

Scepticism About Virtue and the Five-Factor Model of Personality

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Panos Paris

INTRODUCTION

Despite considerable progress in personality psychology, ‘anxiety about whether the psychological theory presupposed by virtue ethics is empirically sustainable’¹ perseveres. Here, I employ the five-factor model of personality, currently the consensus view in personality psychology, to respond to a strong reading of the situationist challenge, whereby most people lack dispositions that are both cross-situationally consistent and temporally stable. To this end, I begin by outlining the version of the situationist challenge which, unlike weaker versions, I take to constitute a genuine threat to virtue-theoretical thought. Squarely facing this challenge, I suggest, is a task for empirical psychology. I therefore turn to introduce the five-factor model of personality, presenting a breadth of supporting evidence, while also addressing certain worries it raises; I argue that the five-factor model of personality dissolves a strong reading of situationism by showing that the evidence supports the empirical adequacy of such traits as are required for virtue ethics to take off, and that situationism relies on a false dichotomy between character traits and situations. I then turn to dispel certain worries and offer certain considerations to the conclusion that

¹ L. Olin and J. M. Doris, ‘Vicious Minds’, *Philosophical Studies* 168 (2014), pp. 665-692, at 665.

the five-factor model may yet vindicate virtue ethics, so that philosophers interested in virtue theory, and especially virtue ethics,² should take it seriously indeed.

I. THE STRONG SITUATIONIST CHALLENGE AND VIRTUE ETHICS

Situationists claim that virtue ethics, in construing virtues as global dispositions, relies on an empirically inadequate descriptive framework.³ Philosophical situationism owes largely to works by John Doris and Gilbert Harman. While I concentrate on Doris' articulation of the challenge, I am interested here in Harman's somewhat more scathing conclusions, since it is these that I think truly threaten virtue ethics.

Doris' central contentions are the following. First, the function of trait attributions consists in allowing us to (a) *interpret, explain, predict*, and (b) *manipulate* behaviour, and presumably the inner states from which it flows. This is plausible: we attribute courage to explain Alex's jumping into the burning building to save his friend; if we had known Alex and believed that he was courageous, we might have expected him to do so; and we think that his behaviour owes partly to good upbringing and summers spent as a lifeguard.

² I concentrate on 'virtue ethics' as opposed to virtue theory in general, although most of what I have to say applies, *mutatis mutandis*, to any ethics which presupposes character traits saliently like those presupposed by virtue ethics.

³ In this paper I focus on situationism as a philosophical, as opposed to psychological, position. Whereas situationist psychologists, such as Ross and Nisbett in L. Ross and R. E. Nisbett, *The Person and the Situation* (New York, 1991), posit the primacy of situations in explaining behaviour on the basis of experimental evidence, philosophical situationists, such as Doris in e.g. J. M. Doris, *Lack of Character* (Cambridge, 2002) and Harman in e.g. G. Harman, 'Moral Philosophy Meets Social Psychology: Virtue Ethics and the Fundamental Attribution Error', *Proceedings of the Aristotelian Society* 99 (1999), pp. 315-331, concentrate on the implications of such work in psychology for philosophical theories like virtue ethics.

Second, that character traits can perform the aforementioned functions partly owes to the fact that they are understood as *global* dispositions. This is key in Doris' argument, since this is how character traits, including the virtues and vices, are standardly understood in moral psychology and virtue theory.⁴ As dispositions, traits can roughly be couched in terms of conditionals, such as '[i]f a person possesses a trait, that person will engage in trait-relevant behaviours in trait-relevant eliciting conditions with markedly above chance probability p.'⁵ Doris understands *globalism* (viz. the view that there are character traits that are global) – something presupposed by virtue theory – as the thesis that there are character traits meeting the following criteria:⁶

(i) *Cross-situational consistency*: are manifested consistently over a range of different situations that may vary widely in their conduciveness to the trait's manifestation.

(ii) *Temporal stability*: yield consistent behaviour over iterations of similar situations.

(iii) *Evaluative integration*: the occurrence of a given trait with a certain evaluative valence, should be probabilistically (positively) related to other, similarly valenced traits.

Consequently, according to Doris, if these conditions are belied by empirical observation, then the psychology presupposed by virtue ethics is empirically wanting. In fact, evidence suggests that people behave differently in different trait-relevant circumstances that call for

⁴ I shall ignore differences between 'character' and 'personality' traits since I take the situationist challenge, under the strong interpretation which I will presently develop, to pertain, as Doris puts it, 'not so much [to] what distinguishes character and personality traits as what they have in common: behavioral consistency as the primary criterion of attribution' (Doris, *Lack of Character*, p. 20).

⁵ Doris, *Lack of Character*, p. 19.

⁶ See Doris, *Lack of Character*, p. 22.

similar behaviour;⁷ for instance, people might cheat in one subject but not another, or lie among colleagues but not family members.⁸ Moreover, people's behaviour is heavily influenced by (morally) irrelevant and arbitrary factors, like the presence of authority figures, as in Milgram's obedience studies, where the vast majority of subjects administered shocks that, for all they knew, were deadly.⁹ More subtle, often unconscious factors, including one's mood, others' presence, and cognitive biases, also influence behaviour;¹⁰ for instance, helping behaviour is shown to vary with things like finding a dime,¹¹ or being in a hurry when chancing upon one in need.¹²

Citing an impressive number of experiments, Doris concludes that '[s]ystematic observation typically fails to reveal the behavioral patterns exhibited by globalism; *globalist conceptions of personality are empirically inadequate*'.¹³ This is because, '[i]f dispositional structures were typically so robust as familiar conceptions of character and personality

⁷ See Doris, *Lack of Character*, ch. 4 and R. M. Adams, *A Theory of Virtue: Excellence in Being for the Good* (Oxford, 2007), ch. 8.

⁸ See H. Hartshorne and M. A. May, *Studies in the Nature of Character, Volume I: Studies in Deceit* (New York, 1928).

⁹ S. Milgram, 'Behavioral Study of Obedience', *The Journal of Abnormal and Social Psychology* 67 (1963), pp. 371-378.

¹⁰ C. Miller, 'Social Psychology, Moods, and Helping: Mixed Results for Virtue Ethics', *The Journal of Ethics* 13 (2009), pp. 145-173.

¹¹ A. M. Isen and P. F. Levin, 'Effects of Feeling Good on Helping: Cookies and Kindness', *Journal of Personality and Social Psychology* 21 (1972), pp. 384-388.

¹² J. M. Darley and D. C. Batson, 'From Jerusalem to Jericho: A Study of Situational and Dispositional Variables in Helping Behavior', *Journal of Personality and Social Psychology* (27), pp. 100-108.

¹³ Doris, *Lack of Character*, p. 23.

[suggest], insubstantial factors would not so frequently have such impressive effects.¹⁴ According to situationists, then, evidence shows situations to be better *predictors* and *explanans* of people's behaviour than character traits, thereby undermining both the grounds for thinking that people possess global traits and the utility of trait discourse. This, I think, is the situationist claim in a nutshell.

But since, as Doris acknowledges, (i) through (iii) are logically independent of one another, different readings of the situationist claim are possible. On one reading, situationism denies that most people have traits meeting all three globalist conditions. This reading is weak because, put together, (i) through (iii) essentially make the situationist target the virtues themselves. Finding people whose character traits satisfy (i) through (iii) is tantamount to identifying highly virtuous people; hence in attacking globalism as construed above one would only be undermining the claim that people typically are virtuous. Now, if situationists only denied the widespread existence of virtue, that would amount to a trivial claim already acknowledged by Aristotle.¹⁵ I think that it is largely (iii) that leads to this conclusion, for, roughly, it implies an expectation to the effect that people are either good or bad, since it claims that virtues are mutually dependent. But (iii) is not even universal among virtue theorists, many of whom try to dampen it or reject it outright.¹⁶ Though there are defenders of the thesis, I take it that (iii) is not indispensable for virtue ethics. Doris himself seems to concede as much in considering evaluative integration as less important for his project than other criteria, as suggested by his remarks that it is an 'elusive target

¹⁴ Doris, *Lack of Character*, p. 28.

¹⁵ Aristotle, *Nicomachean Ethics*, trans. W. D. Ross (Oxford, 1998), pp. 34-35.

¹⁶ See e.g. G. Sreenivasan, 'Disunity of Virtue', *The Journal of Ethics* 13 (2009), pp. 195-212 and Adams, *A Theory of Virtue*, ch. 10.

for empirical attacks',¹⁷ and his acknowledgement that it is 'less prominent in personality psychology ... and ... has been the object of suspicion' even in character ethics.¹⁸

If I am right to think that a conclusion to the effect that there are few virtuous people, perhaps none in the random samples used in empirical psychology, would hardly be surprising and so would be a rather trivial finding, this cannot be what situationists have in mind. For it fails to do justice both to their insistence on the force of their conclusions, and the pervasiveness of situationism in the literature.

In light of the foregoing, I propose to drop the third requirement, viz., evaluative integration, and revise the notion of a *global character trait* as a *cross-situationally consistent and stable disposition* to behave in a way *predictable and explicable by reference to the relevant trait*. Unless otherwise specified, this is what I shall henceforth mean by 'globalism', or 'global' disposition or character trait. This, I think, is the real target of situationist attacks on the empirical adequacy of virtue-theoretical trait discourse.

Of course, doing away with the requirement of evaluative integration does not preclude the situationist challenge from sliding between targeting global dispositions and targeting the virtues themselves.¹⁹ Still, the point of the present discussion is that a situationism truly pernicious to virtue ethics would not just undermine the widespread existence of

¹⁷ Doris, *Lack of Character*, p. 22.

¹⁸ Doris, *Lack of Character*, p. 23.

¹⁹ Although, as I have suggested, it is not the widespread existence of the virtues and vices *per se* that is best seen as the main situationist target, occasional remarks in the debate seem to invite such a reading, such as Doris' comment that the exceptions to situationist findings in experiments such as those mentioned above only 'prove the rule' (*Lack of Character*, p. 60). Moreover, more often than not, situationists will remain silent concerning the few subjects who, for instance, do stop to help while in a hurry, refuse to administer shocks, help whether or not they find a dime, and so on.

virtues and vices, but also the widespread existence of the psychological resources required for the development of virtue itself, a ground which we take for granted to the extent that we encourage and promote the virtues. If such a basis is poorly supported by our best empirical knowledge or, worse, undermined by it, then it would seem that the projects just mentioned are futile.²⁰ Situationism, as I understand it, denies the claim that most people are capable of virtue, not the claim that most people are virtuous.²¹ That these are different claims can be seen by the difference between suggesting that most people lack the cognitive structure required to pursue a career in science, and denying that most people actually do pursue such a career. The latter is, of course, trivial. The reason, moreover, why people are such poor candidates for virtue is that their psychology, in lacking the relevant kinds of dispositions, does not readily support traits of the kind that the virtues are sup-

²⁰ J. Sabini and M. Silver, 'Lack of Character? Situationism Critiqued', *Ethics* 115 (2005), pp. 535-562, especially at 537, 545, 561-561, also seem to suggest that this is the only pernicious reading of situationism.

²¹ Since Doris' and Harman's challenges appeared, situationism has developed, so it is important to bear in mind that I am not, and cannot here refute all versions of the challenge. Recently, for instance, M. W. Merritt, J. M. Doris and G. Harman, 'Character', *The Moral Psychology Handbook*, ed. J. M. Doris and The Moral Psychology Research Group (Oxford, 2010), pp. 355-392, took issue not with people's lack of cross-situational consistency and temporal stability of traits, which they claim is no longer 'much in dispute' (358). Instead, Merritt et al. targeted the assumption that the conception of practical rationality built into certain Aristotelian conceptions of virtue ethics is empirically viable. Though this is an important question in its own right, I think that my arguments here leave it open for the most part. For the question of whether there exist global traits (understood as traits meeting conditions (i) and (ii) above) is largely orthogonal to whether or not such traits are the result of (conscious) practical reasoning, or largely unconscious affective-cognitive dispositions.

posed to be.²² In other words, on the strong reading of situationism, people typically not only lack the virtues, but the kind of character traits required for virtues and vices to develop (and so for virtue ethics to take off), i.e., lack traits meeting both (i) and (ii). While these readings are rarely distinguished, I think that a lot hangs on this distinction.

The argument against virtue ethics, imbued with the strong reading just outlined, is the following:

(1) Virtue ethics is a descriptively adequate theory only if there are widespread global traits (i.e., both *temporally stable* and *cross-situationally consistent dispositions* to behave in ways *predictable and explicable by reference to the relevant traits*).

(2) There are no such global traits that are widespread.

(3) Thus, virtue ethics is a descriptively inadequate theory.²³

Harman seems to argue thus when he says that if ‘there is *no such thing as a character trait* and we know that virtue *would require having character traits ... there is nothing one*

²² This claim, in turn, can be understood in different ways. It may be that global traits are psychologically impossible. However, since situationist arguments rely on experiments in empirical psychology, it is unclear how these could establish psychological impossibility. Alternatively, it may be that human psychology, for the most part, is infertile soil for the cultivation of global traits, since most people lack global traits. But since virtues and vices are global traits, most people lack the psychological resources for virtue.

²³ Compare: ‘(1) If behavior is typically ordered by robust traits, systematic observation will reveal pervasive behavioral consistency. (2) Systematic observation does *not* reveal pervasive behavioral consistency. (3) Behavior is *not* typically ordered by robust traits’ (Merritt, Doris and Harman, ‘Character’, pp. 355-392, at 357-358).

can do to acquire character traits that are ... like those possessed by a virtuous agent'.²⁴ This conclusion is also implied in Doris' response to Adams' theory of virtue, which is designed to sidestep the situationist challenge. Adams construes virtues modularly, modules being 'local' dispositions acquired and manifested in specific contexts, e.g. the household, office, neighbourhood, etc.²⁵ These can then be combined to yield dispositions that constitute 'genuine ... virtue[s]'.²⁶ Doris, however, questions whether the volitional and intellectual strength required for assembling global dispositions resembling virtues out of local ones is anything short of extraordinary, given situationist evidence.²⁷ If Doris' scepticism here is warranted, and not question-begging, it must question the widespread existence, not just of virtues, but of global traits in the sense of cross-situationally consistent and stable dispositions altogether.²⁸ This kind of scepticism runs deeper than virtue ethicists have delved; but insofar as situationist evidence renders this interpretation psychologically feasible, it shifts the burden of proof to virtue ethicists.

This reading of situationism is deeply troubling, for not only does it undermine Adams' account, but also weakens other available virtue-ethical responses, since virtually all discussions of character as comprising virtues and vices presuppose that the widespread existence of temporally stable and cross-situationally consistent dispositions is empirically viable. Unless this assumption is validated, then, such discussions are treading on it as though situationism was never an option; but this is dubious and question-begging.

²⁴ G. Harman, 'The Nonexistence of Character Traits', *Proceedings of the Aristotelian Society* 100 (2000), pp. 223-226, at 224 (emphasis added).

²⁵ Adams, *A Theory of Virtue*, pp. 126-131.

²⁶ Adams, *A Theory of Virtue*, p. 127.

²⁷ J. Doris, 'Heated Agreement: Lack of Character as Being for the Good', *Philosophical Studies* 148 (2010), pp. 135-146, at 138-139.

²⁸ Compare Sabini and Silver, 'Lack of Character?'

To illustrate, consider two plausible objections to situationism. One might charge situationists with relying on a false dichotomy between situations and traits, insofar as they mistakenly seek to explain behaviour as largely an either/or affair between these two variables. To support this claim, one may appeal to philosophers like Aristotle who construe virtues relationally,²⁹ namely as sensitive to concrete situational features.³⁰ Situationist evidence, then, only undermines an intrinsic conception of traits, whereby virtues' particular manifestations would, to a considerable extent, be predictable and explicable without reference to circumstantial considerations. But, first, such a response presupposes that there are global traits, while, second, whether or not character traits are relational is an empirical question. In the next section, I shall be corroborating both of these claims.

²⁹ See Aristotle, *Nicomachean Ethics*, e.g. p. 38.

³⁰ This approach to traits echoes the CAPS approach (see e.g. W. Mischel and Y. Soda, 'A Cognitive-Affective System Theory of Personality: Reconceptualizing Situations, Dispositions, Dynamics, and Invariance in Personality Structure', *Psychological Review* 102 (1995), pp. 246-268), which, according to C. Miller, *Character and Moral Psychology* (Oxford, 2014), ch. 5, provides a sophisticated framework for our folk-psychological trait discourse, and has recently been employed by philosophers building their own, empirically-informed theories of virtue, as witness D. Russell, *Practical Intelligence and the Virtues* (Oxford, 2009) and N. Snow, *Virtue as Social Intelligence: An Empirically Grounded Theory* (New York, 2009). Although I take what I say here to be compatible with such views, my aim is not to construct a new theory of character traits, but rather to rely on current personality psychology to undermine situationism, on the one hand, and possibly rekindle trust in virtue ethics. The CAPS model itself is compatible with the five-factor model discussed below, and often thought to simply elucidate different aspects of personality rather than articulate a distinct conception of traits (see D. P. McAdams and B. D. Olson, 'Personality Development: Continuity and Change Over the Life-Course', *Annual Review of Psychology* 61 (2010), pp. 517-542). Much of what I say here, then, will predictably be compatible with that view.

Alternatively, one might argue that situationists' conclusions are unwarranted. Sosa argues that situations influence virtually all practical competences, without this warranting scepticism about such competences.³¹ Psychologists' findings no more threaten virtue than practical competence altogether, insofar as virtue depends on practical wisdom, or *phronêsis*, which structurally parallels practical competences. Sosa's example is driving competence which, he suggests, is influenced by numerous factors, including blood-alcohol levels, mobile-phone use, tiredness, etc. Discovering the influence of each of these on driving may have come as a surprise, but none resulted in scepticism about driving competence. By analogy, psychologists' findings shouldn't be taken to warrant situationism, albeit they should alert us to blindspots to *phronêsis*.

But imagine a situation where wheels sometimes don't turn, brake hydraulics only occasionally function, roads aren't fixed, rules are interpreted arbitrarily, etc. Were it so, driving competence would be superhuman. Indeed, although things aren't half as bad, it's necessary to regulate driving environments, like most environments wherein people manifest competences, through laws, fines, surveillance, etc. Consequently, driving is a highly circumscribed and controlled activity. To assume that things are, or could be, similarly ordered in morally-salient environments, however, presupposes that people, by and large, have global dispositions.

While I think that such arguments do much to address the normative and conceptual threats posed by situationism, they cannot show that, as a matter of fact, most people have anything resembling global dispositions. Unless this is shown, however, responses proceeding on the assumption that the virtues can be cultivated and possessed by ordi-

³¹ E. Sosa, 'Situations Against Virtues: The Situationist Attack on Virtue Theory', *Philosophy of the Social Sciences: Philosophical Theory and Scientific Practice*, ed. C. Mantzavinos (Cambridge, 2009), pp. 274-290.

nary people remain open to scepticism, since they invariably presuppose the widespread possession of global dispositions. There is one clear way of supporting this assumption, however, and this is to show that, as a matter of fact, people have character traits understood as (i) cross-situationally consistent and (ii) stable dispositions, which are (a) useful in the interpretation, explanation, and prediction of their behaviour and are (b) manipulable. These claims must be established if it is at all plausible that people have traits that can be shaped into virtues and vices. In the next section, I turn to empirical psychology to support (a), offering evidence for the claim that people possess the relevant dispositions. In section III, I address (b) and offer further considerations to corroborate the claim that the relevant character traits seem highly promising for refurbishing a virtue ethics.

II. THE FIVE-FACTOR MODEL OF PERSONALITY

The five-factor model of personality (FFM) is currently the consensus view in personality psychology.³² In this section I argue that it counters the situationist challenge to virtue ethics by showing that there are global traits that are situation-sensitive. Hence, situationists rely on a false dichotomy. Moreover, such traits, according to the evidence, correlate

³² See D. Nettle, *Personality* (Oxford, 2007), p.30. See also Miller, *Character and Moral Psychology*, p. 130 (including notes) for numerous references to the same effect.

with observable and predictable behavioural patterns, thereby undermining situationist scepticism about the existence of global dispositions.³³

FFM: Basic Features

Most personality psychologists today acknowledge at least five personality dimensions, known as *Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism*, conceived of as continua along which all individuals vary.³⁴ An individual's personality (partly) comprises one's traits, i.e. one's levels along each dimension. While not purporting to exhaust trait structure, the FFM identifies the broadest yet informative dimensions of human personality. These psychologists call 'factors', distinguishing them from 'facets' which are more fine-grained dimensions clustered under each factor, and yield a richer picture of personalities.³⁵ *Neuroticism*, for instance, clusters facets *anxiety, depression, anger, self-consciousness, impulsiveness, and vulnerability*, while *Agreeableness* com-

³³ Compare E. Jayawickreme et al., 'Virtuous States and Virtuous Traits: How the Empirical Evidence Regarding the Existence of Broad Traits Saves Virtue Ethics from the Situationist Critique', *Theory and Research in Education* 12 (2014), pp. 283-308, who also offer a favourable assessment of the FFM's prospects in addressing situationism, focusing on the model of traits as density distributions, developed by W. Fleeson, 'Toward a Structure- and Process-Integrated View of Personality: Traits as Density Distributions of States', *Journal of Personality and Social Psychology* 80 (2001), pp. 1011-1027.

³⁴ Debate is ongoing concerning whether more dimensions should be added. For example, the HEXACO model is like FFM with the addition of 'honesty/humility'. See, e.g. M. C. Ashton and K. Lee, 'Honesty-Humility, the Big Five, and the Five-Factor Model', *Journal of Personality* 73 (2005), pp. 1321-1354 and G. Saucier, 'Recurrent Personality Dimensions in Inclusive Lexical Studies: Indications for a Big Six Structure', *Journal of Personality* 77 (2009), pp. 1577-1614.

³⁵ R. McCrae, 'The Place of the FFM in Personality Psychology', *Psychological Inquiry* 21 (2010), pp. 57-64, at 59.

prises *trust, straightforwardness, altruism, compliance, modesty, and tender-mindedness*.³⁶

The following table overviews each dimension's general characteristics. From the left, the first column introduces the factor's name, the second its target cognitive-affective domain, and the remaining ones adjectives describing general tendencies associated with traits on the polar (though not extreme) levels of each factor's continuum.³⁷

Factor	Target	High	Low
<i>Extraversion</i>	responsiveness to reward	outgoing, enthusiastic	aloof, quiet
<i>Neuroticism</i>	responsiveness to threat	easily stressed, worried	emotionally stable
<i>Conscientiousness</i>	response inhibition, practical reasoning	organised, self-directed	spontaneous, careless
<i>Agreeableness</i>	regard for others	trusting, empathetic	uncooperative, hostile
<i>Openness</i>	breadth of mental associations	creative, imaginative, eccentric	practical, conventional

FFM traits are global dispositions, i.e. cross-situationally consistent and temporally stable dispositions to behave (and otherwise respond) in a way *predictable and explicable by reference to the relevant trait*. Importantly, however, the behaviours and cognitive-affective responses associated with them vary with situations. In one psychologist's words, FFM traits, in terms of their basic mechanism, are activated 'by a particular class of situations (you are in danger), and they facilitate a particular set of responses (increases in heart rate, adrenaline and vigilance, desire to leave, and so on). ... Thus, ... a strong predictor

³⁶ P. T. Costa and R. McCrae, 'Domains and Facets: Personality Assessment Using the Revised NEO Personality Inventory', *Journal of Personality Assessment* 64 (1995), pp. 21-50, at 28.

³⁷ Table adapted from Nettle, *Personality*, pp. 28, 209.

of whether [anyone] will be afraid at a given moment or not is whether they are, for example, in a medium-sized cage with a wild bear.³⁸ So not only is referring to situations necessary to explain trait-relevant responses, but situations can outweigh trait tendencies. There is therefore no counterexample to trait attribution in the depressed found rejoicing in life, or the recluse fervently socialising, if one won the lottery, and the other's daughter just graduated.

That said, people's lives carve highly characteristic patterns, both observable and predictable upon trait attribution. According to psychologists, such patterns are identifiable both within situations, and throughout whole lives.³⁹ Not only do people's responses in different circumstances vary with their traits; traits can also predict the kinds of situations people are likely to choose, regularly find themselves in, and engender through trait-relevant behaviours.⁴⁰ Someone low in *Extraversion*, for instance, will generally avoid crowded events and often get angry at people. This will probably result in awkward social encounters, potentially involving unpleasant confrontations, etc. Someone high in *Neuroticism* will often worry about one's performance, behaviour, etc., living in anxiety, stress, and possibly periods of depression; others are likely to see such a person as sensitive and emotional, perhaps avoiding too many frequent encounters with her or him, as these can be unpleasant. Jointly, I think, the foregoing considerations offer considerable plausibility to the suggestion that FFM traits are both cross-situationally consistent and temporally stable, a claim which shall receive further support from the evidence for the FFM trait structure I discuss later. After all, an important test to whether or not a trait meets the criteria of cross-situational consistency and temporal stability is whether or not it enables one to make a

³⁸ Nettle, *Personality*, p. 41.

³⁹ Nettle, *Personality*, pp. 6-9.

⁴⁰ D. M. Buss, 'Selection, Evocation and Manipulation', *Journal of Personality and Social Psychology* 53 (1987), pp. 1214-1221.

wide range of confident predictions and offer apt explanations for such behaviours as can reasonably be expected on, and be explained by, attributing that trait.

FFM: Worries and Support

Psychologists arrived at the FFM via two routes. First, the lexical approach, which involves collecting trait terms from ordinary language, grouping them, and eliminating redundancies.⁴¹ Second, through questionnaires distributed to subjects asked to assess themselves on characteristic behaviours, such as how easily they are stressed or scared, how attracted they are to complex artworks, how keenly they attend crowded events, etc. Results are then entered into factor analyses. Questionnaire studies have been conducted in several languages, numerous replicated, and participants' responses compared to ratings acquired from acquaintances, friends and partners. Different raters' results and replications have yielded high correlations, generally well above .5, suggesting concurrence. Longitudinal studies have also been conducted, with participants retaking tests sometimes over the course of several years. For instance, one longitudinal study where participants' and acquaintances' personality reports were collected over twelve years found correlations between reports ranging from .65 to .85, which is highly significant.⁴² Factor analyses of such data, moreover, consistently yield five domains with highly significant correlations, i.e., the FFM factors.⁴³

⁴¹ O. P. John, A. Angleitner and F. Ostendorf, 'The Lexical Approach to Personality: A Historical Review of Trait Taxonomic Research', *European Journal of Personality* 2 (1988), pp. 171-203.

⁴² P. T. Costa, R. McCrae and D. Arenberg, 'Enduring Dispositions in Adult Males', *Journal of Personality and Social Psychology* 38 (1980), pp. 793-800.

⁴³ Nettle, *Personality*, pp. 27-32.

Despite the FFM's attractiveness, however, many philosophers have emphasised methodological concerns.⁴⁴ One feature philosophers object to is the use of aggregate data both in factor analyses and when examining relations between traits and behaviours.⁴⁵ This is standardly done in quantitative psychology, on the assumption that single measures cannot inform us about people's dispositions, or predict behaviours, any more than one's score on a single school test predicts future performance. Performance over one year, by contrast, better predicts performance over the next one, *ceteris paribus*.⁴⁶ This is partly because individual measurements are liable to errors, which aggregations can largely correct for. Unsurprisingly, while single measurement correlation

⁴⁴ For philosophical objections to the FFM, see: Doris, *Lack of Character*, pp. 67-71; J. J. Prinz, 'The Normativity Challenge: Cultural Psychology Provides the Real Threat to Virtue Ethics', *The Journal of Ethics* 13 (2009), pp. 117-144, at 120-122; C. Miller, *Character and Moral Psychology*, ch. 6; C. Miller, 'Lack of Virtue and Vice: Studies in Aggression and their Implication for the Empirical Adequacy of Character', *Oxford Studies in Normative Ethics Vol. 4*, ed. M. Timmons (Oxford, 2015), pp. 80-112. M. Alfano, *Character as Moral Fiction* (New York, 2013), pp. 52-53 basically dismisses it as irrelevant to virtue ethics within two pages. However, in his more recent M. Alfano, *Moral Psychology: An Introduction* (Cambridge, 2016), pp. 130-132, Alfano is less pessimistic concerning the prospects for the FFM, suggesting that evidence for the model highlights the need to take personality into account if we are to offer any adequate explanation of human behaviour.

⁴⁵ See Doris, *Lack of Character*, pp. 71-75 and P. B. M. Vranas, 'Against Moral Character Evaluations: The Undetectability of Virtue and Vice', *The Journal of Ethics* 13 (2009), pp. 213-233, at 221-224.

⁴⁶ S. Epstein, 'The Stability of Behavior: I. On Predicting Most of the People Much of the Time', *Journal of Personality and Social Psychology* 37 (1979), pp. 1097-1126.

coefficients stagnate at approximately .30, which has come to be known as the 'personality coefficient',⁴⁷ aggregate measures often yield correlations well above that threshold.⁴⁸

But Doris thinks that using aggregate data overlooks an important function of traits, namely that they can predict behaviours even in one-off instances.⁴⁹ Ordinary character discourse hardly reflects such 'apathy'.⁵⁰ People ask: '*will* my partner *ever* cheat on me?', or '*will* the nanny molest my children on Tuesday?'.⁵¹ Ignoring such predictions is tantamount to abandoning a 'distinctive commitment' of virtue ethics, namely the assumption that even 'where the situational pressures toward moral failure are high, ... one can *confidently* predict what the virtuous person will not do'.⁵²

Now, unlike certainty, confidence comes in degrees; and whereas no reasonable psychologist pretends to know whether anyone will molest another anytime, she or he can confidently estimate the likelihood of such scenarios. Empirical investigation of the sort undertaken by most psychologists chiefly concerns general patterns, not isolated instances, which may be unique for all anyone knows.⁵³ The confidence of psychological predictions stems from knowledge of the person whose behaviour is predicted, which in turn comes from aggregated data, collected from reports and observations of behaviours. Ordinary people likewise infer from knowing others over time, and predict behaviours inductively. What we rely on psychologists to confirm is whether trait attributions ground con-

⁴⁷ W. Mischel, *Personality and Assessment* (New Jersey, 1996), p. 78.

⁴⁸ Nettle, *Personality*, pp. 44-45.

⁴⁹ Doris, *Lack of Character*, p. 74.

⁵⁰ Doris, *Lack of Character*, p. 73.

⁵¹ Doris, *Lack of Character*, p. 74.

⁵² Doris, *Lack of Character*, p. 74. This, by the way, seems to me to be another passage where it seems like the situationist challenge has moved from targeting global traits to virtues.

⁵³ Ross and Nisbett, *The Person and the Situation*, pp. 114-115.

fidest predictions. Thereafter, presumably those best acquainted with a person, using relevant knowledge, can most confidently predict how that person will respond under given circumstances. Still, their predictions will be powerful, not infallible. This is to be expected of imperfect creatures like ourselves, philosophical ideals notwithstanding.⁵⁴ And if virtue ethics is committed to working with a plausible descriptive psychology, it too will understand trait attributions to refer to general patterns and reasonably confident predictions.⁵⁵

Doris also objects that since questionnaires can say nothing about the behavioural efficacy of FFM traits, it remains unclear whether such traits relate to behaviours.⁵⁶

I have already suggested that one's close acquaintances are those who know one best. Their knowledge comes partly from past behaviours. Psychologists can in turn collect such data through questionnaires, which they can cross-examine and factor-analyse. And indeed, doing so appears to yield remarkably consistent results. Questionnaires moreover allow psychologists to conduct longitudinal studies, which Doris thinks are highly desirable, but hard to carry out.⁵⁷ So Doris' scepticism seems unwarranted, unless it concerns quantitative research in general; and that would be ill-advised given his own reliance on quantitative research to corroborate situationism.

Anyhow, while crucial for arriving at the FFM, establishment and corroboration thereof goes well beyond questionnaires and reports. By now, numerous studies have examined correlations between questionnaire results, and important behaviours and life out-

⁵⁴ See N. K. Badhwar, 'The Milgram Experiments, Learned Helplessness, and Character Traits', *The Journal of Ethics* 13 (2009), pp. 257-289.

⁵⁵ E.g. Adams, *A Theory of Virtue*, pp. 122-125 construes virtues probabilistically: more or less virtue concerns probabilities of exhibiting virtuous behaviour under given circumstances.

⁵⁶ See Doris, *Lack of Character*, pp. 67-72 and Prinz, 'The Normativity Challenge', p. 121.

⁵⁷ Doris, *Lack of Character*, p. 38.

comes. The FFM powerfully predicts, *inter alia*, marital satisfaction and divorce,⁵⁸ mortality,⁵⁹ as well as pathologies including addiction,⁶⁰ depression,⁶¹ and schizotypy.⁶²

In one longitudinal study, for instance, researchers tracked three-hundred couples for fifty-two years, comparing friends' ratings of subjects' personalities with data on their marriage state, and finding high *Neuroticism* and low *Conscientiousness* to powerfully predict unhappy relationships and divorces, whilst their contraries predicted lifelong, happy partnerships.⁶³ A similar longitudinal study showed low *Conscientiousness* to strongly predict early death,⁶⁴ while meta-analyses of studies on *Conscientiousness*' relation to mortality have found correlations of around .30,⁶⁵ which is remarkable considering both what is at

⁵⁸ E.g. E. L. Kelly and J. J. Conley, 'Personality and Compatibility: A Prospective Analysis of Marital Stability and Marital Satisfaction', *Journal of Personality and Social Psychology* 52 (1987), pp. 27-40.

⁵⁹ E.g. H. S. Friedman et al., 'Psychosocial and Behavioural Predictors of Longevity: The Ageing and Death of the 'Termites'', *American Psychologist* 50 (1995), pp. 69-78.

⁶⁰ E.g. W. S. Slutske et al., 'Personality and Problem Gambling: A Prospective Study of a Birth Cohort of Young Adults', *Archives of General Psychiatry* 62 (2005), pp. 769-775; J. D. Swendsen et al., 'Are Personality Traits Familial Risk Factors for Substance Use Disorders? Results of a Controlled Family Study', *American Journal of Psychiatry* 159 (2002), pp. 1760-1766.

⁶¹ D. Watson and L. A. Clark, 'Positive and Negative Affectivity and their Relation to Anxiety and Depressive Disorders', *Journal of Abnormal Psychology* 97 (1988), pp. 346-353.

⁶² R. J. Gurrera et al., 'The Five-Factor Model in Schizotypal Personality Disorder', *Schizophrenia Research* 80 (2005), pp. 243-251.

⁶³ Kelly and Conley, 'Personality and Compatibility'.

⁶⁴ Friedman et al., 'Psychosocial and Behavioural Predictors of Longevity'.

⁶⁵ T. Boggs and B. W. Roberts, 'Conscientiousness and Health-Related Behaviors: A Meta-Analysis of the Leading Behavioral Contributors to Mortality', *Psychological Bulletin* 130 (2004), pp. 887-919.

stake, and the great variety of factors that determine when one dies. While there may be competing explanations for these findings, given that low *Conscientiousness* involves irresponsible, uninhibited behaviour associated with addiction, impulsiveness, etc., the trait's behavioural efficacy is a safe bet.⁶⁶

The most recent method for studying FFM traits' behavioural efficacy is 'experience sampling'. Subjects are given a palm pilot or some equivalent, allowing them to describe their behaviours every few hours, often over several weeks. The instrument's interference is minimal, descriptions only taking a couple of minutes to complete. Results are then compared to participants' trait levels acquired from questionnaires completed by participants and their acquaintances. This method allows psychologists to examine not only general behavioural patterns, but also the extent to which FFM traits (both at the level of factors and facets) predict concrete behavioural sequences in agents' ordinary life, whilst additionally informing researchers about the frequency of trait-relevant behaviours, and how extreme such behaviours are. Studies of this type have thus far yielded highly significant correlations.⁶⁷

Data analysis from fifteen experience-sampling studies conducted over eight years, and comprising over twenty-thousand behavioural reports from around five-hundred partic-

⁶⁶ I should note that any correlations in the .30 ballpark mentioned in this section are not subject to the criticism that correlation coefficients for personality measures stagnate at around .30, which mainly concerns single item behavioural measures (as Doris, *Lack of Character*, p. 72 acknowledges), since the correlations cited herein concern meta-analytic results for predictions of major life outcomes (almost inevitably containing a wide range of results if they are any good), as well as moment-by-moment behavioural predictions. Questioning the importance of .30 correlations for such measures manifests insensitivity to our subject matter, namely human psychology.

⁶⁷ T. S. Conner et al., 'Experience Sampling Methods: A Modern Idiographic Approach to Personality Research', *Social and Personality Psychology Compass* 3 (2009), pp. 292-313.

ipants, returned reassuring correlations, confirmed by meta-analysis. The lowest, though still significant correlations, ranging from .18-.37, mostly exceeding .30, were between traits and single behaviours; given the possibility of error and the situation-sensitivity of FFM traits, this is unsurprising. Higher correlations were found between trait levels and trait-relevant behavioural extremes, ranging between .34-.54 for maximum and .22-.37 for minimum trait levels. The highest correlations, between .40-.56, were between trait levels and behavioural averages.⁶⁸ It is noteworthy that other experience-sampling studies have found correlations between trait levels and behavioural averages in the .7-.9 ballpark.⁶⁹ Very similar results have been acquired by more recent experience sampling studies which tested the foregoing measures across a number of different cultures,⁷⁰ as well as different age groups.⁷¹

Worries remain, of course, pertaining, for instance, to the honesty of participants; their perceptions of their own behaviours; and the fact that having a palm pilot makes them more self-conscious. But seen in conjunction with the foregoing evidence, and the fact that such evidence is growing, results from these studies provide strong support for the FFM personality structure and, *contra* Doris, suggest that FFM traits satisfactorily predict individuals' behaviours. Moreover, they suggest that FFM traits not only correlate positively

⁶⁸ W. Fleeson and M. P. Gallagher, 'The Implications of Big-Five Structure for the Distribution of Trait Manifestation in Behavior: Fifteen Experience-Sampling Studies and a Meta-Analysis', *Journal of Personality and Social Psychology* 97 (2009), pp. 1097-1114.

⁶⁹ Fleeson, 'Toward a Structure- and Process-Integrated View of Personality'.

⁷⁰ C. M. Ching et al., 'The Manifestation of Traits in Everyday Behavior and Affect: A Five-Culture Study', *Journal of Research in Personality* 48 (2014), pp. 1-16.

⁷¹ C. Wrzus, G. G. Wagner and M. Riediger, 'Personality-Situation Transactions from Adolescence to Old Age', *Journal of Personality and Social Psychology* July 13 (2015), no pagination specified.

with aggregates, nor do they only predict major outcomes, but can also, moderately but importantly, predict individual, moment-by-moment behaviours.

Psychology is not the only field validating the FFM. Findings in other disciplines confirm relevant theoretical hypotheses. First, since FFM dimensions are common to all humans, they are probably shaped by evolution and genetically heritable. Studies show that biological siblings, who share half of their genetic material that varies between human individuals, resemble each other in personality, whereas adoptive siblings brought up together no more resemble one another in personalities than random people. Identical twins, who are genetically identical, have highly similar personalities regardless of whether they are raised together or apart. Additionally, identical twins raised apart are more alike in personality than non-identical twins raised apart. Such findings suggest a genetic basis for FFM personality, and genetic variation is estimated to account for approximately half of the variation in personality.⁷²

Second, sophisticated evolutionary hypotheses are available. For example, Nettle proposes that human personality has evolved through fluctuating selection, arguing that both high and low levels on each factor would have conferred advantages and disadvantages depending on ancestral environments.⁷³ High *Neuroticism*, say, would have benefited individuals in environments swarming with predators and poor defence, because greater responsiveness to threat would have motivated flight from threats. Conversely, low *Neuroticism* would have allowed those in safer environments to improve their lives.⁷⁴

⁷² T. J. Bouchard and J. C. Loehlin, 'Genes, Evolution, and Personality', *Behavior Genetics* 31 (2001), pp. 243-273; T. J. Bouchard and M. McGue, 'Genetic and Environmental Influences on Human Psychological Differences', *Journal of Neurobiology* 54 (2003), pp. 4-45.

⁷³ Netter, *Personality*, pp. 69-70.

⁷⁴ Nettle, *Personality*, pp. 121-122; see also pp. 99-101, 151-152, 177-181, 201-207, where Nettle puts forward equally credible hypotheses for the fluctuating selection of the remaining traits.

Finally, if traits target affective-cognitive domains, they must tap into corresponding neurobiological mechanisms. Studies suggest that serotonin levels and activity in the amygdala and limbic system, which relate to responsiveness to threat, vary dramatically between people different in *Neuroticism* levels.⁷⁵ Similarly, differences in levels of *Extraversion* relate to the brain's reward systems' responsiveness;⁷⁶ while activity in the dorso-lateral prefrontal cortex, which partakes in response inhibition, varies with levels of *Conscientiousness*.⁷⁷ Likewise, differences in *Agreeableness* relate to variations in empathising levels,⁷⁸ as well as social-cognitive theory of mind functioning, which refers to the ability to make inferences about the content of others' mental states and to use the relevant beliefs to predict and explain behaviour.⁷⁹ Research has not yet identified mechanisms corresponding to *Openness*, but there is promising evidence in that direction, which suggests that very high levels of *Openness* relate to schizotypy.⁸⁰ Indeed, on all five factors,

⁷⁵ S Whittle et al., 'The Neurobiological Basis of Temperament: Towards a Better Understanding of Psychopathology', *Neuroscience and Behavioral Reviews* 30 (2006), pp. 511-525; D. Nettle, *Happiness: The Study Behind Your Smile* (Oxford, 2005), ch. 5.

⁷⁶ R. A. Depue and P. F. Collins, 'Neurobiology of the Structure of Personality: Dopamine Facilitation of Incentive Motivation, and Extraversion', *Behavioural and Brain Sciences* 22 (1999), pp. 491-517; T. Canli, 'Functional Brain Mapping of Extraversion and Neuroticism: Learning from Individual Differences in Emotion Processing', *Journal of Personality* 72 (2004), pp. 1105-1131.

⁷⁷ See Nettle, *Personality*, pp. 141-143.

⁷⁸ D. Nettle, 'Empathizing and Systematizing: What Are They, and What Do They Contribute to Our Understanding of Psychological Sex Differences?', *British Journal of Psychology* 98 (2007), pp. 237-255.

⁷⁹ D. Nettle and B. Liddle, 'Agreeableness is Related to Social-Cognitive, But Not Social-Perceptual, Theory of Mind', *European Journal of Personality* 22 (2008), pp. 323-335, at 325.

⁸⁰ Gurrera et al., 'The Five-Factor Model in Schizotypal Personality Disorder' and Nettle, *Personality*, pp. 191-193.

trait extremes relate to pathological conditions, again in line with predictions based on trait descriptions.⁸¹ Low *Conscientiousness*, for instance, is associated with addiction;⁸² high *Neuroticism* with depression and other psychiatric disorders,⁸³ and low *Agreeableness* with psychopathy.⁸⁴

Jointly, I think, the foregoing offer overwhelming support for the FFM, compelling us to accept the existence of the relevant traits.

Before proceeding to draw conclusions about the FFM's implications for situationism, however, I should say something about Miller's worries regarding the FFM's metaphysical status. Miller points to a debate among personality psychologists concerning whether the traits are mere summary labels, i.e., terms we use to describe general behavioural patterns, or causally efficacious psychological dispositions. Miller notes that, if the former, then these should '*not* [be] expected ... to reliably predict how a person will act from moment to moment'.⁸⁵ If interpreted as suggesting that the relevant predictions are fairly or moderately confident, then I think that the evidence sampled above, while inconclusive, does suggest an adequate degree of confidence in moment-by-moment predic-

⁸¹ Nettle, *Personality*, p. 70.

⁸² Slutske et al., 'Personality and Problem Gambling'; Swendsen et al., 'Are Personality Traits Familial Risk Factors for Substance Use Disorders?'

⁸³ G. Claridge and C. Davies, 'What's the Use of Neuroticism?', *Personality and Individual Differences* 31 (2001), pp. 383-400; D. Watson, W. Gamez and L. J. Simms, 'Basic Dimensions of Temperament and Their Relation to Anxiety and Depression: A Symptom-Based Perspective', *Journal of Research in Personality* 39 (2005), pp. 46-66.

⁸⁴ T. J. Harpur, S. D. Hart and R. D. Hare, 'Personality of the Psychopath', *Personality Disorders and the Five-Factor Model of Personality*, ed. P. T. Costa and T. A. Widiger (Washington DC, 1994), pp. 149-174.

⁸⁵ Miller, *Character and Moral Psychology*, p. 136 (emphasis in the original).

tions. This is most clear in the case of experience-sampling method studies and meta-analytic results which actually do measure momentary behavioural and affective responses, indicating that FFM traits do seem to predict moment-to-moment behaviours with some moderate confidence. It is important to note that such predictions are achieved without appeal to contextual considerations, which no doubt would enhance predictive power. For instance, if someone low in Extraversion is thrown into a party, we can be pretty confident that she will feel highly uncomfortable, even though most people in that situation would probably not feel that way. While this does not show FFM traits to be causally efficacious dispositions, it does detract from the plausibility of their construal as *mere* summary labels.

Of course, such data cannot establish metaphysical status. However, jointly with the findings linking FFM traits to neurobiological mechanisms, the plausible evolutionary hypotheses explaining the observable behavioural variability, and the genetic basis of these traits, the evidence should at least strengthen the plausibility of the suggestion that FFM traits are more than just summary labels. Moreover, I think that understanding FFM traits as causal dispositions will give us a much better backdrop against which we can develop psychological theories.

Thus, while perhaps any stronger claims here would be premature, what we can confidently say is that FFM traits can do a good deal more than what Miller expects of traits as mere summary labels.

FFM and Situationism

FFM personality traits are (1) universal, in the sense that everyone has a score along each dimension, hence everyone possesses such traits;⁸⁶ (2) global, i.e. temporally stable and cross-situationally consistent dispositions to respond cognitively-affectively, while most are also associated with characteristic behaviours. Finally, FFM traits do not yield characteristic responses irrespective of circumstances. Instead, they are (3) relational, i.e., a matter of where one's threshold lies for activation of certain cognitive-affective responses to certain types of object.

It follows from this construal of traits that situationists are setting up a false dichotomy. In construing prediction and explanation of behaviour as largely an either/or affair between character and situations, they are conceiving of traits as insensitive to circumstances, moods, and so on. Psychological evidence, however, shows this to be an inaccurate conception of traits, manifestation of which is situation-dependent.

Furthermore, people's lives carve *observable* and *predictable* patterns of behaviour and of affective-cognitive responses to situations. Since such patterns are in place, there

⁸⁶ This remark may require some clarification, for someone who has a mean score on a given dimension may be thought to not have a trait. For instance, consider the dimension of *Neuroticism*; someone may be on the high or low end; but someone may also be in the middle, thereby seeming to be neither neurotic nor the contrary. Hence, it may be said, such a person might appear to be trait-less at least *vis-à-vis Neuroticism*. But to think so would be a mistake. On the FFM (as on Aristotelian ethics) someone who has a mean score may be said to have an affective-cognitive disposition to behave, etc. in a way that lies somewhere in between those of the person who is very high and the one who is very low in *Neuroticism*. To illustrate, on pain of oversimplification, someone with a mean score on neuroticism, will probably be neither insensitive to all danger and threat (as someone exceptionally low might), nor interpret every difficulty as a hint of impending doom (as someone very high might). But this does not mean that one with the score in question would not be disposed (i.e., have a disposition) to respond in certain characteristic ways in trait-relevant situations, even if we lack a term for this trait.

are global character traits, and the FFM dissolves a strong reading of situationism. Moreover, situationism's claim that people's responses depend on situations is trivial given the relational conception of character traits, i.e., just what is expected of beings responsive to their surroundings.

III. THE FFM AND VIRTUE ETHICS

Further to the metaphysical worry mentioned above, Miller thinks that if the FFM includes traits understood as dispositions to form certain mental states, as are the virtues and vices, it is empirically inadequate, because the FFM trait structure includes traits like compassion and modesty in the face of evidence undermining the assumption that people generally have such traits.⁸⁷ But of course, one may be mostly compassionate without being virtuous. So even if Miller is right that most people do not have the virtues of compassion or altruism, this does not show that FFM traits are not dispositions to form beliefs, etc., but that they are not virtues. But we have not claimed that the FFM traits are virtues.

Still, perhaps FFM traits are such as can allow for the virtues to be shaped into being. While I cannot establish this claim here, in this section I would like to take three steps in its direction (though I will *not* be suggesting that most people do in fact possess traits like full-blown honesty or altruism): I will argue, first, that FFM traits are malleable in light of mental states such as beliefs, goals, etc., and so their content can be moulded; second, that the moral salience of at least some FFM traits should be considered fairly uncontroversial; and third, more tentatively, that there is a sense in which the FFM traits may structurally parallel Aristotle's doctrine of the mean.

Jointly, I think, my theses on FFM traits – namely that they are plausibly (a) global dispositions, which are (b) suitably malleable, i.e., changeable in light of beliefs, practice, experience etc., and that some of them are (c) morally salient – should at the very least

⁸⁷ Miller, *Character and Moral Psychology*, pp. 140-141.

show that these are traits that virtue ethics should take seriously. More ambitiously, I hope to take some steps towards the proposal that FFM traits are psychological dispositions that, under suitable conditions, could vindicate virtue ethics.

FFM Traits and Malleability

Above we saw that, according to Doris, if traits are to service virtue ethics, they must be manipulable, for it is traditionally held that we are responsible for our characters. But FFM traits are said to be approximately 50% heritable, with the rest of the variation being said to owe largely to factors outside our control. So FFM traits, the first objection goes, hardly resemble the cultivable and malleable traits postulated in virtue ethics.⁸⁸

Now, most psychologists grant that the FFM is not meant to exhaust the content, structure, or operation of personality.⁸⁹ So the genetic heritability of FFM traits does not entail that our inner lives and behaviour are *determined* by them. Furthermore, although some evidence suggests that FFM traits are remarkably stable,⁹⁰ this does not show that people *cannot* change their personality; only that they generally *do not*. But not even the latter is obvious, as recent evidence amply supports the claim that FFM traits are malleable.

First, it has been found that *Openness*, as measured by personality questionnaires, can significantly increase even in old age, in response to performance of basic cognitive

⁸⁸ See Prinz, 'The Normativity Challenge', pp. 121-122.

⁸⁹ Even McCrae, 'The Place of the FFM in Personality Psychology', pp. 58-61.

⁹⁰ E.g. A. Terraciano, P. T. Costa and R. McCrae, 'Personality Plasticity After Age 30', *Personality and Social Psychology Bulletin* 38 (2006), pp. 999-1009.

activities including attending inductive reasoning tutorials and engagement with tasks like puzzle-solving, over the course of thirty weeks.⁹¹

Second, the effectiveness of cognitive-behavioural therapy (CBT) offers powerful evidence for FFM personality malleability. By identifying certain cognitive patterns that are thought to underlie pathologies like addiction and depression, CBT allows people to re-conceptualise past experiences (including emotional responses and behaviours) through conversation, introspection, etc., thereby altering their affective-cognitive response patterns. CBT is particularly successful in regulating high *Neuroticism*, and treating associated conditions.⁹² Some psychiatric evidence suggests that CBT is at least as effective as alternative treatments (usually pharmacotherapy) in dealing with, *inter alia*, depression, generalised anxiety disorder, panic disorder, social phobia, obsessive-compulsive disorder, anger, and sexual offence. More importantly, CBT is thought to have longer-lasting effects, often proving twice as effective as alternatives in preventing relapse.⁹³

CBT's widely acknowledged success suggests that formulating the right goals and developing cognitive techniques can change personality, at least when trait levels are extreme. There is of course no reason to think that changeability *per se* is limited to extremes; if anything, the reverse is likelier. That said, it may well be that changes from extreme to more moderate traits are more statistically common because certain personality

⁹¹ J. J. Jackson et al., 'Can an Old Dog Learn (and Want to Experience) New Tricks? Cognitive Training Increases Openness to Experience in Older Adults', *Psychology and Ageing* 27 (2012), pp. 286-292.

⁹² R. M. Ragby et al., 'Personality and Differential Treatment Response in Major Depression: A Randomized Controlled Trial Comparing Cognitive-Behavioural Therapy and Pharmacotherapy', *Canadian Journal of Psychiatry* 53 (2008), pp. 361-370.

⁹³ A. C. Butler et al., 'The Empirical Status of Cognitive-Behavioral Therapy: A Review of Meta-Analyses', *Clinical Psychology Review* 26 (2006), pp. 17-31.

extremes are highly undesirable, they are met with increased concern, and greater motivation and effort to palliate.

In addition to the foregoing, available research on personality change, aside from having discredited a view whereby FFM traits are fixed after early adulthood,⁹⁴ also reveals certain patterns of change, which psychologists call 'normative'. One cohort of evidence, for instance, indicates patterns of personality change with age. *Neuroticism* has been found to decrease, while *Agreeableness* and *Conscientiousness* increase, *Conscientiousness*' covariance with age being 'extremely stable and systematic'.⁹⁵ Such findings are well-documented. For instance, a meta-analysis of ninety-two longitudinal studies of personality mean-level change (i.e., change in personality measures of a group, rather than individuals within it) featuring people from different age groups, found that there is a clear pattern of increase in the dimension of *Conscientiousness* as well as a decrease in *Neuroticism* with age.⁹⁶ Moreover, *Extraversion*, especially the facets of 'social vitality' and 'social dominance', and *Openness* were found to increase in adolescence and young adulthood, and to either remain stable or sometimes decrease in old age. While this particular meta-analysis did not find significant changes in *Agreeableness*, others have found

⁹⁴ E.g. R. McCrae and P. T. Costa, 'Toward a New Generation of Personality Theories: Theoretical Contexts for the Five-Factor Model', *The Five-Factor Model of Personality: Theoretical Perspectives*, ed. J. S. Wiggins (New York, 1996), pp. 51-87. Compare S. Srivastava et al., 'Development of Personality in Middle Adulthood: Set Like Plaster or Persistent Change?', *Journal of Personality and Social Psychology* 84 (2003), pp. 1041-1053.

⁹⁵ R. Helson et al., 'The Growing Evidence for Personality Change in Adulthood', *Journal of Research in Personality* 36 (2002), pp. 287-306, at 293.

⁹⁶ B. W. Roberts, K. E. Walton and W. Viechtbauer, 'Patterns of Mean-Level Change in Personality Traits Across the Life Course: A Meta-Analysis of Longitudinal Studies', *Psychological Bulletin* 132 (2006), pp. 1-25.

that trait levels of this dimension also generally increase with age.⁹⁷ Similar conclusions are suggested by studies looking at the rank-order consistency of personality (i.e., consistency of individuals' placement in terms of their trait levels relative to a group), which found that there is a clear increase in stability, reaching a plateau between sixty and seventy years of age, though not of a magnitude that would preclude further change.⁹⁸

Hence, available research reveals a general – and generally desirable – trend. As several personality psychologists have noted, 'the direction of change is clearly ... positive ... With age, people become more confident, warm, responsible, and calm ... Social maturity is equated with the capacity to become a productive and involved contributor to society'.⁹⁹ Certain traits, including the virtues, are desirable; moreover some of the facets in the FFM seem to resemble virtues in their content, broadly speaking; *Conscientiousness* for instance, has clear relations to epistemic virtues, and *Agreeableness* comprises facets

⁹⁷ J. Specht, B. Egloff and S. C. Schmukle, 'Stability and Change of Personality Across the Life Course: The Impact of Age and Major Life Events on Mean-Level and Rank-Order Stability on the Big Five', *Journal of Personality and Social Psychology* 101 (2011), pp. 862-882; B. W. Roberts, M. O'Donnell, R. W. Robins, 'Goal and Personality Trait Development in Emerging Adulthood', *Journal of Personality and Social Psychology* 87 (2004), pp. 541-550.

⁹⁸ B. W. Roberts and W. F. DelVecchio, 'The Rank-Order Consistency of Personality Traits from Childhood to Old Age: A Quantitative Review of Longitudinal Studies', *Psychological Bulletin* 126 (2000), pp. 3-25. Also recall the study noted earlier, which found simple tasks can increase *Openness* even in old age.

⁹⁹ B. W. Roberts and D. Mroczek, 'Personality Trait Change in Adulthood', *Current Directions in Psychological Science* 17 (2008), pp. 31-35, at 33. Compare Roberts, Walton and Viechbauer, 'Patterns of Mean-Level Change in Personality Traits Across the Life Course', p.20.

like altruism, empathy, modesty, etc.;¹⁰⁰ it is also a commonplace that the virtues require experience and knowledge (and *phronêsis*). Given the foregoing considerations, it is not, I think, implausible to take seriously the suggestion that things are as one might have expected: as people grow older, they mature (hence psychologists' phrase – 'maturity principle'¹⁰¹ – for the trend), acquiring a more sophisticated view of the world, gaining experience and knowledge, becoming more sensitive to the demands of others, including friends and family, as well as their personal and professional development. For instance, seeing as *Conscientiousness* concerns self-control, reasoning, and prudence, it is plausible that experience, knowledge, and maturity are key to certain increases in *Conscientiousness* with age.

Unsurprisingly perhaps, such personality change as described above does not occur in everyone (especially not in those with already high levels on FFM dimensions¹⁰²), while some people change contrary to the 'normative' trend. More importantly for my purposes, changes in personality appear to depend at least partly on people's goals, prospects, ideals, and so on. Although more work in this area is needed, studies of the causes of personality change have found significant correlations between personality traits and the goals people have, something found to be particularly important for changes in *Agreeableness*, which were found to relate to having morally salient concerns, as well as between changes in goals and changes in personality, not explicable through personality

¹⁰⁰ This should be interpreted with caution, for it would be a gross oversimplification to think that however high one scores on these dimensions, it is always for the better. Indeed, the links between extreme scores on FFM dimensions and pathologies should seriously undermine our confidence in such scenarios.

¹⁰¹ See e.g. M. D. Bloninger et al., 'Stability and Change in Personality Traits From Late Adolescence to Early Adulthood: A Longitudinal Twin Study', pp. 229-266, at 256.

¹⁰² See McAdams and Olson, 'Personality Development'.

traits alone.¹⁰³ Similarly, a recent study found that college-aged adult personality tends on the whole to improve, but does so at least partly in patterns that reveal correlations between people's prospects and ideals, including moral ones.¹⁰⁴ The discussion of CBT above lends further credence to the claim that personality changes in light of mental states, such as beliefs, etc.

To sum up, I take it that addressing the objection against the claim that FFM traits are suitably malleable involves showing that personality *can* change on the basis of beliefs and other mental states, and people *have* the required cognitive and motivational resources for change.¹⁰⁵ These conditions appear to obtain. *Ergo*, FFM traits are suitably malleable, hence we are to that extent responsible for our personality. Moreover, I suggested that there does seem to be a pattern of desirable personality change, with people becoming friendlier, more conscientious, and so on.

FFM and Moral Character

Virtue depends on deeper forces than people's perceptions of one another or overt behaviours. But, another objection claims, it is only over behaviours that the foregoing studies

¹⁰³ Roberts, O'Donnell and Robins, 'Goal and Personality Trait Development in Emerging Adulthood'.

¹⁰⁴ E. E. Noftle, 'Character Across Early Emerging Adulthood', *Character: New Directions from Philosophy, Psychology, and Theology*, ed. C. Miller, R. Furr, A. Knobel and W. Fleeson (Oxford, 2015), pp. 490-521.

¹⁰⁵ Some situationists (e.g. Olin and Doris, 'Vicious Minds'; Alfano, *Character as Moral Fiction*, pp. 111-180) have recently targeted the epistemic virtues. But I take my requirement here to amount to something weaker than a requirement for epistemic virtue, something, moreover, discrediting which would require independent argument on the part of situationists.

examine. Because questionnaires fail to capture salient information, they cannot ascertain that people possess virtues and vices.¹⁰⁶ FFM traits, then, may be morally insignificant.

This objection fails to observe the dialectic. Under the strong reading, situationists argue: virtue ethics is descriptively adequate only if people generally have global character traits; people do not have such traits; hence virtue ethics is empirically inadequate; it is therefore unsurprising that virtues are extremely rare (if they exist at all). But nearly everyone has global traits, so the second premise of the argument just summarised is false. Hence, there is no reason to remain sceptical about whether the ‘psychological theory presupposed by virtue ethics is empirically sustainable’.¹⁰⁷ The burden of proof is on the situationists to show that virtue ethics is empirically unsustainable. The prospects for this, moreover, are bleak: virtues and vices would have to be very uncharacteristic character traits indeed if the situationist case is to remain persuasive.

While I could rest my case here, I think that some brief remarks by way of response are in order. If the objector means to suggest that psychological research should include qualitative measures, then I agree. But if instead the objector insists that questionnaires, on pain of being morally uninformative, should include sets of conditionals, more detail, etc., as some have suggested,¹⁰⁸ then I find the worry exaggerated. For regardless of how satisfactory questionnaires are, their results’ strong correlations with morally-salient behaviours cannot be ignored when considering traits’ moral salience. And while behaviour cannot conclusively demonstrate that anyone is virtuous – I am not sure *what* might achieve this – this does not mean that it is uninformative *vis-à-vis* people’s characters. Doris him-

¹⁰⁶ Miller, *Character and Moral Psychology*, pp. 147-150; Prinz, ‘The Normativity Challenge’, p. 121.

¹⁰⁷ Olin and Doris, ‘Vicious Minds’, p. 665.

¹⁰⁸ E.g. D. P. McAdams, ‘The Five-Factor Model *in* Personality: A Critical Appraisal’, *Journal of Personality* 60 (1992), pp. 329-361; Miller, *Character and Moral Psychology*, pp. 138-140.

self assumes that if habits 'contrary to a trait [do] not undermine the attribution, it is hard to see what possibly could'.¹⁰⁹ *Mutatis mutandis*, people who generally behave altruistically and are seen as altruistic, short of contrary evidence, should have altruism attributed to them. This is perhaps more intuitive for vices, since appeals to nice motives, right beliefs, and so on, are unlikely to hold of an abusive parent or partner, a cheat, or a psychopath.

Now, studies have found low *Conscientiousness* and *Agreeableness* to strongly correlate with academic dishonesty, a result confirmed by meta-analysis.¹¹⁰ Low *Agreeableness* is also an important predictor of vengefulness in romantic relationships,¹¹¹ as is Low *Conscientiousness* for infidelity.¹¹² Moreover, studies suggest that *Extraversion*, a seemingly less morally salient dimension, predicts sexual behaviour potentially harmful both to oneself and partners.¹¹³ Additionally, low *Agreeableness* significantly predicts responsive-

¹⁰⁹ Doris, *Lack of Character*, p. 26.

¹¹⁰ T. L. Giluk and B. E. Postlethwaite, 'Big Five Personality and Academic Dishonesty—A Meta-Analytic Review', *Personality and Individual Differences* 72 (2015), pp. 59-67.

¹¹¹ K. E. Sheppard and S. D. Boon, 'Predicting Appraisals of Romantic Revenge—The Roles of Honesty-Humility, Agreeableness, and Vengefulness', *Personality and Individual Differences* 52 (2012), pp. 128-132; K. Lee and M. C. Ashton, 'Psychopathy, Machiavellianism, and Narcissism in the FFM and the HEXACO Model of Personality Structure', *Personality and Individual Differences* 38 (2005), pp. 1751-1582.

¹¹² T. Orzeck and E. Lung, 'Big Five Personality Differences of Cheaters and Non-Cheaters', *Current Psychology: Developmental, Learning, Personality, Social* 24 (2005), pp. 274-286.

¹¹³ D. P. Schmitt, 'The Big Five Related to Risky Sexual Behaviour Across 10 World Regions: Differential Personality Associations of Sexual Promiscuity and Relationship Infidelity', *European Journal of Personality* 18 (2004), pp. 301-319; J. D. Miller et al., 'The Utility of the Five Factor Model in Understanding Risky Sexual Behavior', *Personality and Individual Differences* 36 (2004), pp. 1611-1626.

ness to aggressive cues and proneness to aggressive behaviour,¹¹⁴ something also supported in meta-analyses.¹¹⁵ Lastly, *Agreeableness* has been found to predict obedience in a Milgram-type setup.¹¹⁶

Strong correlations between FFM traits and pathologies are also morally significant; for instance, the psychopath, plausibly the archetype of evil, has been found to be characteristically low in *Agreeableness* and *Conscientiousness*. Other FFM traits also correlate with, *inter alia*, Narcissism, characterised by (unjust) preferential treatment, and Machiavellianism, characterised by manipulateness.¹¹⁷

This brief sample of findings doubtless reveals a morally salient aspect of FFM traits, at least on the level of behaviour. Doubting such salience, therefore, is not, I think, an option for anyone wishing to take psychological research seriously in discussing virtue ethics.

FFM, Moral Salience, and the Doctrine of the Mean

Before I proceed, it is worth pausing to remind the reader what I have, and what I have not, argued for thus far. First, I have argued that the FFM offers evidence for the existence of traits that are of the kind that virtue ethics requires to take off, namely cross-situationally consistent and temporally stable dispositions, as seen by the fact that attributing the rele-

¹¹⁴ B. P. Meier, M. D. Robinson and B. M. Wilkowski, 'Turning the Other Cheek: Agreeableness and the Regulation of Aggression-Related Primes', *Psychological Science* 17 (2006), pp. 136-141.

¹¹⁵ S. E. Jones, J. D. Miller and D. Lynam, 'Personality, Anti-Social Behavior and Aggression: A Meta-Analytic Review', *Journal of Criminal Justice* 39 (2011), pp. 329-337.

¹¹⁶ L. Bègue et al., 'Personality Predicts Obedience in a Milgram Paradigm', *Journal of Personality* 83 (2015), pp. 299-306.

¹¹⁷ Lee and Ashton, 'Psychopathy, Machiavellianism and Narcissism in the FFM and the HEXACO Model of Personality Structure'.

vant traits allows for confident predictions and explanations of behaviours. Second, I have offered evidence that shows such traits to be suitably malleable for virtue-theoretical purposes. Third, I have suggested that these traits are morally salient, in that they are highly predictive of at least some behaviours that are quite plausibly thought of as being of moral significance. Jointly, I think, these considerations offer reason to think that FFM traits may offer a basis on which to refurnish a virtue ethics. What I have not argued is that FFM traits are virtues and vices.¹¹⁸ And although the foregoing may intuitively conjure a picture whereby someone who scores very high on *Agreeableness* or *Extraversion* is morally good, whereas someone who scores either very high on *Neuroticism* is not going to be so good, nowhere have I claimed that any such picture is accurate. Indeed, if Aristotle was right about virtue not being so straightforward a matter as having a lot of this but only a little of that without qualification,¹¹⁹ then we should be wary of drawing any such quick conclusions.

Notice now that the findings discussed above, apart from clearly indicating the moral salience of certain FFM traits, also hint at a structural resemblance between such traits and Aristotle's conception of the virtues as dispositions intermediate between two extremes, each of which is a vice, one of excess and another of deficiency – a view best known as the 'doctrine of the mean'.¹²⁰ This structural resemblance is suggested not just

¹¹⁸ To put this differently, my arguments so far point to the importance of the FFM in the debate between situationists and virtue ethicists, as well as the potential of this model for an empirically informed virtue ethics. However, the story I offer is compatible with such views as Miller's, for instance, according to whom most people have 'mixed traits', comprising some features that we would describe as virtuous and others which seem vicious. See C. Miller, *Character and Moral Psychology*.

¹¹⁹ Aristotle, *Nicomachean Ethics*, pp. 36-40.

¹²⁰ Aristotle, *Nicomachean Ethics*, pp. 43-44.

by the fact that extreme levels on each FFM dimension wind up pathological; but also by the fact that morally relevant behaviours (especially negative ones) are related to FFM traits to be found either at a high or low extreme on their respective dimensions. In light of this, before concluding I would like to suggest that, on the one hand, the morally salient FFM dimensions recommend a structure along the lines of Aristotle's doctrine of the mean; while, on the other, the remaining FFM dimensions plausibly pertain to the intellectual virtues and vices. The discussion here is necessarily somewhat speculative, given the dearth of research on this subject. However, in conjunction with the foregoing, it should strengthen my case against scepticism about virtue ethics, whilst pointing to potentially fruitful avenues for future research.

(i) *Neuroticism*

Neuroticism concerns one's threshold for fear, anxiety, and stress, which are among its facets. Aristotle defines courage as the mean 'with regards to feelings of fear and confidence'.¹²¹ The courageous are not fearless – fearlessness precludes courage; nor are they so sensitive that their fear overcomes any desire or motivation to fend for their values. Fear is necessary for courage, which largely concerns how much one fears what, and to what extent fear inhibits or motivates action relative to worthwhile ends. Some level of *Neuroticism*, then, is necessary for courage. Plausibly, however, too little *Neuroticism* may result in recklessness or rashness, whilst too much in cowardice. Thus, courage requires an intermediate level of *Neuroticism*.

(ii) *Agreeableness*

¹²¹ Aristotle, *Nicomachean Ethics*, p. 40.

Agreeableness' facets include empathy, altruism, and trust. These terms appear to name virtues in their own right;¹²² even if this is denied, they relate to traits like friendliness and sociability, and are at least necessary for virtues like cooperativeness, love, and honesty. Considering how *Agreeableness* might feature in the doctrine of the mean is trickier. Low *Agreeableness* involves lack of empathy, altruism, and trust. As aforementioned, it relates to psychopathy, and plausibly also vices like callousness and hostility. As for high *Agreeableness*, a recent experiment with a Milgram setup found that subjects who administered the most severe shocks to confederates were those who were very high in *Agreeableness*.¹²³ Thus, even high *Agreeableness* can be vicious if cooperativeness and a desire to please turn into submissiveness. Hence, if one is going to have the virtues of empathy, altruism, honesty, and so on, one's *Agreeableness* levels should be such as to allow for balancing against accurate perception of the beneficiaries and potential reasons for withholding pro-social behaviour.

(iii) *Extraversion*

Extraversion targets the enjoyment of pleasures, its facets including gregariousness and warmth, excitement- and pleasure-seeking. According to Aristotle, this sphere has its particular virtue, namely 'temperance', which requires neither excessive preoccupation with pleasures, particularly those of food, drink, and sex, nor indifference towards them. Indifference towards these would fall short of excellence, which requires an immersion in the full gamut of worthy human activity, of which pleasures form a considerable part. More-

¹²² This is liable to mislead in the way indicated at the beginning of this section, namely to seem as though *Agreeableness* was empathy and the like. But the suggestion is only that *Agreeableness* is the FFM dimension that pertains to these virtues, not that the higher one scores on it, the more virtuous one will be.

¹²³ Bègue et al., 'Personality Predicts Obedience in a Milgram Paradigm'.

over, such pleasures often accompany those of good company and collegiality, so that in the sphere of social life insensateness can convert the prudent comrade into a miserly bore. Conversely, indulgence in pleasure, concomitant to high *Extraversion*, may degenerate into vice, behaviours stemming therefrom including excessive eating or drinking, but also, as indeed studies confirm, infidelity in romantic relationships, and sexual behaviour that is potentially harmful both for oneself and one's partners, all of which very high *Extraversion* strongly predicts.¹²⁴

(iv) *Openness*

Unlike the moral virtues, Aristotle did not accommodate the intellectual virtues in the doctrine of the mean, so I shall refrain from attempting to fit them therein. That said, I have already noted that extremes of *Openness* do wind up pathological, with schizotypy at the high end of *Openness*. Similarly, obsessive-compulsive personality disorder corresponds to very high *Conscientiousness*, which I will shortly suggest is also plausibly linked to intellectual virtue. I am therefore sceptical that indiscriminately high levels of intellectually-relevant FFM traits cohere with virtue, though a fuller discussion of this will have to await a further occasion.

Openness' facets include imaginativeness, intellectual curiosity, and readiness to scrutinise established values. These are undoubtedly important and essential, though plausibly to intellectual rather than moral virtue; moreover, they seem pertinent to the 'contemplative', which concern truth, probing, searching, etc., rather than the 'calculative' intellectual virtues, which are associated to practical reasoning skills.¹²⁵ Intellectual sluggish-

¹²⁴ Schmitt, 'The Big Five Related to Risky Sexual Behaviour'; Miller et al., 'The Utility of the Five Factor Model in Understanding Risky Sexual Behavior'; Orzeck and Lung, 'Big Five Personality Differences of Cheaters and Non-Cheaters'.

¹²⁵ See Aristotle, *Nicomachean Ethics*, pp. 137-140.

ness, unimaginativeness, and stubbornness, then, seem like apt *prima facie* candidates for vices corresponding to low *Openness*.

(v) *Conscientiousness*

Conscientiousness comprises, *inter alia*, self-discipline, perceived importance of fulfilling one's moral duties, and means-end reasoning aptitude. Such facets bring to mind Plato's notion of *sôphrosunê*, which refers to 'sound-mindedness', 'moderation', 'prudence'.¹²⁶ *Sôphrosunê* concerns weighing one's own strengths and weaknesses, ensuring that these factor into one's responses and decisions, etc., and that one does not over- or under-react. *Conscientiousness* also resembles Aristotle's notion of continence, or *enkrateia*, which, though not a virtue, like prudence, keeps the virtuous from extreme behaviours through self-control.¹²⁷ Low *Conscientiousness* can clearly lead to undesirable behaviours and seeing as it is strongly associated with addictive behaviours, including eating disorders, alcoholism, and gambling, it is implausible to sever this dimension from the virtues and vices.

Finally, *Conscientiousness*' relation to *sôphrosunê* and means-end reasoning aptitude also suggests a possible link to Aristotelian *phronêsis*. *Phronêsis* is the chief 'calculative' intellectual virtue, inasmuch as it pertains to the rationality of the structure of one's motivation and deliberation, thereby sustaining moral virtue.¹²⁸ *Conscientiousness* concerns, *inter alia*, one's degree of emphasis placed on fulfilling moral obligations; strength of will in carrying out plans and actions despite difficulties; and one's tendency and skill at reasoning prior to responding. While *Conscientiousness* cannot exhaust *phronêsis*, which also depends on knowledge acquired from experience, *phronêsis* does seem to presup-

¹²⁶ See e.g. Plato, *Laches and Charmides*, trans. R. K. Sprague (Indianapolis, 1992).

¹²⁷ See Aristotle, *Nicomachean Ethics*, pp. 159-183.

¹²⁸ See Aristotle, *Nicomachean Ethics*, pp. 142-143.

pose such facets as fall under the domain of *Conscientiousness*, albeit they have not been theorised under the present terminology and have largely been the focus of philosophical work. Thus, perhaps the FFM opens up the way for empirical research into *phronêsis*, promising further insights into virtue ethics.

CONCLUSION

I have argued that the FFM overcomes problems confronting virtue ethics under a strong interpretation of situationism, whereby situationism questions the widespread existence not of virtue and vices, but of traits understood as temporally stable and cross-situationally consistent dispositions. Moreover, I have tried to show that the FFM dimensions may yet vindicate virtue ethics in meeting such requirements for virtues and vices as malleability and moral salience, while also noting a structural parallel between them and Aristotle's conception of the virtues as means between vices. A promising descriptive framework is available; rather than wallow in scepticism, virtue ethicists should cooperate with personality psychologists to conceptually refine it and carve out an adequate normative proposal, while working on improving our understanding of how moral education is best achievable.¹²⁹

University of St Andrews

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