

Epistemic Radicals and The Vice of Arrogance as a Counterfeit to the Virtue of Assured Epistemic Ambition.

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Abstract (not in published version)

Epistemic radicals play key roles in conceptual revolutions, technological innovation and everyday transformation. As outlined this is partly because their epistemic character includes features such as epistemic ambition, unconventionality, resoluteness despite disagreement, and resilience against set-backs. Such features are associated with epistemic vice especially arrogance. This sets up a tension given epistemic virtue tends toward epistemic goods, vice toward failings, epistemic radicalism is good, and arrogance tends toward epistemic radicalism (while virtue impedes such). The rest of the chapter is devoted toward solving this puzzle. It is shown that arrogance tends toward key epistemic strengths and weaknesses. Second, it is argued there is a nearby counterpart virtue of assured epistemic ambition that is insulated from the failings the arrogant tend toward. The virtue is epistemically better placed to realize valuable epistemic goals than the vice. Nonetheless, people who possess assured epistemic ambition share apparently similar, overlapping behavioural profiles with the arrogant. Hence it is argued arrogance is best conceived of as a counterfeit virtue. This captures complex interrelations between arrogance and assured epistemic ambition, and explains why the virtue is often mistaken for the vice (and vice versa). Epistemic radicals can be heroes or villains (i.e. epistemically virtuous or vicious). Conceptualizing arrogance as an epistemic vice standing in a counterfeit relation to the true epistemic virtue of assured epistemic ambition shows how and why this is so.

I Epistemic Radicals

Epistemic radicals play key roles in conceptual revolutions and technological innovation. At a much lower level, everyday epistemic transformations in disciplines, departments or projects often depend on people being epistemically radical. Even if this requires something like transformative or radical creativity (Boden 2004), the ability to be epistemically creative or radical is bound up with a cluster of features concerning epistemic character (Kieran 2019). This is to be expected especially if we take creativity in general to be tied up with aspects of an agent's character in particular concerning motivations, virtues and vices (Kieran 2014a; 2014b; 2018). Features of epistemic character such as epistemic ambition, unconventionality, resoluteness in the face of disagreement and resilience in the face of set-backs partly explain how radicals come to pursue seemingly unlikely possibilities, question disciplinary matrices, explore neglected conceptual spaces, entertain unorthodox assumptions and resolutely pursue inquiry in the face of epistemic indifference, ridicule, disdain and fundamental set-backs. Lynn Margulis, for example, met with "almost universal disbelief and scorn" (Ruse 2013) when arguing for the serial endosymbiotic theory of eukaryotic cell development. One rather emblematic evaluation concluded "your research is crap. Don't ever bother to apply again" (Bybee 2012: 157). Margulis met with initial indifference, followed by near unanimous disagreement, epistemic ridicule and significant intellectual ostracism. Yet Margulis' epistemic resoluteness, ambition and resilience in pursuing her project meant that initial scientific heresy eventually transformed the theory of evolution.

The problem is that the features characteristic of epistemic radicals are often associated with epistemic vice. According to conciliationism or the equal weight view (Christensen 2009; Frances and Matheson 2018), perhaps the dominant position in the disagreement literature, the steadfastness characteristic of an epistemic radical is viciously irrational. Frances (2010; 2014 and 2016) even argues that most philosophers can only stick with their philosophical commitments as 'renegades' on

pain of irrationality or some other epistemic vice. The tension between epistemic virtue and epistemic radicalism has not gone unnoticed. In the philosophical literature Patternote and Ivanova (2016), for example, argue that while standard epistemic virtues are beneficial for conventional science, certain vices, such as egoism, conformism and dogmatism, are beneficial for the pre-convergence phase of scientific inquiry. Historical case studies also present epistemic vice as playing a causally explanatory role in the achievements of epistemic radicals. Michael White's *Acid Tongues and Tranquil Dreamers*, to take one example, details eight great rivalries in the advancement of science and technology as being fueled by intellectual arrogance, ego and competitiveness. To take another example, Sylvia Nasar, John Nash's biographer, states that at Princeton the "young mathematicians were all pretty cocky, but he [Nash] towered over them in arrogance and confidence and also in eccentricity" (Samuels 2002). According to Nasar, Nash took himself to be the measure of others, was frequently dismissive of anyone who disagreed with him and prided himself on being a free thinker who would work things out for himself (Nasar 2001: 67–69). He was also highly epistemically ambitious and possessed an "uncommon measure of self-confidence and self-importance. On one occasion, not long after his arrival at Princeton [as a student], he went to see Einstein and sketched some ideas he had for amending quantum theory' (Nasar 2001: 69–70). According to Nasar "no one was more obsessed with originality, more disdainful of authority, or more jealous of his independence . . . Even as a student, his indifference to others' skepticism, doubt and ridicule was awesome" (Nasar 2001: 12). Nash's intellectual arrogance – or at least something very close to it – is presented as helping to explain his epistemic achievements. There is even testimony from some epistemic radicals that arrogance is epistemically speaking a good thing. James Watson, for example, states that in scientific inquiry "you're not supposed to be arrogant, but if you're not arrogant, if you don't believe you know how to do something better than someone else, you're probably not doing anything" (Watson 1991).

Empirical work seems consonant with the thought that arrogance in particular makes for epistemic radicals. Feist's (1993) interview study of one hundred leading scientists, blindly and independently evaluated, found "positive relations between ratings of hostility and arrogance and scientific eminence. The most eminent were deemed the most hostile and arrogant." Feist's subsequent metaanalysis of creative personalities (1998) identified the aforementioned traits to be indicative of high creativity and, as he later summarized matters, "the traits of arrogance, hostility and conscientiousness (or relative lack thereof) are most noteworthy of highly creative scientists. The confidence found in scientists in general seems to go one step further in the most creative scientists" (2006: 122). More recently, a study of 1,304 subjects using the HEXACO-60 found "people lower in Honesty-Humility had higher creativity scores consistent with past work on arrogance and pretentiousness among creative people" (Silvia, Kaufman, Reiter-Palmon and Wigert 2011: 687).

Now virtue can sometimes have bad consequences and vice good ones. However, this is supposed to be so only atypically and accidentally. Epistemic virtue is supposed to tend systematically toward epistemic good and vice toward epistemic failure and handicapping. Yet if the above is right, we have a significant tension between a) epistemic vice systematically tends toward being epistemically radical, b) epistemic virtue systematically impedes being epistemically radical and c) being epistemically radical is a highly valuable epistemic good. How should we resolve the tension?

In what follows this puzzle will be addressed by:

- i) Showing how epistemic arrogance renders people susceptible to certain kinds of epistemic error and misdirection.
- ii) Arguing that there is a nearby counterpart virtue of assured epistemic ambition that is insulated from those very susceptibilities.

iii) Showing how i) and ii) have significantly overlapping epistemic behavioural profiles such that arrogance is best conceived as a counterfeit virtue. This captures the complex relations arrogance has in relation to genuine virtue thereby explaining why people may often misattribute epistemic virtue to the arrogant and the epistemic vice of arrogance to the genuinely virtuous.

iv) Arguing that given i) – iii) epistemic radicals can be heroes or villains i.e. epistemically virtuous or vicious. Conceptualizing arrogance as an epistemic vice standing in a counterfeit relation to the true epistemic virtue of assured epistemic ambition shows how and why this is so.

2 The Strengths and Weaknesses of Epistemic Arrogance

Spinoza characterizes arrogant pride as “thinking more highly of oneself than is just, as a function of self-love” (Spinoza 2001 [1677]), Pt 3, Definitions of the Emotions XXVIII). Contemporary accounts vary in how exactly this core thought is cashed out:

a) Roberts and Wood (2007: 243–50) consider arrogance most fundamentally to involve a high sense of superiority motivating the disposition to infer false or illicit entitlement.

b) Whitcomb, Battaly, Baehr and Howard-Snyder Baehr (2017: 530–1) take arrogance to involve excessive self-attentiveness to strengths and a variety of ‘over-owning’ dispositions including self-attributive tendencies to over-estimate, over-emphasise and over-attribute positive outcomes.

c) Tiberius and Walker (1998) argue that arrogance is constituted by a high self-opinion taken to legitimize the presumption of superiority qua human specimen which, in turn, generates tendencies to look down on others, dismissiveness and a failure to consider others’ viewpoints.

d) Tanesini takes distinct kinds of arrogance to tend toward dismissiveness or the ignoring of others and an ‘unwillingness to submit oneself to the norms governing

ordinary conversation and rational debate' (Tanesini 2016: 85) including tendencies toward self-exemption from the requirement to justify claims (Tanesini 2018a).

On all major accounts, arrogance is bound up with characteristics that enable someone to be an epistemic radical. An excessive attention to epistemic strengths and associated dispositions tends to generate greater ambition and reinforce the drive to realize such. Where someone is disposed to infer illicit entitlement it is much easier to make assumptions or work from commitments that go beyond whatever is justified by the available evidence. Where someone tends to be epistemically dismissive, ignore the work of others and feels less bound by norms governing rational debate, then it is much easier to be resolute in the face of disagreement. Note that being epistemically arrogant is consistent with possessing certain epistemic virtues even to a high degree (e.g. curiosity). Hence epistemic radicals can be epistemically virtuous in certain respects even while being vicious in another (i.e. epistemically arrogant). Nonetheless, arrogance by its nature systematically tends toward epistemic failure. What is the maxim or rule under which the epistemically arrogant act? *'My superior epistemic position ensures success or insight'*. Notice that this connects with Tiberius and Walker's (1998: 382) characterization of arrogance as the presumption that one is 'better qua human specimen' while recognizing that the particular presumption need not be involved.

The Neo-Darwinians who ridiculed Margulis, for example, may just have been complacent about the (falsely) presumed superiority of their epistemic vantage point. As Margulis characterizes matters the fact that many of them came from zoology led to an overly narrow focus on and over-generalisation from the limited case of animals. This looks like a case of inferring illicit entitlement ala Roberts and Wood (2007) or excessive attention to the strengths of a position ala Whitcomb et al (2017) which led the Neo-Darwinians to make overly general claims from too narrow an evidential base. In effect the upshot was to codify ignorance given that their approach misses "four out of the five kingdoms of life. Animals are only one of these kingdoms.

They miss bacteria, protocista, funghi, and plants. They take a small and interesting chapter in the book of evolution and extrapolate it into the entire encyclopedia of life. Skewed and limited in their perspective, they are not wrong so much as grossly uninformed” (Margulis 1995: 130). The fact that the Neo-Darwinians were so dismissive of Margulis’s arguments compounded by the vitriolic ridicule involved is also consonant with Tanesini’s (2016; 2018a) characterization of arrogance as trampling roughshod over the standard norms of discourse in ways bound up with superiority, dismissiveness of others and exemption from epistemic justification.

Arrogance’s self-presumption generates reckless ambition manifested in carelessness over methods, short cuts in approach and epistemic licence. This guiding modus operandi in turn explains how even early problematic signals are ignored, set backs rationalized away and epistemic norms disregarded. As a result, epistemic projects will often crash and burn. Lysenko’s overreaching epistemic ambition was bound up with arrogation from the norms of decent science. Infamously Lysenko was culpably reckless in method, viciously dismissive of criticism and over generalized from experiments far too quickly (Joravsky 1970; Graham 2016). In the more recent case of Diederik Stapel we have an eminent psychologist who faked a lot of his data seemingly to ‘prove’ what he ‘knew’ anyway (Bhattacharjee 2013; Levelt, Noort and Drenth 2012). Retractions of Stapel’s work in peer reviewed journals at the last count as identified by Retraction Watch came to 58 articles (Retraction Watch 2015). Less dramatically, arrogance often tends toward epistemic rigidity, speculation taken as certainty, data cherry picking, over generalisation, over claiming and obstinacy in the face of criticism. Where inquirers arrogantly presume their conceptualisation or approach must be right, they often fail to see otherwise obvious phenomena, problems or alternative explanations that fail to mesh with their projected schemas. This leads to a kind of insensitive deliberation and feedback failure which in turn only serves to reinforce close minded stubbornness.

3 The Virtue of Assured Epistemic Ambition

There is, however, a counterpart virtue to the vice of arrogance: the virtue of assured epistemic ambition. This can be characterised as follows:

S possesses assured epistemic ambition to the degree that S is admirable in i) having high epistemic ambitions ii) which are internalized as being immensely valuable or valuable for their own sake iii) and is committed to pursuing them appropriately with iv) an epistemically permissible high degree of self-trust in presuming she has a good enough chance at realizing them.

To be virtuous the epistemically ambitious must strive for great epistemic achievement either for its own sake or because it is justifiably taken to have significant value. The motivation alone is insufficient for the virtue since it must be rationally permissible for the person to think that she is capable of succeeding. This entails that the agent must have rationally permissible high self-belief that she is or could become capable of realising her high epistemic ambitions in some form. The characterization picks out people with high epistemic ambitions who are committed to realizing them. They back themselves to give the relevant project or enquiry a good go. It is epistemically permissible to do so given what they are justified in believing, their strengths, what may justifiably be made of the present state of evidence and the possible prospects for the epistemic project. Notice that such agents need not be aware of or think of themselves in self-approving ways. While the characterization is consistent with people thinking highly of themselves for being like this, self-approbation is not part of what it is to possess assured epistemic ambition. We admire people with great epistemic ambitions. What is crucial here is that such agents take themselves to be epistemically ambitious for epistemic goods that are either valuable for their own sake or for further goods that are immensely valuable. This goes a long way to explaining why such people tend to remain committed to their inquiries even where doing so results in indifference, ridicule and ostracism.

Exactly how the ambitions are construed as valuable may be psychologically configured in a variety of ways. People can take their high epistemic ambitions to be immensely valuable for their own sake. In other words, what matters just is working out what exactly is significantly puzzling in the relevant domain, how to explore the terrain, experiment, conceptualise matters and try out potentially valuable solutions. The discovery of polonium then radium by the Curies, for example, seems to be the story of two scientific idealists driven on by epistemic curiosity, fascination and the epistemic drive for knowledge for its own sake (Curie 2013; Pasachoff 1996). Having epistemic ambitions taken as valuable for their own sake is, note, compatible with having further reasons (which may lead to symbiotic reinforcement). People can be interested in some domain or set of questions for the sake of knowledge while possessing additional reasons for being drawn into an area of inquiry in the first place. Jane Goodall both loved animals from an early age and was fascinated by them. By the age of ten she was dreaming of living with animals in Africa (Goodall 2001; Greene 2005). The symbiotic inter-action of Goodall's early love of animals and epistemic curiosity help to explain her radical departures in observation and methods such as her naming and descriptions of individual animals (Goodall 2001; 2002). Her epistemic motivations came to dovetail for a large part of her life with the partly non-epistemic conservationist or environmentalist motivations that came to figure so largely in her life. In some cases, knowledge for its own sake may not figure at all given that what is taken to matter is epistemic significance for the sake of some further non-epistemic goal. Donald Hopkins played a leading role in wiping out smallpox in central and west Africa and then went on to play an even greater role in eradicating the now near extinct guinea worm disease. As a Morehouse College chemistry undergraduate he went to the Institute of European Studies and then travelled more widely. In Egypt he was struck by just how severe and widespread eye infections were (Oakes 2000: 347). Hopkins decided "then and there that I wanted to work on tropical diseases" to alleviate human suffering (PBS). He returned home, worked hard at being transferred to the University of Chicago to study

medicine, became the only black person to graduate in his cohort (Yeoman 2017), and then devoted his life to eradicating infectious diseases.

The virtue of assured epistemic ambition may involve - though need not - desiring epistemic achievement for its own sake. Nonetheless, people can possess the relevant dispositions constituting the epistemic virtue while being motivated to realize high epistemic ambitions for some further, ultimate end such as relieving suffering, bringing about a more just society or enabling space travel. Even so, there are minimal constraints on how this can be so in order to constitute the virtue:

- a) The agent must possess the sincere, epistemically permissible belief that the line being explored is or might be a good way of realizing the ultimate ends aimed at.
- b) The ultimate ends being aimed at must have significant, immense value.
- c) The inquiry must be pursued in a particular non-wholly instrumentalised way. To be more specific the agent's epistemic conduct must respect and honour proper epistemic constraints, duties, permissions and values.

Consider a basic contrast. A person may pursue her scientific inquiry for the sake of making people's lives better in some way. She sincerely, justifiably believes that there are decent grounds for pursuing the line of inquiry. Yet in conducting her inquiry, she fails to do justice to the standards and values of decent epistemic investigation. This might be manifest in a whole host of ways such as being culpably careless in not running certain tests, in failing to ensure proper experimental conditions, cherry picking data, dismissing negative results, filing away inconclusive data, or even in extremis making things up. Egotistical self-promotion and careerism are further ends often taken to explain such failings. Yet this can be the case even where the fundamental driving motivation is beneficent. Even if non-epistemic admirable, beneficent ends had been driving Lysenko, his failure to respect epistemic constraints, norms and the procedures of good science would have been

epistemically vicious. People can commit blameworthy, vicious epistemic failings in part because they are psychologically overcommitted in the wrong kind of way to what they wish to be the case. The epistemically virtuous, by contrast, seek to do justice to strictly epistemic constraints and abide by epistemic norms no matter how much it matters that the value of what they are doing depends on realizing the non-epistemic worthy end goal. The recognition of this point only requires cognizance of the fact that there is a hierarchy of motivational structure to our actions. An epistemic action or disposition can be virtuous, in respecting the internal nature of epistemic duties and goods, while nonetheless being ultimately for the sake of some further final goal or end. This way of putting matters is intended to be as neutral as possible between various distinct ways of cashing out the notions of doing something for its own sake and for the sake of something else (for different kinds of account see, for example, MacIntyre 2007 181–203; Rabinowicz and Ronnow-Rasmussen 2015 30–4; Williams 2002) though it does suggest that epistemic virtue, contra responsibilism (Zagzebski 1996: 165–97), does not have to involve the ultimate motivation of pursuing knowledge for its own sake (Baehr 2018; Kieran 2019).

The virtue requires not just possessing epistemic ambitions, but the right kind of commitment to them. The virtuous are driven to seek out, explore and take on the means of realizing their ambitions appropriately: they work at skilling up, acquiring expertise, cast around for interesting problems, look to address difficult challenges, avoid giving themselves easy passes and persevere in the face of set-backs.

Crucially it is not enough for people just to back an epistemic project. The virtuous have to trust in the project and themselves. Hence thoughts like ‘why not?’, ‘this has a decent shot’ or ‘this looks like a promising way to go’ in pursuing difficult inquiry have to be epistemically permissible rather than unjustifiably misplaced or deluded.

People who possess assured epistemic ambition often set themselves at what sometimes seems to their peers to be unpromising or less than fully justified lines of inquiry. This is part of what makes the ambitiously assured epistemic risk takers. Yet the ambitiously assured are far from deluded since they are prudent risk

takers relative to the nature of their epistemic ambitions. We would not admire epistemically ambitious agents seeking to taxonomise the kinds of leprechauns to be found at the ends of rainbows. Minimally, it must be epistemically permissible for the ambitiously assured to think that pursuing the line of inquiry they are committed to has a shot at realizing the relevant epistemic ambitions.

We can put the point rather differently. People who possess the virtue of assured epistemic ambition tend to take risks, explore neglected avenues and pursue new approaches where doing so justifiably looks like a genuine, worthwhile epistemic possibility. Even if nearly everyone else is dismissive based on the evidence they attend to or their disciplinary conceptual schemes, there must be something from an epistemic point of view which renders the approach promising even if the hope seems a comparatively remote one (at least in the initial stages at any rate). Minimally, then, those with assured epistemic ambition pursue enquiry on the basis of the warranted hope that something is a live option rather than, say, on the basis of deluded optimism. Genuine hope is rational and so, for example, entertains the possibility of failure in ways that optimism in virtue of its nonrational or irrational nature does not (Eagleton 2015). To the degree that someone possesses assured epistemic ambition she has the ability to take on difficult, challenging inquiries or new approaches in pursuit of the valuable high epistemic goals that she is committed to and – justifiably – trusts herself in doing so. It does not thereby follow in so self-trusting that she takes herself to be utterly reliable or bound to succeed (Hawley 2018). The default question that those with the virtue of assured epistemic ambition ask with respect to great epistemic ambitions is ‘is this is a good way to go?’ as contrasted with the presumption of the arrogant who just assume ‘I am bound to succeed’. Hence assured epistemic ambition is in principle open to and watchful over the possibility of failure as contrasted with the complacency of arrogance.

The characterisation given helps to explain a virtuous cycle of epistemic self-development. In the early stages someone with such a disposition will tend to approach difficult but reachable challenges and, in so doing, skill up and develop her

capacities more quickly than the less ambitious. This, in turn, will make more difficult challenges more approachable, and she will come to gain greater justification for thinking that she can overcome difficult challenges and realise high ambitions. Given that she is open to the possibility of failing she will learn to deal with and watch out for failure as a matter of prudence without thereby dampening her great ambitions. The net result over time is an ever-increasing development of ability that puts her in a better position to realise great ambitions. The cycle gives the possessor increasing assurance and trust in her epistemic commitments, abilities and judgement when faced with indifference and disagreement. Hence the possessor tends toward fortitude and courage in epistemic inquiries, such as that displayed by the Curies and Margulis, in the face of challenges, ridicule and hostility from others. This helps to explain close links between assured epistemic ambition and other important epistemic virtues.

Contemporary philosophical literature often takes genuine or proper pride to be the contrasting virtue to both arrogance and servility (see, for example, Whitcomb et al 2017: 530; Tanesini 2018b). However, assured epistemic ambition is distinct from proper pride (though consistent with it). Why? People without large ambitions often can and do possess genuine, merited pride. More importantly, pride necessarily involves self-approbation in a way that epistemic assurance does not. You may trust yourself to write that really hard book, come up with a creative experiment or develop some theory without involving any degree of self-approbation. Assured epistemic ambition focuses on doing the project or the inquiry (i.e. is outward focused) whereas pride necessarily involves self-consciously approving attitudes (i.e. is approvingly self-directed). The proud will tend to possess high-self confidence and think 'I did that' or 'I can do this' in self-approving terms. The ambitiously assured will tend to think 'this idea is worth pursuing' or 'that line of inquiry looks promising'. The proud self-consciously approve of and have confidence in themselves, the ambitiously epistemically assured have confidence in the idea or inquiry and trust themselves to pursue it.

As characterised assured epistemic ambition has features that place people in a good position to be epistemic radicals without being susceptible to some of arrogance's error or misguidance tendencies. In particular the self-assured will be more:

- a) open to the possibility of failure and so less inclined to be complacent about the nature of epistemic challenges e.g. more open to early set backs or failures as signals for things to work on.
- b) open to disagreement as something worth taking seriously rather than being a function of others inferiority.
- c) co-operative since for the ambitiously assured the idea is the thing whereas for the arrogant the presumption of superiority is the thing. Hence people with assured epistemic ambition tend to be more open than the arrogant in recognising that good ideas or help can come from others (and can often do so irrespective of status).

Before moving on to consider the relationship between assured epistemic ambition and arrogance, it is worth saying something about a contrast with epistemic humility. Humility is taken constitutively to involve dispositions to attend to, consider and acknowledge failings, limitations and weaknesses (Whitcombe et al 2017). Furthermore, in classical terms at least, it is taken to be contrary to humility to aim at great things by trusting in our own powers (Aquinas 1947 ST II-II, 161, A. 1). This helps to explain why Hume denounced humility as a 'monkish' virtue and it is notable that nothing close to humility figures as a virtue for Aristotle. On the above characterization assured epistemic ambition is partly constituted by aiming at great things in ways involving epistemic self-trust. It does not necessarily follow, however, that assured epistemic ambition is incompatible with humility. As Aquinas characterizes matters, humility is "concerned to temper and restrain the mind, lest it tend to high things immoderately" (Aquinas 1947 ST II-II, 161, A. 1) Humility thus

serves to correct and rein in inappropriate or immoderate epistemic ambition. Much will turn on what 'immoderate' here amounts to. Nonetheless, humility might thus be in principle consistent with though distinct from assured epistemic ambition given the latter constitutively involves the appropriate pursuit of high epistemic ambitions and trust in your epistemic potential, powers and strengths to do so. Hence the virtuous pursuit of ambitious enquiry can tend toward ambitious risk taking without involving the recklessness born of arrogance. Arrogance is closed off from and complacent about possibilities of error, misguidance and owning epistemic limitations. By contrast, assured epistemic ambition is open to such possibilities though openness to such may be distinct from fully recognizing or owning epistemic weaknesses (which might constitute the epistemic virtue of humility).

4 Arrogance as a Counterfeit Virtue.

Nonetheless, in many instances people who possess the virtue of assured epistemic ambition and those who possess the vice of arrogance may end up with apparently similar, overlapping behavioural profiles. Take, for example, judgements with respect to epistemic peerhood. As characterised above, people with assured epistemic ambition not only set their epistemic sights high but come to acquire a comparatively high degree of technical skills, knowledge and understanding. It follows that they may often regard only a comparatively select few people as epistemic peers. This follows from the fact that they have good justification for holding that they have a greater degree of knowledge or understanding than most others in the relevant domains. As observed from the third person point of view, those with assured epistemic ambition can thus seem remarkably close to the behavioural profile of the epistemically arrogant. After all, the epistemically arrogant tend not to recognise many others as their epistemic peers and so fail to take them seriously. Furthermore, where possessors of the virtue and the vice judge that a peer's testimony or disagreement is worth taking seriously, they'll all be strongly motivated to investigate for themselves rather than just accept the testimony or reasoning of others (even if only as

something to think about and overcome in the project or inquiry). In other words, the epistemic benefits of the virtue as contrasted with the epistemic susceptibilities of the vice might not show up much in many instances of judgements of peerhood and epistemic interactions with others (though they will do so in other contexts). This is not to say that there are no differences. The dispositional patterning in principle will tend toward certain key differences. The arrogant, for example, will have a much stronger tendency to take lack of interest or disagreement as such as evidence of epistemic inferiority, whereas the self-assured tend to be more epistemically open to learning from others (whatever their epistemic status) and accepting of differences in epistemic interests. The epistemically assured, for example, will judge someone merely to have different epistemic interests in certain instances where the arrogant would dismiss someone as epistemically inferior. Nonetheless assured epistemic ambition can often be mistaken for arrogance given that both have tendencies towards features such as:

- i) independence of mind
- ii) interest in and commitment to ambitious projects and inquiries
- iii) resoluteness in the face of disagreement

Such strengths help to explain why both those with assured epistemic ambition and the arrogant often make for epistemic radicals. Crucially, however, those possessed of assured epistemic ambition have strengths the arrogant lack and lack failings that the arrogant are susceptible to. Consider, by way of example, epistemic arrogance's failings such as inattentiveness to possible failings or challenges, insufficient motivation to address such, rigid close mindedness and a presumption of entitlement to success (which in extremis can lead to abrogating the norms of epistemically good inquiry).

If the above is right, then arrogance might best be thought of as a vice that is the counterfeit virtue for the true virtue of assured epistemic ambition. What is the

notion of a counterfeit virtue? Aquinas makes use of the notion in reminding us that a proper virtue is orientated toward a good that is an end though actions may have the semblance of virtue in being orientated only toward or possessing the semblance of the good in which case “it is not a true virtue that is ordered to such a good, but a counterfeit virtue” (Aquinas 1947: ST II-II, q. 23, a. 7). In more general terms, a counterfeit is something that can pass for something else while lacking some key feature or relation required to constitute the genuine article. Now, counterfeit money or goods, for example, often can and do pass extremely well for the real thing. Good counterfeits can be used to serve many of the same functions as the genuine article ranging from utility value to social signaling (in many though not all circumstances).

What makes arrogance a good *counterfeit* for assured epistemic ambition?

There will be a large degree of overlap between the epistemic behavioural profiles of the arrogant and those with assured epistemic ambition. The profiles will not be identical, for the reasons given above, but the epistemically arrogant often have high epistemic ambitions, are prepared to take many similar kinds of risks, are independent minded and forge ahead in the face of indifference, disagreement and ridicule. Transformative epistemic creativity, and the creative development required to become an epistemic radical typically depends upon a wide range of traits and behaviours such as initiative, risk taking, opportunity seeking, persistence, boldness, assertiveness, daring, resilience in the face of failure, single mindedness, self reliance, self belief and the abilities to deal with a high degree of uncertainty and any associated anxiety over extended periods of time. In many circumstances both assured epistemic ambition and arrogance can underwrite or give rise to such behaviours.

It is worth pointing out several practical implications here. First, if we consider the empirical work cited above (Feist 1993, 1998, 2006, and Silvia et al 2011), there is reason to think that the operationalization of arrogance (or lack of humility) is too broad. It could be that the arrogant and those with assured epistemic ambition are being falsely conflated together as arrogant. Second, notice that where people are

overly deferential, fearful, self-doubting, people pleasing, weak in the face of disagreement or epistemically insecure, a useful practical heuristic for them might be to aim to be 'more arrogant'. This is not because in aiming to be more arrogant such people will likely hit the behaviour profile of the arrogant. Rather, given where such characters start from, in aiming to be a bit more arrogant, as they would see it, they will likely come closer to the behavioural profile of the more self-assured (and in so doing may start to build up greater confidence and ability). Nonetheless this can be a tricky thing since as we have seen there is a fine line between being assured epistemic ambition and arrogance.

It is important to realize that the counterfeit relation works both ways. This has certain practical consequences such as the perpetration of epistemic injustice where people are wronged in their capacities as knowers or epistemic agents (Fricker 2007). Recognizing that arrogance is the counterfeit virtue to the genuine virtue of assured epistemic ambition helps to explain why the epistemically vicious may easily be mistaken for the epistemically virtuous and vice versa. This possibility is likely compounded by interaction with certain moderating factors such as stereotype effects. People from disadvantaged groups for example, may often be much more easily construed as arrogant when they manifest the epistemic profile of assured epistemic ambition precisely because the profile is in tension with the stereotypically assumed profile qua member of that group. Women who are ambitiously assured in domains such as mathematics, physics or philosophy may be condemned as arrogant because the profile of the virtue is in tension with gendered concepts concerning how women 'are' or are 'supposed to be'. Hence members of the relevant group may be punished when they display the epistemic virtue (and one way of punishing people is to condemn them as vicious). Conversely, when members from an advantaged group are being arrogant this might be more easily mistakenly for the virtue of assured epistemic ambition where the profile is consonant with relevant stereotypical assumptions. Recognizing that arrogance is a counterfeit virtue for assured epistemic ambition may thus help to deepen our understanding of how

epistemic injustice works in certain contexts. After all, cultivating assured epistemic ambition may thus often be much more difficult – and so a much more challenging achievement - for members of disadvantaged groups. Moreover, the obvious pursuit of the virtue in certain domains may be an apparently imprudent strategy for members of disadvantaged groups unless they are prepared to cope with or confront a host of difficulties.

Nonetheless, it might be objected that in such scenarios being arrogant will lead to greater epistemic benefit for some small number of individuals (though this may go along with greater epistemic disbenefit for a far greater number of individuals). Furthermore, the overall net gain to radical, innovative science may overall be epistemically beneficial. Hence, at least to the extent that we prize epistemic radicals and innovative science, we would want some number of people to be arrogant. Hence arrogance cannot be a true epistemic vice and assured epistemic ambition cannot be a true epistemic virtue.

The objection misses the mark because it fails to take in to account the normative aspect of assured epistemic ambition. This is about how to be a good, admirable epistemic agent. It could be in certain problematic environments that the epistemic benefits of arrogance are more obvious and even exceed those of the virtue under particular circumstances. What this would then show is that something is wrong with the way the epistemic environment is. Consider a putative sub-culture of inquiry driven by assumptions and norms tied to competitive, individualist 'star' systems tracking self-confident performance. Such environments might tend to cultivate or compound arrogance taken as ambitious assurance. This might have a form that fits the following basic schematic:

i). Successful 'stars' give advice, tips and model success along the lines of 'do as I did'. They do so without recognizing that much of what they did was high risk, that they got lucky, and 'their' work was highly dependent on others. Hence the

individuals in question have strong tendencies to overattribute responsibility for success to themselves rather than to the work of others as well as good luck.

ii). Inquirers act within structural or institutional systems that strongly promote high risk taking. By way of example, people may be promoted, honoured and awarded significant research grants only when they have big successes. Hence only the very high risk-seeking are disproportionately promoted or honoured, even if it is also the case that a very large number of high risk takers fail (or have to leave in disgrace).

Even without any further complicating factors if i) is combined with ii) the upshot might be a simple psychological recipe for inculcating and rewarding arrogance (at least at the 'higher end' of structural hierarchies and organizational ranks). What this would show is not that arrogance is not a true epistemic vice in such a scenario but, rather, that there is something problematic about the epistemic environment.

A rather different objection might articulate the thought that at least much of the time we surely do not want all inquirers to be radical. A lot of inquiry is developed through working out, elaborating and refining ideas in rather conventional ways. If assured epistemic ambition is something that we want people to possess only at particular epistemic junctures, or something we want only some small number of inquirers to possess, then it cannot be a virtue. Work in the social epistemology literature might seem consonant with just this thought. It has been argued not just that diversity in research approach in a scientific population is more epistemically efficient (Zollman 2010) but that the most successful epistemic communities (i.e. the most efficient groups capable of realising their epistemic goals more quickly), are constituted by two different groups of scientists: mavericks and followers (Weisberg and Muldoon 2009). In such communities only a small number of groups of mavericks are required to generate new ideas that are then developed by the followers. It has, further, been argued that mavericks are arrogant, egotistic, self-

centered and focus on their own ideas, while followers are more modest or humble in exploring and refining the ideas of the mavericks (Paternotte and Ivanova 2016).

The first thing to say here is that just because something is an epistemic virtue, it does not follow that it must be manifested. What it is to possess a virtue involves being disposed to manifest patternings of thought, affect and action appropriately in the relevant virtue eliciting conditions. It may be that many people much of the time are not in the appropriate epistemic circumstances to pursue ambitiously unconventional epistemic inquiries. Consider, by analogy, non-epistemic courage. If anything is a virtue, then courage is. Yet it may be that in good conditions for much of the time many people are not required to be courageous. The truly virtuous will be courageous only when courage is called. The same can be said for the epistemic virtue of assured epistemic ambition. It may be that great epistemic ambition is not always or perhaps not even often called for given the relevant situation.

The second thing to say is that if the argument presented in this chapter holds, then it is intelligible though mistaken to hold that mavericks must tend toward vices such as arrogance, egotism and self-center understandable. Rather, as has been argued, the true virtue of assured epistemic ambition affords the relevant epistemic goods more consistently, reliably and without the weaknesses of the counterpart vices mentioned.

The third thing to say is that the virtue theorist can opt for either a more global response to the worry – the one I tend toward myself – or a more situationally specific response.

The global virtue theorist will hold that assured epistemic ambition is an epistemic virtue that is partly constitutive of what it is to be a good inquirer. Everyone should possess the virtue. As noted, it does not necessarily follow that this should be manifested all or much of the time. Nonetheless, any good inquirer at some point in pursuit of their epistemic interests will likely need to call on the virtue – at least if their epistemic endeavours are to make any headway. One way to make this view

appealing is to consider just what it is to develop as an epistemic agent. There is a tendency to think of epistemic development as a kind of linear progression in the development progression of epistemic skills and understanding. But this is far from being true. If anything, we must unlearn certain habits and learn how to question or radically reconceptualize key assumptions. This might not be the most radical thing to do in the fullest degree, but it does require at least a minimal degree of assured epistemic ambition. Hence the virtue is required to some degree both in developing as an epistemic agent and at certain stages in pretty much any project or inquiry. The virtue will be exercised as, when and where it is required.

The more situationally specific response, by contrast, will acknowledge that that we do not want or need most inquirers to possess ambitious assurance. We only need some individuals or teams to have such a character. Note that a team can possess the overall composite character of being ambitiously assured without necessarily each or perhaps any individual being so. If it is a good idea for a particular group to be striving for ambitious assurance, it may be a fine art in balancing the comparative virtues and relational character of the composite individuals so that the team as a whole is ambitiously assured. In principle there might be many possible configurations that could give rise to a group possessing the virtue as a collective. More crucially, the more situationally specific response will hold that we would not want every or even most inquirers to have this particular virtue. It is one good way to be amongst others, though it is the best way to be if you –either as an individual or a collective - want to be epistemically radical. It is just that not all of us do or should want to be epistemic radicals. In principle we might need individual people and epistemic groupings who are epistemic moderates just as much as we need epistemic radicals.

5 Epistemic Radicals: Heroes and Villains

Thinking of assured epistemic ambition as the virtue to which arrogance pays the compliment of being a counterfeit gives us an account of epistemic radicals as follows:

Epistemic radicals are not necessarily lacking in virtue or vicious. They *can* be virtuous in in possessing the virtue of assured epistemic ambition which puts them in a good place to realize high end, difficult, transformative epistemic goods (ones those lacking the virtue are less well placed to realize). Nonetheless, epistemic radicals as a matter of fact can be and sometimes are vicious in so far as they are epistemically arrogant. Arrogance can play a role in helping to explain causally how some epistemic radicals come to achieve epistemic goods while nonetheless not being the only or the best way to realize them. Even in such cases, epistemic arrogance, whether of an individual, group or epistemic culture more generally, always warrants condemnation. Moreover, epistemic arrogance always has certain error or misguidance susceptibilities which the true virtue of assured epistemic ambition does not. Epistemic arrogance is at best a counterfeit to the true virtue of assured epistemic ambition.

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