilPapers subfield each corresponds to is included in parentheses – this was not shown to participants).

Personality traits Personality was assessed using three measures. The Ten Item Personality Inventory (TIPI) is a brief measure of the big five personality traits (Gosling et al., 2003). It comprises ten items, e.g., 'I see myself as dependable; self-disciplined,' to which participants indicate their level of agreement. The Short Dark Triad scale (SD3) is a brief measure of machiavellianism, narcissism, and psychopathy) (Jones and Paulhus, 2013). It comprises nine items per subscale, e.g., 'I know that I am special because everyone keeps telling me so,' to which participants indicate their level of agreement. The Short Autism Quotient scale (AQ-10) (Allison et al., 2012) is a brief measure of autism-spectrum quotient. It comprises ten items, e.g., 'I find it easy to work out what someone is thinking or feeling just by looking at their face,' to which participants rate their level of agreement. Participants responded to all items on a similar seven-point scale as described above. <sup>19</sup> The full list of items for these

In their original form, these three scales don't use exactly the same format of question or scoring, e.g., SD3 uses a 5-point scale. To make the task more straightforward for participants, the choice was made to standardize the format across the three scales.

scales are provided in Table 2, Table 3, Table 4, Table 5 and Table 4. These scales were chosen as they are relatively brief measures of the relevant constructs. Although brief measures have their drawbacks, the choice to use brief measures was made to limit the amount of time participants had to spend on the survey – to maximise completion rates and minimize respondant fatigue.

#### 5.4 Descriptive Results

Attitudes to intuitions Philosophers' judgments about the role of intuitions in philosophy are given in Table 7. The results are very similar to Kuntz and Kuntz (2011)'s. Participants tend to agree that intuitions are useful to discovery and disagree that they are essential to justification, whereas no clear tendency emerges with respect to whether intuitions are useful to justification or essential to discovery.

Perceptions of centrality of subdisciplines Philosophers' judgments about the centrality of the thirty-two subfields are given in Table 8, page 36. The results are much as one might have feared. Most subareas are judged on average to be at least somewhat central. As suggested above, areas such as Philosophy of Gender and of Race, as well as areas such as Asian and African philosophy, are not on average considered central to the discipline of philosophy. Nonphilosophers' judgments about the centrality of these subfields are also in Table 8. Most subareas are judged on average to be at least somewhat central.

We can also compare the centrality ratings between the two groups (although some caution is warranted due to, e.g., differences in the items viewed by philosophers and nonphilosophers). There was a significant multivariate effect of group on centrality rating.<sup>20</sup> There were significant univariate effects for all subfields except 20th century philosophy, epistemology, normative ethics, philosophy of language, philosophy of probability, and philosophy of social science. In a small number of cases, philosophers rate the relevant subfield as being more central than nonphilosophers: Philosophy of Biology; Philosophy of computing and information; Philosophy of mathematics; Philosophy of physical sciences; Social and Political Philosophy.<sup>21</sup> In the majority of cases, however, it is nonphilosophers who rate the relevant subfield as being more central.<sup>22</sup>

Wilks $\Lambda = .338, F(32, 334) = 20.450, p < .001, \eta_p^2 = .662.$ 

<sup>&</sup>lt;sup>21</sup> Philosophy of Biology  $(F(1,365) = 8.190, p = .004, \eta_p^2 = .022)$ ; Philosophy of computing and information  $(F(1,365) = 36.006, p < .001, \eta_p^2 = .090)$ ; Philosophy of mathematics  $(F(1,365) = 9.763, p = .002, \eta_p^2 = .026)$ ; Philosophy of physical sciences  $(F(1,365) = 24.697, p < .001, \eta_p^2 = .063)$ ; Social and Political Philosophy  $(F(1,365) = 7.067, p = .008, \eta_p^2 = .019)$ .

<sup>22 17</sup>th / 18th Century Philosophy  $(F(1,365) = 9.002, p = .003, \eta_p^2 = .024)$ ; 19th Century Philosophy  $(F(1,365) = 28.029, p < .001, \eta_p^2 = .071)$ ; Aesthetics  $(F(1,365) = 10.380, p = .001, \eta_p^2 = .028)$ ; African/Africana Philosophy  $(F(1,365) = 67.833, p < .001, \eta_p^2 = .157)$ ; Greek and Roman Philosophy  $(F(1,365) = 24.190, p < .001, \eta_p^2 = .062)$ ; Applied Philosophy  $(F(1,365) = 35.249, p < .001, \eta_p^2 = .088)$ ; Asian Philosophy  $(F(1,365) = 110.903, p < .001, \eta_p^2 = .233)$ ; Continental Philosophy  $(F(1,365) = 58.557, p < .001, \eta_p^2 = .138)$ ; European Philosophy  $(F(1,365) = 33.913, p < .001, \eta_p^2 = .085)$ ; Logic and Philosophy of Logic  $(F(1,365) = 11.796, p = .001, \eta_p^2 = .031)$ ; Medieval and Renaissance Philosophy  $(F(1,365) = 55.810, p < .001, \eta_p^2 = .133)$ ; Metaethics  $(F(1,365) = 16.667, p < .001, \eta_p^2 = .133)$ ; Metaethics  $(F(1,365) = 16.667, p < .001, \eta_p^2 = .133)$ ; Metaethics  $(F(1,365) = 16.667, p < .001, \eta_p^2 = .133)$ ;

Personality There were significant differences in personality traits between the two samples (mean scores in Table 9, page 36). Philosophers scored more highly on Conscientiousness<sup>24</sup> and Openness to Experience. Non-philosophers scored more highly on Autism quotient, Psychopathy and Extraversion. There was no significant difference between groups for Machiavellianism, Narcissism, Agreeableness or Emotional stability.

#### 5.5 Factor Analysis

The thirty-two centrality items were entered into a PAF factor analysis using direct oblimin ( $\delta=0$ ). Six factors were initially extracted on the basis of the scree plot. Retaining only items that loaded onto a single factor at .4 or above, and retaining only factors with three or more items, produced a four factor model that explained 55.63% of the variance. The factors extracted have very clear interpretations with the first concerning the History of Philosophy and European Philosophy (HIST), the second concerning the Philosophy of Science and Mathematics (SCIE), the third concerning traditional topics in analytic philosophy (TRAD), and the fourth concerning Applied and Non-Western Philosophy (APPL). Participant scores for each factor were calculated by taking the mean of the items loading onto the relevant factor at .4 or above. See Table 10, page 37, for details.

A different way to think about centrality is to consider how central participants perceive each factor to be relative to the other clusters. So, relative centrality scores were also calculated by subtracting the mean centrality score for the remaining clusters of subfields from the centrality scores for each cluster.

The same procedure was conducted using the ten personality scale scores. A three factor model was produced that explained 68.09% of the variance. The factors extracted cohere with other findings about the relation between traits with the first factor concerning machiavellianism and psychopathy (M&P), the second factor concerning conscientiousness, openness to experience, and low autism quotient (C&O), and narcissism and extraversion (N&E). Participant scores for each factor were calculated by taking the mean of the items loading onto the relevant factor at .4 or above. See Table 11, page 37, for details.

 $<sup>.001, \</sup>eta_p^2 = .044); \ \text{Metaphilosophy} \ (F(1,365) = 55.502, p < .001, \eta_p^2 = .132); \ \text{Metaphysics} \ (F(1,365) = 18.603, p < .001, \eta_p^2 = .048); \ \text{Philosophy} \ \text{of action} \ (F(1,365) = 18.255, p < .001, \eta_p^2 = .048); \ \text{Philosophy} \ \text{of Cognitive Science} \ (F(1,365) = 5.367, p = .021, \eta_p^2 = .014); \ \text{Philosophy} \ \text{of gender, race, and sexuality} \ (F(1,365) = 42.179, p < .001, \eta_p^2 = .104); \ \text{Philosophy} \ \text{of Law} \ (F(1,365) = 60.966, p < .001, \eta_p^2 = .143); \ \text{Philosophy} \ \text{of mind} \ (F(1,365) = 49.638, p < .001, \eta_p^2 = .120) \ \text{Philosophy} \ \text{of religion} \ (F(1,365) = 70.317, p < .001, \eta_p^2 = .162); \ \text{Philosophy} \ \text{of the Americas} \ (F(1,365) = 84.435, p < .001, \eta_p^2 = .188).$ 

<sup>&</sup>lt;sup>23</sup> Caution required in comparing these scores to those in other studies, see fn.19.

 $<sup>^{24} \</sup>quad F(1,366) = 81.730, p < .001, \eta_p^2 = .183$ 

<sup>&</sup>lt;sup>25</sup>  $F(1,366) = 112.102, p < .001, \eta_p^2 = .234$ 

 $F(1,366) = 172.433, p < .001, \eta_p^2 = .320$ 

 $F(1,366) = 18.756, p < .001, \eta_p^2 = .049$ 

 $F(1,366) = 12.951, p < .001, \eta_p^2 = .034$ 

<sup>&</sup>lt;sup>29</sup> Machiavellianism (p = .078), Narcissism (p = .424), Agreeableness (p = .387), and Emotional stability (p = .528).

#### 5.6 Regression analysis

Linear regression analysis was used to explore the relations between centrality ratings and personality, as well as the attitudes to intuitions and personality. Philosophers and Non-philosophers were treated separately. Age, Gender (Male -1, Female 1), and the three high-level personality factors were considered as predictors, as well as all two-way interactions, in separate models predicting each of the four centrality factors and each of the four intuition items.<sup>30</sup> Given the exploratory nature of this study, a relatively conservative method was adopted. Only predictors that were significant in simple linear regression models with an  $R^2$  value greater than 0.02 were considered for inclusion in the final model.<sup>31</sup> Predictors were removed from the final multiple regression model if associated with a very small  $\delta R^2$ , lower than 0.01. Using this method, some models were produced in which high-level personality factors predicted ratings of centrality or relative centrality. No models predicting attitudes to intuitions were produced (as no predictors were entered at the first step).

For philosophers' centrality ratings the following relationships were observed (in decreasing order of  $\mathbb{R}^2$  value for the model).<sup>32</sup>

- Relative centrality scores for SCIE were predicted by a model containing one predictor: higher Machiavellianism-Psychopathy led to higher ratings of relative centrality for  $\rm SCIE^{33}$
- Centrality scores for SCIE were predicted by a model containing one predictor: higher Machiavellianism-Psychopathy led to higher ratings of centrality for  ${\rm SCIE}^{34}$
- Relative centrality scores for HIST were predicted by a model containing three interaction terms:<sup>35</sup>
  - an interaction between Age and Gender  $^{36}$  such that while Age had little effect on women's perceptions of the relative centrality of HIST  $^{37}$  there was a small positive trend for  $\mathrm{men}^{38}$
  - an interaction between Gender and Narcissism-Extraversion<sup>39</sup> such that while higher Narcissism-Extraversion was not associated with perceptions of the relative centrality of HIST for women<sup>40</sup>, there was a small negative trend for men<sup>41</sup>

<sup>&</sup>lt;sup>30</sup> All variables standardised.

This follows Cohen (1988)'s suggested rules of thumb for interpreting the fit of regression models using  $R^2$  which are as follows: small (> .02), moderate (> .13), and large (> .26).

<sup>32</sup> All confidence intervals are 95% confidence intervals.  $\delta R^2$  values concern change in  $R^2$  when Age was added in a final step in models containing N&E and and interaction between M&P and C&E for men and women respectively. A similar process was used below when reporting ' $\delta R^2$  =' in the context of models with multiple predictors and in breaking down interactions

 $<sup>^{33}</sup>$   $(F(1,216) = 28.314, p < .001, B = .289, SE = .054, CI = [.182, .397], R^2 = .116)$ 

 $<sup>^{34}</sup>$   $(F(1,216) = 27.039, p < .001, B = .323, SE = .062, CI = [.201, .446], R^2 = .111)$ 

 $<sup>^{35}</sup>$   $(F(3,207) = 5.660, p = .001, R^2 = .076)$ 

 $<sup>^{36}</sup>$   $(B = -.126, SE = .074, CI = [-.271, .019], \delta R^2 = .013)$ 

 $<sup>^{37}</sup>$  (B = .029, SE = .137, CI = [-.246, .303],  $\delta R^2$  = .001)

 $<sup>^{38}</sup>$  (B = .189, SE = .081, CI = [.030, .349],  $\delta R^2$  = .033)

<sup>&</sup>lt;sup>39</sup>  $(B = .110, SE = .062, CI = [-.012, .232], \delta R^2 = .014)$ 

 $<sup>^{40} \</sup>quad (B=.072, SE=.114, CI=[-.155, -.300], \delta R^2=.007)$ 

 $<sup>(</sup>B = -.152, SE = .069, CI = [-.288, -.017], \delta R^2 = .030)$ 

– an interaction between Machiavellianism-Psychopathy and Conscientiousness-Openness<sup>42</sup> such that for those with higher than median CnO, MnP was associated with lower ratings<sup>43</sup>, but not for others<sup>44</sup>

- Centrality scores for APPL were predicted by a model containing just Gender as a predictor: women gave higher ratings of centrality for APPL  $^{45}$
- Relative centrality scores for APPL were predicted by a model containing just Gender as a predictor: women gave higher ratings of relative centrality for APPL  $^{46}$

For nonphilosophers' centrality ratings the following relationships were observed.

- Relative centrality scores for SCIE were predicted by a model containing two interaction terms: 47
  - an interaction between Gender and Machiavellianism-Psychopathy<sup>48</sup> such that among women high Machiavellianism-Psychopathy was associated with higher ratings of the relative centrality of SCIE<sup>49</sup>, but the same was not true of men<sup>50</sup>
  - an interaction between Conscientiousness-Openness and Narcissism-Extraversion<sup>51</sup> such that among those with Conscientiousness-Openness scores above the median higher Narcissism-Extraversion scores were not associated with higher centrality ratings for SCIE<sup>52</sup> but among others they were<sup>53</sup>
- Centrality scores for HIST were predicted by a model containing two terms:<sup>54</sup>
  - Gender such that women gave lower ratings of centrality for HIST<sup>55</sup>
  - an interaction between Age and Narcissism-Extraversion<sup>56</sup> such that there was no relationship between Age and ratings of centrality for HIST among those with Narcissism-Extraversion scores over the median<sup>57</sup> but a positive trend for the others<sup>58</sup>
- Relative centrality scores for HIST were predicted by a model containing two interaction terms:  $^{59}\,$ 
  - an interaction between Gender and Narcissism-Extraversion<sup>60</sup> such that among those with higher than median NnE scores, being a women was associated

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42
     (B = -.217, p = .073, CI = [-.361, -.073], \delta R^2 = .039)
43
    (B = -.184, SE = .075, CI = [-.332, -.035], \delta R^2 = .029)
    (B = .130, SE = .293, CI = [-.502, .762], \delta R^2 = .013)
45
    (F(1,209) = 7.599, p = .006, B = .184, SE = .067, CI = [.053, .316], R^2 = .035)
46
    (F(1,209) = 6.668, p = .01, B = .177, SE = .068, CI = [.042, .312], R^2 = .031)
47
    (F(2, 145) = 6.084, p = .003, R^2 = .077)
48
    (B = .147, SE = .075, CI = [-.001, .296], \delta R^2 = .024)
49
     (B = .182, SE = .110, CI = [-.038, .401], \delta R^2 = .029)
     (B = -.012, SE = .131, CI = [-.273, .250], \delta R^2 = .000)
     (B = -.278, SE = .105, CI = [-.486, -.070], \delta R^2 = .044)
52
     (B = .161, SE = .182, CI = [-.201, .524], \delta R^2 = .011)
53
     (B = .340, SE = .159, CI = [.023, .656], \delta R^2 = .056)
54
     (F(2, 145) = 4.764, p = .010, R^2 = .062)
55
     (B = .150, SE = .071, CI = [-.290, -.010], \delta R^2 = .029)
    (B = -.197, SE = .092, CI = [-.379, -.016], \delta R^2 = .030)
57
    (B = -.036, SE = .109, CI = [-.253, .180], \delta R^2 = .002)
58
    (B = .182, SE = .100, CI = [-.017, .381], \delta R^2 = .044)
59
    (F(2, 145) = 5.584, p = .005, R^2 = .072)
     (B=-.212.,SE=.103,CI=[-.416,-.008],\delta R^2=.027)
```

- with higher ratings of relative centrality  $^{61}$  but not among those with lower NnE  $\rm scores^{62}$
- an interaction between Conscientiousness-Openness and Narcissism-Extraversion<sup>63</sup> such that among those with higher than median CnO scores there was no association between NnE scores and relative centrality ratings<sup>64</sup> but there was a negative relationship among the others<sup>65</sup>
- Centrality scores for SCIE were predicted by a model containing three terms:<sup>66</sup>
  - those with higher Conscientiousness-Openness gave lower centrality ratings for  $\mathrm{SCIE}^{67}$
  - an interaction between Gender and Machiavellianism-Psychopathy $^{68}$  such that among women high Machiavellianism-Psychopathy was associated with higher ratings of the centrality of  $\mathrm{SCIE}^{69}$  but if anything the opposite was true of  $\mathrm{men}^{70}$
  - an interaction between Conscientiousness-Openness and Narcissism-Extraversion<sup>71</sup> such that among those with Conscientiousness-Openness scores above the median higher Narcissism-Extraversion scores were not associated with higher centrality ratings for SCIE<sup>72</sup> but among others they were<sup>73</sup>
- Centrality scores for APPL were predicted by a model containing two terms:<sup>74</sup>
  - higher Conscientious ness-Openness was associated with lower ratings of the centrality of  ${\rm APPL^{75}}$
  - an interaction between Age and Gender  $^{76}$  such that Age is associated with higher ratings of the centrality of APPL among women  $^{77}$  but with lower ratings among  $\rm men^{78}$
- Centrality scores for TRAD were predicted by an interaction between Machiavellianism-Psychopathy and Narcissism-Extraversion<sup>79</sup> such that among those with Machiavellianism-Psychopathy above the median higher Narcissism-Extraversion scores were associated with higher centrality ratings for TRAD<sup>80</sup> but not among others<sup>81</sup>

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(B = -.207, SE = .107, CI = [-.420, .007], \delta R^2 = .050)
62
     (B = -.042, SE = .115, CI = [-.271, .187], \delta R^2 = .002)
63
     (B = .206, SE = .100, CI = [.009, .403], \delta R^2 = .027)
     (B = .095, SE = .250, CI = [-.402, .593], \delta R^2 = .002)
    (B = -.281, SE = .131, CI = [-.542, -.020], \delta R^2 = .054)
    (F(3, 144) = 7.932, p < .001, R^2 = .142)
67
    (B = -.284, SE = .135, CI = [-.551, -.017], \delta R^2 = .026)
68
    (B = .161, SE = .077, CI = [.008, .314], \delta R^2 = .026)
69
    (B = .204, SE = .118, CI = -.030, .439, \delta R^2 = .031)
70
     (B = -.135, SE = .137, CI = [-.408, .139], \delta R^2 = .014)
     (B = -.329, SE = .110, CI = [-.547, -.110], \delta R^2 = .053)
72
     (B = .262, SE = .203, CI = [-.143, .667], \delta R^2 = .021)
73
     (B = .405, SE, .161, CI = [.084, .726], \delta R^2 = .081)
74
     (F(2, 145) = 4.290, p = .015, R^2 = .056)
75
     (B = -.218, SE = .103, CI = [-.421, -.015], \delta R^2 = .029)
76
    (B = .109, SE = .062, CI = [-.013, .231], \delta R^2 = .020)
77
    (B = .111, SE = .081, CI = [-.051, .272], R^2 = .021)
    (B = -.125, SE = .133, CI = [-.351, .100], \delta R^2 = .019)
79
    (F(1,148) = 3.943, p = .049, \delta R^2 = .026)
80
    (B = .309, SE = .177, CI = [-.043, .661], \delta R^2 = .040)
     (B = -.033, SE = .139, CI = [-.310, .244], \delta R^2 = .001)
```

# 5.7 Summary of main findings

The discussion will focus on three main aspects of the results:

No important link between personality and attitudes to intuitions This study finds no evidence that philosophers' attitudes concerning the role of intuitions in philosophy are related to personality.

Differences in centrality ratings between experts and non-experts While the nature of the centrality probes varies between groups, and so some caution is required in comparing the two groups, the results may nonetheless be taken to provide some information about where differences in perceptions of which issues are central to philosophy between lay and expert populations. $^{82}$ 

Only limited evidence that perceptions of centrality are related to personality Although only exploratory, this study does find some limited evidence that attitudes towards the centrality of various subfields is related to personality. However, the significance of these relations shouldn't be overstated. In no model does a personality factor exceeds the conventional threshold for medium-size ( $\delta R^2 < .13$ ). In most of the models, the personality factors seem to be of relatively little importance. The only real exception is that, for philosophers, higher Machiavellianism-Psychopathy predicts higher centrality and relative centrality ratings for SCIE (Philosophy of Science, Mathematics, and similar). But this is still minor!<sup>83</sup>

## 5.8 Actual versus perceived centrality

One natural question to ask about participants' centrality ratings is the extent to which they track the actual centrality of these subfields. Indeed it is tempting to ask whether philosophers are better judges of centrality than nonphilosophers. It is difficult, however, to answer such questions in a principled way. There is no extant and uncontroversial measure of the objective centrality of the various subfields of philosophy within philosophy the discipline (indeed perhaps centrality should be treated as a mere fiction). It is instructive, nonetheless, to compare participants' ratings with two easily accessible proxy measures for centrality: (1) Total number of publications in PhilPapers; (2) Total number of forthcoming conferences in PhilEvents.<sup>84</sup> The

Above, these differences were reported for each individual subdisciplines. The same pattern emerges using the four higher level factors. Non-philosophers give higher ratings of HIST, TRAD, and APPL. Philosophers give higher ratings of SCIE.

One could sense of this correlation in the following way: perhaps philosophers with higher empathy for others (relating to lower psychopathy) might have more humanistic inclinations and thus be inclined to rate areas such philosophy of probability as being less central; and perhaps philosophers who tend to agree with items such as "I like to use clever manipulation to get my way" and "It is wise to keep track of information that you can use against people later" (relating to Machiavellianism) might be more oriented towards technical and data-driven subjects. However, it should be noted that such connections are very speculative. This footnote shouldn't be read as inferring conclusions from the results of the study.

Searches conducted 27/9/18. Although this comparison is instructive, we should be cautious in interpreting this data as, e.g., it is unclear that we should expect any of the measures involved to relate to objective centrality in a straightforward linear fashion.

results are plotted in Figure 1, page 38. In broad terms we can see that philosophers' ratings seem to track slightly more with the number of events in philosophy, and nonphilosophers' slightly more with the number of publications. This may be the result of philosophers being sensitive to 'hot topics' and nonphilosophers being sensitive to 'perennial questions' – but that is difficult to assess properly without more extensive investigation.

#### 6 Discussion

What underlies the differences of opinion among philosophers about metaphilosophical issues? William James is doubtless far from alone in speculating about whether metaphilosophical differences might have their roots in individual differences in the psychology of philosophers. William James's picture – painted in the opening lecture of his *Pragmatism* – was one in which personality has a profound and all-pervasive effect on the approach that philosophers have to philosophy including their perceptions of alternative philosophical approaches. The current results certainly don't support this picture or anything like it. The results are, in that sense, largely negative. Philosopher's attitudes to the use of intuitions in philosophy seem unrelated to personality, there are only a few suggestions of links between personality traits and perceptions of the centrality of philosophical subdisciplines, and those suggestions are only of minor correlations. Nonetheless, while the results of the study are largely negative, even the finding of some minor correlation between personality traits and perceptions of the centrality of certain subfields in philosophy, does warrant some discussion.

What, if any, implications might the correlations observed in this exploratory study have?<sup>85</sup> Earlier in the paper, I considered one typical way in which findings of a relation between personality traits and philosophical judgements in experimental philosophy have been thought to potentially factor into a challenge for traditional philosophical methodology. Let me rehearse it here briefly in order to highlight some significant differences between this, perhaps familiar, challenge and the issue we are about to dig into. In the familiar challenge, the challenge targets extant use of certain judgements as evidence in philosophical arguments (e.g., intuitions about key thought experiments) on the basis that the judgements are unreliable as indicated by an association with irrelevant personality traits. This familiar challenge—to philosophers' evidence on the basis of associations with irrelevant factors—wouldn't be the best way to think about the current results for two reasons (in addition to the fact that the main findings are negative). First, the personality traits in question might not be thought *irrelevant* in the relevant way.<sup>86</sup> Consider the strongest (al-

Thanks to various commentators for pressing me to include this discussion. Note, however, that the main finding of the paper remains that there are no dramatic correlations between personality and centrality judgements.

Indeed, this isn't specific to metaphilosophical views. The point that personality might sometimes be correlated with the reliability of first order philosophical beliefs is made clear in Yaden and Anderson (2021)'s discussion. Here and else where, I'm also setting aside any concerns about whether there is such a thing as having more or less accurate perceptions of the centrality of subfields. Of course, if there are no facts, or no objective facts, about which subfields are more central than others, then, regardless of any association between personality and perceptions of centrality, we should probably be very careful about letting any ideas we have about centrality play a big role in shaping the discipline.

though, still minor) relationship observed between personality traits and perceptions of centrality: that between (a) Machiavellianism-Psychopathy and (b) Philosophy of Science and Maths. There is certainly a case to be made that such anti-social personality traits should be expected to be negatively correlated with a better perception of centrality. As captured by the SD3 (Jones and Paulhus, 2013) the key elements of Psychopathy, for example, are a deficit of self-control, recklessness, and short-term callousness. These are not traits one automatically associates with an ability to discern value in areas in which one is not personally invested.<sup>87</sup> Second, the role that judgments about centrality play in philosophy (or at lease the role of interest here) isn't that they are taken as evidence in philosophical arguments. The main reason to be interested in perceptions of centrality is the role that they play in shaping philosophers' preferences and choices in philosophical research (rather than in arguments in which they are treated as evidence). If philosophers operate with perceptions of centrality which are to some significant extent distorted or biased by personality, and these perceptions are allowed to shape the research priorities of the discipline (perhaps implicitly), this will lead to a discipline with distorted research priorities that don't match up with what is truly most worthy of philosophical investigation.<sup>88</sup>

So, suppose there were a concern about the reliability of philosophers' perceptions of centrality. What, if any, implications would that have? Generally speaking, such a concern would certainly present a prima facie case for being cautious about the relevant ideas about centrality influencing the structure of the discipline (rather than the impugning of some key source of evidence).<sup>89</sup> What would it mean to be more cautious about letting ideas about centrality influence the structure of the discipline? There are many ways in which ideas about centrality help to shape the world of philosophy and thus many ways in which one might exercise greater caution. Some of these ways coincide with the measures currently being advocated and pursued with the aim of addressing the lack of diversity the topics that enjoy the limelight in philosophy (see subsection 3.3). One contributing factor to the relative lack of diversity is the presence of some strong prevalent opinions about which areas are more central to philosophy, more important, more foundational. One way to be more cautious about letting ideas about centrality influence the structure of the discipline is thus to actively promote greater diversity of this kind within philosophy. So more pluralistic editorial policies and easy to access resources for diversifying syllabuses

The same would not be true for some other personality traits. While a lack of conscientiousness, for example, as captured by TIPI, would involve low dependability, self-discipline, organization, and carefulness—traits which one might also plausibly associate with lower ability to discern centrality—others look irrelevant: autism quotient, and agreeableness.

Although, note that in this case, the situation we are considering is not one in which Philosophy of Science and Maths are enjoying massive, potentially undeserved prominence—whether due to some unreliability of centrality judgements about the relevant subfields or for any other reason—as the relevant subfields were not generally rated particularly as being particularly central by philosophers.

Should any recommendations for greater caution around letting ideas about centrality shape the discipline take into account the fact that a concerning relationship between personality and perceptions of centrality was observed only for one cluster of subdisciplines (philosophy of science and maths) and one trait? Should what we are especially cautious about be letting the perceptions of centrality of those with higher machiavellianism or psychopathy shape the discipline in relation to the status of philosophy of science and maths? Perhaps. But it is hard to see what practical measures could facilitate such a fine-grained, subtle approach. My view is that we should see the current results as, if anything, feeding in to a more general call for greater caution around such issues.

would both be ways to be more cautious. Similar initiatives with respect to curricula, hiring policies, funding competitions, and so on, would also be ways to exercise greater caution. I mention these only by means of illustration, and I expect the reader will be able to come up with many more.

What, if any, implications might the correlations observed in this exploratory study have? If we were to take anything from the results, I think it would simply be a greater caution of the kind just discussed. However, note that the largely negative nature of the results means that they don't raise any particularly strong concerns about the reliability of philosophers perceptions of the centrality of philosophical subfields.

#### 6.1 Other points of interest

There are a few further points of interest. First, there seem to be differences between what philosophers and nonphilosophers consider to be central to philosophy (although it is possible these apparent differences are due to something different, e.g., the differences in the items seen by the two groups). At broad strokes, nonphilosophers expect philosophy to be more diverse in the traditions it considers to be central, more historical, and less engaged with maths and the sciences, than philosophers themselves consider (this can be seen in Table 8, page 36, and Figure 1, page 38, is helpful too). This is significant information for all philosophers involved in teaching introductory courses and in public philosophy because it will help them manage expectations, etc. However, there are also a deeper metaphilosophical questions raised in interpreting this result. One natural interpretation is that philosophers, in virtue of greater familiarity, simply have a better understanding of what is central to philosophy. 90 However, that is not the only interpretation available. Alternatively, one might think the differences observed are evidence that professional philosophers' priorities and interests are miscalibrated. Why? Suppose one thought that philosophy should be responsive to the concerns of ordinary people in such a way that philosophers ought to treat as central those questions and issues ordinary people hold to be central philosophical concerns. Given such a picture, you might think that while philosophers' responses in this study were more reliable indicators of how central the profession actually treat certain questions and topics, nonphilosophers' responses are more reliable indicators of how central the profession should treat those questions and topics. 91 Perhaps, most plausibly, the correct interpretation lies somewhere in the middle of the two interpretations we've just considered: in some cases, the differences between groups reflect a simple descriptive misunderstanding on the part of nonphilosophers (e.g., on the nature of Ethics); in others, the differences may reflect ways in which professional philosophy

If that's right, the current findings push back a little on Bourget and Chalmers (2014)'s scepticism about the accuracy of philosophers' sociological beliefs. Although, of course, Bourget and Chalmers's result concerning sociological beliefs about the relative distribution of first order philosophical positions among philosophers isn't threatened by the current results.

An anonymous reviewer reported finding this alternative viewpoint implausible. But I think it is at least a plausible hypothesis that the process of becoming a professional philosopher distorts rather than enhances one's sense of what kinds of issue most deserve philosophers' attention.

over or under prioritises certain subfields (e.g., treating Asian philosophy as less central). In any case, the finding should probably prompt some reflection on the part of philosophers.  $^{92}$ 

Second, the current results paint much the same descriptive picture concerning philosophers' views about the methodological importance of intuitions to that reported by Kuntz and Kuntz (2011) (see Table 7 for details): philosophers tend to agree that intuitions are useful to discovery, but disagree that they are essential to justification. Given the large degree of disagreement among philosophers as to the role of intuitions in philosophy, it is interesting that no stronger links were found to individual differences in personality traits. Further research could investigate potential links with other factors, e.g., where philosophers do their graduate training.

Third, the current results concerning perceptions of centrality paint a picture that is broadly consistent with Turri (2016)'s findings in terms of which subfields are regarded as most and least central (compare the results in Table 8, with Turri's results summarised on page 10). However, because the current research employed a more fine-grained taxonomy of philosophical positions, one can get a better sense of whether some subfields might be marginalised to some degree. Whereas Turri found that the majority of participants rated all areas but one as being central, in the current research 8 subfields received a mean rating below the midpoint (see Table 8).<sup>93</sup>

Fourth, concerning the results of exploratory factor analysis, perceptions of the centrality of sub-domains of philosophy seem to cluster in meaningful ways that might tell us something important about the philosophical community. One can see, for example, that perceptions of the centrality of Applied philosophy, African/Africana Philosophy, Asian Philosophy, Philosophy of Gender, Race and Sexuality, and Philosophy of the Americas cluster together.

#### 6.2 Limitations

Finally, a number of limitations of the current research that should be mentioned. First, the taxonomy of philosophical subfields used is far from ideal despite being that employed by one of the most widely used web resources in philosophy and despite employing a more fine-grained taxonomy than previous research, and the specific single items used to gauge the views of nonphilosophers concerning specific subfields should be interpreted with some caution. Future research might use a more finely grained taxonomy still and/or develop multi-item scales to explore the relevant views alongside more coarse measures, e.g., looking at how people of philosophy as a whole

A second limitation concerns the interpretation of results for the items concerning the centrality of subfields. Participants were free to interpret the centrality question as they felt appropriate. As noted above, some participants may be answering a purely descriptive question (what's considered central within the discipline) and others a normative one (what ought to be considered central), whereas it is of course

<sup>92</sup> Reflection that could itself potentially feed into a greater caution around letting ideas about centrality shape the discipline.

<sup>93</sup> Indeed, if we consider only responses above the midpoint as indicating that a participant rates a subfield as "central", a majority of philosophers in the current study failed to rate 16 out of 32 as being central to philosophy!

possible to think that Philosophy of Logic, for example, is not central but ought to be. Further research could also attempt to tease apart these ideas.  $^{94}$  It is possible, for example, that personality influences how participants interpret the question they are asked.  $^{95}$ 

Third, there are some potential limitations of the web-based sampling used. Although web-based survey tools have been found to yield similar results to lab studies in many cases, there is some evidence that some online samples are less extraverted and less emotionally stable than the general population (Paolacci and Chandler, 2014). Likewise, it is reasonable to expect some sampling bias in the recruitment of philosophers via mailing lists and an online survey.

Finally, the current study essentially uses indirect measures of the metaphilosophical issues of interest, i.e., views about use of intuitions rather than methodological practice, espoused views about centrality rather than how subfields are actually treated. Further research could attempt to explore connections between personality traits and metaphilosophical phenomena more directly.

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One way would be to design new probes to effectively disambiguate the question for participants. For example, participants could (perhaps alongside other questions) be asked to estimate directly the proportion of professional philosophers who specialize in each area, and then be asked to indicate the proportion of professional philosophers (or of publications) who they think should specialize in each area.

<sup>95</sup> Indeed, it is possible that some of the apparent differences between the two groups could be due to one group tending to interpret the question in one way and the other group tending to interpret the question in the other way. Thanks to a reviewer for this suggestion.

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## Table 1 Centrality items received by nonphilosophers

- Philosophical thought from 1600-1799 ( $17^{th}/18^{th}$  C Phil.)
- Philosophical thought from 1800–1899 (19th C Phil.)
- Philosophical thought from 1900– 1999 (20<sup>th</sup> C Phil.)
- The nature of Art and Beauty (Aesthetics)
- Philosophical thought from Africa and philosophers of African descent (African/Africana Phil.)
- Philosophical thought from Ancient Rome and Ancient Greece (Ancient Greek & Roman Phil.)
- The application of philosophical ideas to practical issues (Applied Phil.)
- Philosophical thought from Asia (Asian Phil.)
- Philosophical thought from Continental Europe (Continental Phil.)
- The nature of knowledge and justification (Epistemology)
- Philosophical thought from Europe (European Phil.)
- Logic (Logic & Phil. of Logic)
- Philosophical thought from Medieval and Renaissance periods (Medieval & Renaissance Phil.)
- The nature of ethical properties, judgements, and language (Metaethics)
- The nature of philosophy itself (Metaphilosophy)
- The nature of being, existence, and reality (Metaphysics)
- How one ought to act (Normative Ethics)

- The nature of action and agency (Philosophy of Action)
- Engagement with biological science (Phil. of Biology)
- Engagement with cognitive science (Phil. of Cognitive Science)
- The nature and function of computer hardware and software (Phil. of Computing & Information)
- The nature of gender, race, and sexuality (Phil. of Gender, Race & Sexuality)
- The relationship between language and reality (Phil. of Language)
- The nature of laws (Phil. of Law)
- The assumptions and foundations of mathematics (Phil. of Mathematics)
- The nature of mind and consciousness (Phil. of Mind)
- The foundations and methods of physical sciences, e.g., physics (Phil. of Physical Science)
- The nature and use of probabilities (Phil. of Probability)
- The case for and against the existence of God (Phil. of Religion)
- The foundations and methods of social sciences, e.g., economics (Phil. of Social Science)
- Philosophical thought from Latin America, Native Americans & African Americans (Phil. of the Americas)
- How societies and political systems ought to be structured (Social & Political Phil.)

Table 2 Items from Ten Item Personality Inventory (TIPI) (Gosling et al., 2003). Subscale indicated in parentheses. R = reverse coded items.

I see myself as Extraverted, enthusiastic (Extraversion)
I see myself as Critical, quarrelsome (Agreeableness) (R)
I see myself as Dependable, self-disciplined. (Conscientiousness)
I see myself as Anxious, easily upset. (Emotional Stability) (R)
I see myself as Open to new experiences, complex. (Openness to Experience)
I see myself as Reserved, quiet (Extraversion) (R)
I see myself as Sympathetic, warm (Agreeableness)
I see myself as Disorganized, careless. (Conscientiousness) (R)
I see myself as Calm, emotionally stable. (Emotional Stability)
I see myself as Conventional, uncreative (Openness to Experience) (R)

**Table 3** Items from Machiavellianism subscale from Short Dark Triad scale (SD3) (Jones and Paulhus, 2013). No reverse coded items.

It's not wise to tell your secrets.

I like to use clever manipulation to get my way.

Whatever it takes, you must get the important people on your side.

Avoid direct conflict with others because they may be useful in the future.

It's wise to keep track of information that you can use against people later.

You should wait for the right time to get back at people.

There are things you should hide from other people because they don't need to know.

Make sure your plans benefit you, not others.

Most people can be manipulated.

Table 4 Items from Narcissism subscale from Short Dark Triad scale (SD3) (Jones and Paulhus, 2013). R = reverse coded items.

People see me as a natural leader.

I hate being the center of attention. (R)

Many group activities tend to be dull without me.

I know that I am special because everyone keeps telling me so.

I like to get acquainted with important people.

I feel embarrassed if someone compliments me. (R)

I have been compared to famous people.

I am an average person. (R)

I insist on getting the respect I deserve.

Table 5 Items from Psychopathy subscale from Short Dark Triad scale (SD3) (Jones and Paulhus, 2013). R = reverse coded items.

I like to get revenge on authorities.

I avoid dangerous situations. (R)

Payback needs to be quick and nasty.

People often say I'm out of control.

It's true that I can be mean to others.

People who mess with me always regret it.

I have never gotten into trouble with the law. (R)

I enjoy having sex with people I hardly know

I'll say anything to get what I want.

Table 6 Items from AQ-10 (SD3) (Allison et al., 2012). R= reverse coded items.

I often notice small sounds when others do not

I usually concentrate more on the whole picture, rather than the small details (R)

I find it easy to do more than one thing at once (R)

If there is an interruption, I can switch back to what I was doing very quickly (R)

I find it easy to 'read between the lines' when someone is talking to me (R)

I know how to tell if someone listening to me is getting bored (R)

When I'm reading a story I find it difficult to work out the characters' intentions

I like to collect information about categories of things

(e.g. types of car, types of bird, types of train, types of plant etc)

I find it easy to work out what someone is thinking or feeling just by

looking at their face (R)

I find it difficult to work out people's intentions

Table 7 Descriptive results for items concerning the methodological role of intuition. Results for both the current study and a previous study, Kuntz and Kuntz (2011), are included to allow comparison. The column headed 't-test' indicates the results of a one-sample t-test comparing the observed mean to midpoint of the scale. The columns headed 'Agree' indicate the proportion of participants who gave a response above the mid-line and thus indicated that they 'Agree' with the relevant item.

Kuntz & Kuntz			Current Study			
Item	Mean	Agree	Mean	$_{ m SE}$	t-test	Agree
INT1	3.82	51%	4.10	.128	t(217) = .79, p = .430	51.8%
INT2	5.26	83%	5.06	.103	t(217) = 1.38, p < .001	73.4%
INT3	2.95	30%	3.28	.123	t(217) = 5.84, p < .001	29.8%
INT4	4.04	57%	4.06	.121	t(217) = .53, p = .595	45.0%

 $\textbf{Table 8} \ \ \text{Descriptive results for questions concerning the centrality of philosophical subareas as categorized by Philosophical subareas as categorized by Philosophical subareas and standard errors are provided. The lowest possible score was 1 (Peripheral) and the highest 7 (Central). }$ 

0.16.11	Nonphilosophers		Philosophers	
Subfield	Mean	$\overline{\text{SE}}$	Mean	SE
17th and 18th Century Philosophy	5.13	0.116	4.64	0.109
19th Century Philosophy	5.22	0.113	4.38	0.105
20th Century Philosophy	5.11	0.123	5.30	0.092
Aesthetics	4.93	0.132	4.35	0.122
African/Africana Philosophy	4.35	0.134	2.96	0.109
Greek and Roman Philosophy	5.61	0.122	4.78	0.111
Applied Philosophy	5.47	0.123	4.49	0.110
Asian Philosophy	5.05	0.109	3.38	0.111
Continental Philosophy	5.41	0.106	4.10	0.124
Epistemology	5.93	0.103	6.12	0.078
European Philosophy	5.45	0.109	4.51	0.112
Logic and Philosophy of Logic	5.94	0.108	5.42	0.103
Medieval and Renaissance Philosophy	5.03	0.123	3.81	0.105
Metaethics	5.85	0.115	5.23	0.101
Metaphilosophy	6.04	0.110	4.83	0.113
Metaphysics	6.45	0.084	5.89	0.090
Normative Ethics	5.19	0.134	5.48	0.103
Philosophy of action	5.23	0.112	4.57	0.105
Philosophy of Biology	3.73	0.137	4.22	0.102
Philosophy of Cognitive Science	4.75	0.125	4.38	0.110
Philosophy of computing and information	2.47	0.139	3.53	0.109
Philosophy of gender, race, and sexuality	4.95	0.138	3.77	0.121
Philosophy of language	5.17	0.123	5.44	0.098
Philosophy of Law	5.37	0.122	4.09	0.109
Philosophy of mathematics	3.78	0.153	4.36	0.107
Philosophy of mind	6.48	0.068	5.59	0.094
Philosophy of physical sciences	3.75	0.153	4.65	0.105
Philosophy of probability	4.15	0.149	3.82	0.109
Philosophy of religion	5.46	0.158	3.84	0.120
Philosophy of social sciences	4.29	0.148	4.30	0.108
Philosophy of the Americas	4.44	0.140	2.83	0.112
Social and political	5.04	0.143	5.49	0.095

**Table 9** Descriptive results for personality trait scores. Means and standard errors are provided. The scores are average scores across a number of items rated on a seven-point scale (1-7).

D 111 TT 11	Nonphi	ilosophers	Philosophers	
Personality Trait	Mean	$\overrightarrow{\text{SE}}$	Mean	SE
AQ10	4.25	0.045	3.36	0.047
MACH	3.81	0.081	3.64	0.059
NARC	3.58	0.05	3.64	0.055
PSYC	3.05	0.062	2.69	0.054
EXTR	4.17	0.063	3.7	0.099
AGR	4.26	0.071	4.35	0.075
CONS	4.06	0.064	5.11	0.085
EMOT	4.31	0.065	4.39	0.096
OPEN	4.32	0.077	5.41	0.067

**Table 10** Factor loadings for centrality items entered into PAF factor analysis using direct oblimin ( $\delta = 0$ ). Values less than 0.4 are suppressed for readability.

	HIST	SCIE	TRAD	APPL
17th/18th	.801			
19th	.797			
greek and roman	.687			
european	.637			
medieval	.615			
continental	.578			
20th	.551			
physicalscience		.858		
maths		.737		
biology		.707		
computing		.591		
probability		.589		
cognitive		.494		
socialscience		.481		
metaethics			.584	
$\operatorname{mind}$			.560	
action			.543	
epist			.531	
metaphysics			.529	
ethics			.496	
americas				.793
African/Africana Phil.				.761
asian				.634
applied				.501
gender,race,sexuality				.498

Table 11 Factor loadings for personality scale scores entered into PAF factor analysis using direct oblimin ( $\delta=0$ ). Values less than 0.4 are suppressed for readability.

	M&P	C&O	N&E
MACH	.942		
PSYC	.634		
AQ10		603	
CONS		.583	
OPEN		.543	
NARC			.561
EXTR			.510

Fig. 1 Plot showing philosophers' (blue) and nonphilosophers' (green) mean centrality ratings (diameter of circle) of thirty-two subdisciplines of philosophy compared to two proxy measures of objective centrality (Volume of Publications and Number of Events). The three lines are included to aid interpretation. The vertical line illustrates the number of publications expected per subfield if divided equally. The horizontal line illustrates the number of events expected per subfield if divided equally. The diagonal line passes through their intersection (the point at which a subfield has no more or no less events or publications than if both were distributed equally among subfields) and through the point representing the maximum possible score on both proxy ratings (at which all events and publications are in a single discipline). Subfield names abbreviated, see Table 8 for full names.

