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Intellectual Creativity

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Is Creativity an Intellectual Virtue?

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One prominent approach to virtue epistemology conceives of intellectual virtues as excellences of intellectual *character*. Standardly recognized virtues include qualities like curiosity, open-mindedness, intellectual humility, and intellectual courage.¹ Creativity, by contrast, has received relatively little attention within virtue epistemology: it appears on few if any standard lists of intellectual virtues; and its nature, structure, and value have not been thoroughly explored.² Is this an accidental oversight? Or is there something problematic about conceiving of creativity as an intellectual virtue?

There are some reasons for thinking that creativity may *not* be an intellectual virtue. One is that creativity often manifests in activity aimed at non-epistemic ends like the production of good art or at technological innovation. Intellectual virtues, by contrast, are said to aim at epistemic ends like knowledge and understanding.³ A second reason concerns the intuitive connection between creativity and "creative genius." This association suggests that creativity may be more like an innate talent or ability than a cultivated strength of intellectual character.

Other initial considerations tell in *favor* of conceiving of creativity as an intellectual virtue. First, while clearly relevant to artistic activities and aims, creativity is also widely regarded as bearing on various aspects of scientific practice, for example, on the formulation of scientific theories.⁵ The fact that this and related scientific activities have a distinctively epistemic aim underscores the possibility that creativity is—or at least can be—an intellectual virtue. Second, creativity is often identified as an important educational goal.⁶ One often hears that in addition to equipping students with knowledge and intellectual skills, education should also help students become more curious and creative thinkers.⁷ This suggests, contra the point above about creative genius, that creativity is not a mere talent: that most students (and therefore most people) can grow in creativity.

Thus creativity's status as an intellectual virtue appears to be uncertain. Given the indisputable *value* of creativity to various domains and practices, this status is worth exploring. In the present chapter, I argue that creativity is an intellectual virtue on par with other intellectual virtues of the sort that interest virtue epistemologists. More precisely, I argue that there is *a plausible and*

reasonably familiar way of conceiving of creativity according to which it is an intellectual virtue. As this suggests, I do not purport that the concept of creativity elucidated here answers to every ordinary or theoretical way of thinking about creativity. Rather, I take for granted a kind of pluralism about concepts or kinds of creativity. My aim here is to identify a single concept of creativity that (1) is present in ordinary and theoretical conceptions of creativity and (2) fits well with a familiar view of the structure of an intellectual virtue.

1. The Structure of an Intellectual Virtue

I begin by sketching a structural model of intellectual virtues according to which they have four primary dimensions.⁹

First, intellectual virtues have a *skill* or *ability* dimension. For every intellectual virtue V, there is an intellectual skill or ability with respect to which the possessor of V must be competent—a skill that provides a way of distinguishing V from other intellectual virtues. To possess the virtue of open-mindedness, for instance, a person must be skilled at taking up and giving a fair and honest consideration to perspectives very different from her own. This is what differentiates open-mindedness from other intellectual virtues like curiosity and intellectual humility, each of which has a characteristic skill of its own (viz. asking thoughtful and insightful questions and "owning" one's intellectual limitations and mistakes, respectively).

Second, a person can possess the skill characteristic of a given virtue while being unmotivated to use it. This is inconsistent with the possession of the virtue. Accordingly, intellectual virtues also have a *motivational* dimension. On one familiar view of this dimension, intellectual virtues are rooted in a "love" of (i.e. a desire or commitment to) epistemic goods like truth, knowledge, and understanding. That is, if one possesses an intellectual virtue V, then one is motivated to practice the skill or ability characteristic of V *out of* a desire for or commitment to such goods. Many virtue epistemologists also hold that the motivation in question is at least partly *intrinsic*, which is to say that an intellectually virtuous person cares about and is motivated to pursue epistemic goods at least partly *as such* or *for their own sake* (i.e. not simply on account of their connection with other, non-epistemic goods or ends).¹²

Third, a further and related dimension of intellectual virtues is *affective* in nature. To possess intellectual virtues in their fullness, one must take an appropriate *pleasure* or satisfaction in their exercise and in related ends and activities. An open-minded person, for instance, enjoys taking up

and considering alternative perspectives. A person who finds such activity annoying or tedious lacks genuine or full open-mindedness. Similarly, an intellectually virtuous person characteristically feels pain or dissatisfaction at the frustration or failure of her cognitive endeavors. Thus the possession of an intellectual virtue requires, not just that one be motivated to practice the skill characteristic of this virtue, but also that one experience certain fitting or appropriate affective states in connection with such practice.

Fourth, empirical research suggests that a person can be skilled in a particular intellectual virtue and be motivated to use this skill, while nonetheless failing to do so on a consistent basis.¹³ The reason? The person can lack good *judgment* about when or where or how much the skill ought to be practiced. Accordingly, intellectual virtues also have a kind of "practical wisdom" or judgment component.¹⁴ Put another way, activity that manifests intellectual virtues is *rationally regulated*; it is informed and guided by reason. It does not follow that such activity must be explicitly deliberative or calculating; on the contrary, intellectually virtuous activity is often automatic or spontaneous in the sense that it manifests a settled intellectual disposition or habit that has been acquired over time. Virtuous intellectual activity (e.g. a careful examination of a text or an open and honest consideration of an objection) can be and often is guided by reason without involving conscious deliberation or explicit inference.

2. Creativity: A Sketch

My aim in the present section is to develop an account of creativity conceived of as an intellectual virtue, that is, an account of what I will henceforth refer to as "intellectual creativity." Again, I intend to offer an account intellectual creativity that (1) fits reasonably well with ordinary and theoretical ways of thinking about creativity and (2) conforms to the four-dimensional structural model just outlined.

2.1. Some Putative Features of Creativity

I begin with an enumeration of several putative features of creativity *simpliciter*. Each feature of these features is widely recognized in the psychological or philosophical literature on creativity. However, I contend that each one also has considerable *intuitive* plausible. Thus my suggestion is that a satisfactory account of creativity (whether intellectual or otherwise) must either make room for or

"explain away" each of these features. While intended to be intuitive, each item on the list also enjoys considerable support from the philosophical or psychological literature on creativity:

- (1) As the term itself suggests, creativity involves an act of *creation*. It involves the production of something—be it a piece of art, business solution, scientific theory, poem, technological instrument, philosophical argument, or some other entity. Creativity, in other words, has a generative or productive dimension. ¹⁵
- (2) Further, the products of creativity are *new* or *unexpected*.¹⁶ If one artist simply copies or mimics the work another, the created work will be uncreative. Likewise in the case of a scientific theory or explanation that is completely obvious given the available data: while perhaps reasonable and well-supported, such a theory is unlikely to be creative. For this reason, creativity is closely associated with originality and inventiveness.
- (3) In addition to being new or unexpected, the products of creativity must also satisfy certain standards of *value* or *excellence*.¹⁷ Suppose a musician combines two very different musical genres to create a highly original composition. If the result is uninteresting or unimpressive (or worse), it will fail to instantiate creativity. To be creative, the product or result of a creative process must "work." It must be good or significant or valuable.
- (4) Creativity is closely tied to the operation of the *imagination*.¹⁸ Creative persons characteristically possess lively, active, and powerful imaginations. While a person can have poor eyesight and a bad memory while still being highly creative, having a poor imagination seriously complicates, if not precludes, the possession of creativity.
- (5) Creativity is tied to a kind of unique *perception*. Creative people see the world differently. They tend to notice things or possibilities or connections that escape the attention of uncreative persons.¹⁹
- (6) Creativity is also importantly related to the notion of *insight*. It often begins with a unique thought, image, or idea, that is, with a "creative insight." Such insights often form the basis of and play an important role in guiding and shaping the creative activity that ensues.²⁰

- (7) Creativity often functions in a *muse*-like fashion.²¹ Creative insights often simply come to or dawn on creative persons. As a general rule, the operation of creativity is not easy to control. Creative writers experience writer's block, poets lose their muse, etc.
- (8) Creative persons find creative activity *intrinsically* rewarding. Their engagement in this activity tends to be motivated substantially by goods that are internal to the creative process rather than by external goods like wealth or status.²²

While far from exhaustive, this list of putative features of creativity provides a reasonable starting point for thinking in greater detail about the substance of creativity, including *intellectual* creativity.

2.2. Skill Dimension

I turn now to an account of creativity conceived of as an intellectual virtue with the four-dimensional structure sketched above. I begin with the skill dimension. As will become clear, this dimension constitutes the conceptual core of intellectual creativity. Once it has been elucidated, characterizing the additional three dimensions will be a relatively straightforward task.²³

On the view developed here, the skill proper to intellectual creativity does not differ in kind from the skill proper to creativity *simpliciter*.²⁴ Rather, intellectual creativity involves the possession of a generically creative skill *relative to* the epistemic domain, which for our purposes can be specified as the domain of *pursuing and transmitting epistemic goods* like knowledge, truth, and understanding. On the "pursuing" side, this includes activities like scientific, historical, philosophical, and other forms of inquiry. On the "transmitting" side, it includes such activities as teaching and journalistic reporting. A person with intellectual creativity is creatively skilled in one or more contexts of this sort.

How, then, might we understand the skill dimension of creativity *simplicter*? I propose the following view:

(C) A creative person is skilled or competent at (i) identifying or conceiving of new or unexpected possibilities and (ii) organizing or rearranging a given set of elements in a way that reflects these possibilities and instantiates one or more values proper to the activity in question.

According to (*C*), the skill dimension of creativity has two main parts or aspects. First, it has what can be thought of as a *cognitive* aspect. This is a matter of identifying or conceiving of new or unexpected possibilities. In an epistemic context, these possibilities might pertain to how a given collection of data can be explained (e.g. in the case of theory construction), how a particular view is vulnerable or immune to critique (e.g. in the case of generating or responding to objections), or how certain concepts of chunks of information might be structured or arranged (e.g. in the case of preparing a teaching lesson).²⁵

Second, the skill component of creativity also involves what can be referred to as a productive aspect, which involves "organizing or rearranging a given set of elements" in a way that reflects certain "new or unexpected possibilities" identified or conceived of by the creative person. Put another way, it involves creating something new or unexpected on the basis of a creative idea or insight. 26 Again, in an epistemic context, the creative "product" might be anything from a theory to a counterexample to a lesson plan. Further, the resulting product or arrangement must "instantiate one or more values proper to the activity in question." This latter feature of (C) is intended to capture claim (3) above, which describes the products of creativity as significant or valuable. On the present view, creative products must satisfy certain normative standards specific to the type of creative activity in question. So, for instance, a "new or unexpected" piece of technology that fails to serve its intended purpose would not count as creative. The same goes for a short story that, while original in certain respects, nevertheless is a bad story or bad qua story. Likewise for an innovative scientific theory that lacks simplicity, predictive power, and other theoretical virtues. Again, the claim is not that the products of creativity must be good in some generic sense; nor that they are necessarily, say, morally or even aesthetically good. Rather, the value in question is determined by norms proper to whatever kind of creative activity is being engaged in.²⁷

This two-part account of the skill dimension of creativity also comports well with several other intuitive claims about creativity identified above. For instance, the *cognitive* element of (C) fits well with claims (4), (5), and (6), which identify a close association between creativity, on the one hand, and imagination, "unique perception," and "insight," on the other. It is plausible to think of imagination as the capacity or ability in virtue of which a creative person is skilled at "identifying or conceiving of new or unexpected possibilities," that this process either is or is facilitated by a certain kind of perception or attentiveness, and that it consists in or leads to creative insights.

The *productive* aspect of creativity's skill dimension also incorporates some of the putative features of creativity enumerated above. Specifically, it aligns with the idea, in (1), that creativity involves an act of creation. This idea is at the heart of the claim that creativity involves "organizing or rearranging a given set of elements" in a way that reflects the identification of certain "new or unexpected possibilities." This element of (C) also demonstrates a fit with (2), which stipulates that the products of creativity are "new or unexpected."

(C) is an account of the skill dimension of creativity *simpliciter*. As noted earlier, to capture the skill dimension of *intellectual* creativity, or of creativity conceived of as an intellectual virtue, the account must be relativized to the epistemic domain:

(C*) An intellectually creative person is skilled or competent, (i) in the context of pursuing or transmitting epistemic goods, at (ii) identifying or conceiving of new or unexpected possibilities and (iii) organizing or rearranging a given set of elements in a way that reflects these possibilities and instantiates one or more values proper to the activity in question.

A couple of additional points about this characterization are in order. First, as I am conceiving of it, the skill at issue can be possessed to a greater or lesser *degree*. For instance, a person who is extremely competent at conceiving of interesting and novel scientific theories can be said to possess this skill to some extent even if he lacks this competence in other relevant contexts (e.g. as a teacher). The degree to which a person possesses creative skill can also be a function of other factors, for example, of just *how* reliable she is at manifesting the skill in appropriate circumstances (e.g. minimally reliable or extremely so), how *many* relevant values her creative performances tend to instantiate, and so on.

Second, as an account of the skill dimension of intellectual creativity, (C*) purports to capture the "characteristic activity" of this virtue, that is, what the virtue looks like in actual practice. As such it may elicit an objection to the effect that creativity—including creativity applied to epistemic contexts—does not always or even typically proceed in the linear way indicated by the account. (C*) suggests that creative persons have insights and subsequently go on to create things in light of these insights. In reality, the objection goes, the process is often much messier, either because the creative process is not driven by an especially explicit or coherent vision or because it exhibits a kind of spiral structure, whereby an initial thought or insight leads to an initial stretch of creativity activity, which in turn leads to a deepening of the original insight (or to a further insight),

which is then followed by additional creative activity, and so on until the creative product or output appears.²⁸

I want to allow for these possibilities. Therefore, it is important to clarify that the "identification or conception of new or unexpected possibilities" described by (C*) need not be a very explicit or choate cognitive state or process. To initiate the creative process, this state presumably must have some positive content; however, this is consistent with its being what the creative person himself might describe as an intuition or hunch—even a question. Similarly, this state need not be something that occurs only once within a single iteration of the creative process. Rather, as I intend it, (C*) is consistent with the idea that a creative person might make several connections or identify several possibilities over a period of time that together lead to a creative output. Thus (C*) does not require—and indeed is not intended to suggest—that the skill characteristic of intellectual creativity always follows a simple linear path.

2.3. Motivation Component

Having articulated a view of the skill dimension of intellectual creativity, I turn to an account of its motivational dimension. As I am thinking of it, intellectual creativity, like other intellectual virtues, is grounded in a "love" of epistemic goods. That is, a person with this virtue is disposed to conceive of new or unexpected possibilities *out of* a concern with ends like knowledge and understanding; the latter motivate and direct her creative intellectual activity. Notably, this concern need not be limited to the intellectually creative person's *own* share in epistemic goods. It can also pertain to the epistemic well-being of others. Again, a teacher might be motivated to design a creative lesson out of a concern that his students develop a firm understanding of the material.

Further, on the present view, the epistemic motivation underlying intellectual creativity is at least partly *intrinsic*. The intellectually creative teacher cares about his students' understanding of the material at least partly for its own sake (not simply because of how this understanding might help them graduate, secure a good job, etc.). Similarly, a scientist who manifests intellectual creativity in the design of an experiment or in the formulation of a new theory is motivated at least partly by an intrinsic concern for truth or understanding (not merely by, say, the status or financial windfall a new discovery might yield).²⁹

None of this implies that activity manifesting intellectual creativity must be *exclusively* motivated by an intrinsic concern with epistemic goods. Nor is it to say that such activity must be

consciously based on an attempt to secure epistemic goods for oneself or others in the sense that the creative person thinks explicitly about these goods as she engages in the creative process. On the contrary, the creative person's immediate attention is likely to on aspects of her creative activity or on the product emerging from this activity. But again this is entirely consistent with the idea that part of what *motivates* and *guides* the activity of intellectually creative persons is an underlying intrinsic concern with epistemic goods.

The foregoing is a *prima facie* plausible way of thinking about the motivational basis of creativity conceived of as an intellectual virtue. It fits well, for instance, with the claim in (8) above that creative activity tends to be motivated "by goods that are internal to the creative process rather than by external goods like wealth or status." Further, recall that intellectual virtues are the character traits of a good learner or inquirer, where learning and inquiry are clear cases of epistemically motivated activities. It is plausible to think that among the more important abilities for successful learners or inquirers to possess is the ability to identify new possibilities or connections and give expression to these in the solutions or theories they conceive of while attempting to reach the truth, acquire understanding, and the like. And "creativity" or "intellectual creativity" seem like apt labels for such an ability.

Nevertheless, it could be objected that the motivational requirement at issue is too restrictive. Specifically, someone might take issue with the claim the epistemic motivation underlying intellectual creativity must be (partly) *intrinsic*. Imagine, for example, a medical researcher who arrives at a creative solution to particular scientific problem or question but whose creative intellectual activity is motivated entirely by her interest in developing a new therapy or technology. The researcher has no interest in the relevant scientific facts as such; she is interested in these facts strictly because of their potential connection with a therapeutic or technological breakthrough). It could be claimed that such a person might manifest a kind of intellectual creativity and that such creativity could be considered an intellectual virtue.

This is a reasonable objection. I offer only a limited rebuttal to it here.³⁰ On the one hand, as a pluralist about kinds or concepts of intellectual virtue, I want to allow that there may be viable conceptions of intellectual virtue according to which the researcher's activity manifests an intellectual virtue. This includes a reliabilist conception, which says (roughly) that a trait of intellectual character is an intellectual virtue if and only if it is epistemically reliable, that is, if and only if it leads systematically to the formation of true beliefs and the avoidance of false beliefs.³¹ In connection with the present case, a reliabilist might argue that the researcher's creativity is an

intellectual virtue because of how it systematically aids her attempts to get to the truth, acquire understanding, and so on, even if she has no intrinsic interest in these ends. Again, I have no objection to the idea that this is *one* acceptable way of looking at the case.

However, it is not the *only* viable assessment. Many virtue epistemologists maintain that intellectual virtues are "personal excellences," that is, that they make their possessor good or excellent or admirable *qua person*—and that they do so in a distinctively epistemic-cum-personal way. While I cannot develop the view here, I have argued elsewhere that the basis of such value is a positive orientation toward epistemic goods—an orientation that is partly constituted by an element of intrinsic epistemic motivation.³² This motivation is part of what gives intellectual virtues understood as personal excellences the distinctive value they have. I conclude that insofar as we are committed to thinking of intellectual virtues in this way, we should insist that intellectual creativity has an intrinsic motivational dimension.³³

2.4. Affective Component

I turn now to a third dimension of intellectual creativity. In keeping with the relevant structural model, this virtue also involves the possession of certain *affective* dispositions. This includes, most notably, the disposition to take pleasure or delight in creative activity. A creative person enjoys conceiving of and giving expression to new ideas and possibilities. This is not to say that she always finds this activity pleasant. As I explain in more detail below, she may sometimes find it arduous and uncomfortable. Rather, the claim is that there exists a kind of agreement or complementarity between the creative person's motivational states and her affective states: she desires or is committed to reaching the truth, this desire prompts her to engage in creative intellectual activity, and she finds this activity pleasing or enjoyable. This requirement is intended to rule out an epistemic version of Aristotle's "continent man" (in Book VII of the *Nicomachean Ethics*), that is, a person who desires to reach the truth, engages in creative intellectual activity as a result, but generally finds this activity dull, painful, or otherwise displeasing.

That creative people should find pleasure in creative activity fits with (8) above and several extant theoretical treatments of creativity. Intuitively, a brilliant and creative scientist or teacher is enthusiastic about his work; he takes delight in and is uplifted by identifying new ways of thinking, making unexpected connections, or arriving at innovative solutions. This view is also supported by well-known empirical research on creativity by psychologist Mihaly Csikszentmihalyi (1996: Ch. 5)

and others who identify pleasure in creative activity as one of the most salient and universal dispositions of creative persons, including creative persons engaged in epistemic pursuits.³⁴

Thinking of intellectual creativity as involving certain positive affects is consistent with the familiar observation that the creative process is often difficult or painful.³⁵ In fact, given the nature of the skill component of intellectual creativity, intellectually creative persons can probably expect to experience at least some pain or discomfort as a result of their creative activity. First, the kind of intellectual sensitivity that comes with being able to see things differently or to make new connections may often be accompanied by a broader sensitivity or awareness that can be emotionally challenging or taxing. Second, persons who frequently go against the intellectual grain or make "outside the box" conjectures can expect to confront a fair amount of incredulity—if not outright scorn—from their peers, which can be a further source of discomfort or struggle. At a minimum, creative thinkers do not enjoy the comforts of conformity. Third, the very activity of thinking differently or conceiving of new or unexpected ideas can be difficult. Such activity often involves significant intellectual stretching. It can be slow and frustrating, proceeding in fits and starts. Therefore, while not a required or defining feature of intellectual creativity, negative affective states like these can often accompany its exercise.³⁶ But again this is wholly consistent with the claim that in other respects an intellectual creative person finds creative activity enjoyable and invigorating.

2.5. Judgment Component

I have argued that creativity conceived of as an intellectual virtue involves a skill dimension, a motivational dimension, and an affective dimension. While it can be tempting to think of these as jointly sufficient for the possession of intellectual creativity, we noted above that a person can be skilled and motivated to engage in certain forms of intellectually virtuous activity while nevertheless lacking a sense of when, to what extent, toward whom, and so on, to engage in this activity, that is, while lacking a critical form of practical *judgment*. I see no reason to think that the same is not true of intellectual creativity. It seems entirely possible that a person could be capable of engaging in intellectually creative activity, motivated to engage in this activity, but nevertheless have poor judgment about, say, when her creative thinking has gone too far or when it needs to be reigned in.

In light of this, I propose a further "judgment dimension" of intellectual creativity. Specifically, my view is that an intellectually creative person possesses well-calibrated judgment (an element of *phronesis*, as it were) when it comes to manifesting her creative ability in the sense that she

is reliable at recognizing situations that call for an exercise of this virtue and her creativity activity is informed and regulated by reason or rationality. As suggested above, this does not mean that intellectually creative activity is always deliberative or calculating. What it does mean, however, is that this activity fits with or is reasonable given the specific context at hand—that the intellectually creative person does not give up too easily, that she does not think too far outside the box, that she knows when to begin implementing or giving fuller expression to her creative insights, and so on.

While rational judgment seems like a salient feature of some intellectual virtues, it might be viewed as less relevant in the case of intellectual creativity. Indeed, as noted in claim (7) above, we often think of creativity as operating in a kind of muse-like fashion, such that its operation is not amenable to rational judgment or control. Similarly, some philosophers, including Plato, have described creativity as a largely *irrational* phenomenon.³⁷ These points might be taken to show that intellectual creativity, if it exists, lacks a judgment or rationality component on par with that of other intellectual virtues.

I have three main responses to this objection. First, here again I note that there may be other viable conceptions of intellectual virtue according to which creativity conceived of as a kind of brute or muse-like cognitive ability is an intellectual virtue. This is consistent with the conceptual pluralism endorsed above. The question is whether it would be a mistake to apply the term "creativity" to any intellectual attribute that does *not* function in this way, that is, whether it is essential to any form of personal creativity that it operate *outside* the purview of rational judgment or control. I see no antecedent reason to adopt such a restrictive position. In any case, that such a position is too demanding should be clear once the relationship between reason and imagination is examined in more detail below.

Second, the present account of intellectual creativity is consistent with the possibility that the brute or muse-like functioning of a person's imaginative faculty might regularly make a significant contribution to her creative activity. In this respect, intellectual creativity is akin to other intellectual virtues. A primary function of intellectual virtues is to harness and regulate the cognitive faculties that comprise a person's basic cognitive endowment. Attentiveness, for example, is characteristically a matter of *looking* and *listening* in a particular fashion. And intellectual carefulness often makes important demands on a person's use of *reason*, for example, by enabling this person to identify and avoid unwarranted inferences.

Creativity differs from these other virtues in that the cognitive faculty it most often or most saliently regulates is *imagination*. However, the manner in which it does so is entirely analogous to the

way that other intellectual virtues (e.g. attentiveness and carefulness) regulate other cognitive faculties (e.g. vision and reason). For instance, in the same way that an attentive person might focus on a visual experience that comes to him spontaneously or an intellectually careful person might question the apparent validity of a logical inference, an intellectually creative person might take note of and give expression to insights or ideas that "pop" into her mind or come to her "out of the blue." In doing so, she would be asserting rational control over the spontaneous products of her imagination in much the same way that an attentive might assert rational control over a spontaneous visual experience or an intellectually careful person over an output of intuitive reason. Again, my claim is not that an intellectually creative person wields complete rational control over her creative activity. It is rather that this activity is informed and constrained by her reason.

Third, it is also important to bear in mind a considerable body of recent empirical research that indicates that while creativity often seems to operate in sudden, unpredictable, or spontaneous ways, in fact creative insights often are the result of a creative person's (potentially very deliberate) *practice* of or *immersion* in creative activities and environments over long periods of time—activities and environments that shape and condition the creative person's imagination such that it eventually yields creative insights.³⁸ This perspective on the origin of creativity suggests that thinking of creativity as operating in an arational or muse-like way may be misleading and that creativity may be more amenable to rational effort and control than it might initially appear to be.

The foregoing replies also suggest a way of handling a further objection that might be raised against the claim that intellectual creativity has a judgment or rationality component. One could also appeal to the supposedly irrational or muse-like quality of creativity *simpliciter* to argue that intellectual creativity cannot be deliberately cultivated or taught. Given the received view that virtues, including intellectual virtues, arise at least partly through a process of practice and habituation, this might be viewed as grounds for denying that creativity of any sort can be an intellectual virtue. But this objection is no more forceful than the claim that, say, attentiveness cannot be an intellectual virtue because its operation is parasitic on that of cognitive faculties the basic functioning of which lies well outside the scope of rational judgment or control (i.e. we don't choose whether to have visual or auditory experiences). Rather, in the case of both intellectual creativity and attentiveness, the trait in question builds upon, informs, guides, and "infuses" with rationality one or more cognitive faculties whose default mode of operation is or can be entirely natural or brute.

In further support of the idea that intellectual creativity can be cultivated—that it isn't a mere cognitive talent or aptitude that a person is simply born with (or without)—it is worth touching on *how* it might be cultivated. While this topic can only be dealt with very briefly here, my suggestion is that if one were to regularly engage in the following sorts of practices over an extended period of time, it would not be unreasonable to expect some growth or progress along the creative dimensions described above (these activities could easily be modified as practices a teacher or parent might undertake to help his students or children experience similar progress):

- Learning about the lives, activities, and accomplishments of creative "exemplars" (e.g. biographies of these persons).
- Surrounding oneself with creative people—people who will stimulate and inspire one's own creative impulses and efforts.
- Frequenting creative environments and settings (e.g. museums or art galleries).
- Spending time learning about or interacting with creative objects (e.g. artworks, theories, technologies), studying and admiring their creative features.
- Creating time and opportunities for "free" thought, reflection, or experimentation.
- Practicing wondering and asking questions.
- Practicing "perspective-switching" or thinking about issues from multiple perspectives or standpoints.
- Practicing noticing interesting but subtle details and making meaningful but subtle connections between different objects, experiences, or ideas.
- Cultivating the technical skills necessary for competent performance in whatever creative domain one is interested in (e.g. brush technique for a painter, logic for a philosopher, higher math for a scientist, etc.).
- Learning more about the creative process, for example, by reading some of the many books or other resources that shed light on what creativity is or how it comes about.

The impact of such activities on a person's cultivation of intellectual creativity is ultimately an empirical matter. Nevertheless, while it is unlikely that they would be efficacious enough to turn a "naturally creative" person into a paragon of intellectual creativity, it does not seem unreasonable to think that if pursued intentionally, thoughtfully, over an extended period of time, and in relation to

the sorts *epistemic* activities and contexts discussed above, they might result in at least some "meaningful growth" in this virtue. By drawing attention to ways in which creativity can be actively pursued and practiced, these activities also lend further plausibility to the idea that creativity can be an intellectual virtue.

3. Conclusion

I began this chapter by noting that I intended to identify a single concept of creativity that (1) is present in ordinary and theoretical conceptions of creativity and (2) fits well with a familiar view of the structure of an intellectual virtue. I proceeded to sketch an account of "intellectual creativity." According to this account, intellectual creativity involves "organizing or rearranging a given set of elements" in a way that reflects certain "new or unexpected possibilities" identified by the creative person and instantiates a type of value proper to the creativity activity in question. Put simply, it involves the creation of something new and valuable on the basis of a creative insight. Moreover, as intellectual creativity, it involves engaging in such activity within the epistemic domain, that is, in the context of pursuing or transmitting epistemic goods. As such, examples of intellectual creativity include a scientist's formulation of an innovative and promising theory or a teacher's novel but illuminating way of organizing a body of material. In addition to possessing the kind of skill just noted, an intellectually creative person must also be motivated to use this skill in the service of epistemic ends, this motivation must have an intrinsic element, and it must be accompanied by certain corresponding affections (e.g. enjoyment of creative activity). Finally, intellectual creativity involves an element of practical judgment or rationality: a person who possesses this virtue has a good sense of when it should be exercised, in what way, for how long, etc.

This account clearly and straightforwardly conforms to the four-dimensional structural model sketched earlier in the paper. As such, the trait it describes can be viewed as an intellectual virtue on par with other intellectual virtues. The account also makes sense of several intuitive judgments about creativity (viz. the judgments in (1) – (8) above) and several additional theoretical considerations drawn from philosophy and psychology. We are, then, finally in a position to affirm a positive response to the question posed at the outset of this chapter: creativity *is* an intellectual virtue; or, more precisely, there is a reasonably familiar and plausible concept of creativity that picks out an intellectual virtue. While virtue epistemologists have paid relatively little attention to creativity, this inattention would appear to be unwarranted. 40

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¹ For recent treatments see Battaly (2008), Roberts and Wood (2007), and Baehr (2011).

² For instance, it does not appear on the lists of intellectual virtues found in Montmarquet (1993: viii-ix, 23), Roberts and Wood (2007: 7, Ch. 3), Zagzebski (1996: 21, 114), or Baehr (2011: 1-2). Zagzebski does offer some extended discussions of creativity, which suffice to show that she thinks of it as an intellectual virtue; however, she does not probe its nature or structure in much depth. And, in fact, what interests her most about creativity are the ways in which it seems *not* to conform to her model of intellectual virtue (see esp. pp. 123-5, 182-3). Similarly, in my (2011), I include creativity in an overall taxonomy of intellectual virtues (21) and briefly discuss whether it conforms to my own model of intellectual virtue (106-8), but do not give it nearly the treatment that I give other virtues like open-mindedness and intellectual courage.

³ See (Zagzebski 1996: 168-76) and my (2011: Ch. 6).

⁴ For relevant discussions, see Balkin (1990: 29) and Kieran (2014a: 209-14).

⁵ See Schaffer (1994).

⁶ See Kieran (2014b: 142-3) and Gaut (2014).

⁷ See Craig and Deretchin (2010).

⁸ For similar views, see Kaufmann (2003), Csikszentmihalyi (1996: 25), and Balkin (1990: 29).

⁹ I develop this model at length in my (2015). Here I offer only a brief overview. The model overlaps with the account of "thinking dispositions" in Ritchhart (2002). As I explain in (2015), the model also appears to enjoy broad implicit acceptance within much of virtue epistemology.

¹⁰ See my (2011: Ch. 8).

¹¹ See, for example, Zagzebski (1996), Roberts and Wood (2007), Montmarquet (1993), and Baehr (2011).

¹² For a development of this point, see my (2011: 99-102).

¹³ See Perkins and Tishman (2001).

¹⁴ For more on this point, see Roberts and Wood (2007: 305).

¹⁵ See Balkin (1990: 29-30), Young (1985), and Gaut (2014: 272).

¹⁶ While this point is widely embraced in the philosophical and psychological literature on creativity, there are difficult questions surrounding the sense in which the products of creativity must be "new" and related putative features of creativity. For more on these issues, see Gaut (2010: 1039-41; 2014: 272), Kieran (2014a: 204; 2014b: 126), Kaufman (2003: 237-9, 241-27), Mumford (2003: 110), Young (1985: 82-6), and Nickerson (1999: 393-4).

¹⁷ See Balkin (1990: 30), Gaut (2010: 1039-41; 2014: 272), Kieran (2014: 204, 228-9), Niu and Sternberg (2002: 272), Young (1985: 86-7), (Nickerson 1999: 392-3), and Runco (2012: 92).

- ¹⁸ See, Niu and Sternberg (2002: 272-3), Stokes (2014), and Gaut (2010: 1034, 1042-4). As Gaut discusses, a classic treatment of this issue can be found in Kant's *Critique of the Power of Judgment*, esp. sections 43-50.
- ¹⁹ See Balkin (1990: 30).
- ²⁰ See Csikszentmihalyi (1996: 28) and Ward, Smith, and Finke (1999: 194-5).
- ²¹ See Zagzebski (1996: 123-5) and Gaut (2012: 259-60). Gaut traces this way of thinking about creativity to discussions in Plato's *Ion* and *Phaedrus*. A similar view can be found at 22c in Plato's *Apology*.
- ²² See Kieran (2014: 208-9), Shaw (1994), and Csikszentmihalyi (1996: Chs. 3, 5).
- ²³ As will become clear momentarily, the skill dimension of intellectual creativity is a complicated matter. As a result, I will have to leave several important questions largely unexplored.
- ²⁴ For a related discussion of the skill (or ability) component of creativity, see Gaut (2014: 272-3). For more on the point that creativity is domain-specific, see Gardner (1994: 145).
- ²⁵ For partially overlapping accounts of the cognitive dimension of creative ability, see (Balkin 1990: 30), Ward, Smith, and Finke (1999), and Csikszentmihalyi (1996: 28).
- ²⁶ For a similar view, see Rhodes (1961: 305, 309) and Csikszentmihalyi (1996: 77). This feature of the account also goes some way toward accommodating an anti-luck condition on creativity defended by Gaut in (2014: 272-3). On the present view, a creative "product" (i.e. a product the coming-to-be of which manifests creativity) cannot emerge accidentally from a person's creative activity. Rather, it must be a "reflection" of the creative person's insight, which in turn is a kind of skill or ability. Accordingly, it makes sense to say, on the present view, that the coming-to-be of creative products must be attributable to the skills or abilities of a creative person (i.e. must not be a matter of luck).
- ²⁷ For an overview of different ways in which this evaluative dimension of creativity has been conceived of by psychologists, see Runco (2012). For related views, see the works referenced in note [8] above.
- ²⁸ For an example that illustrates this kind of possibility, see Csikszentmihalyi's discussion of Darwin in (1996: 80-81).
- ²⁹ For discussions of creativity and intrinsic motivation consistent with this picture, see Mumford (2003: 112), Amabile (1996), Niu and Sternberg (2002: 272), Csikszentmihalyi (1996: 113), Kieran (2014b: 128-33), and Gaut (2014: 272).
- ³⁰ For a more in-depth discussion of this issue, see my (2011: Ch. 6).
- ³¹ See, for example, Driver (2003).
- ³² See my (2011: Chs. 6-7). For a similar view, defended in relation to an account of moral virtue, see Adams (2006).
- ³³ For a similar response to a similar concern, see Kieran (2014b: 136-40).
- ³⁴ Csikszentmihalyi remarks: "Perhaps the most important quality, the one that is most consistently present in all creative individuals, is the ability to enjoy the process of creation for its own sake" (1996: 75). See also Kieran (2014a: 208-9) and Shaw (1994).
- ³⁵ This is distinct from the question of whether creative persons tend to be depressed or otherwise unhappy. To the extent that they do, this need not bear one way or another on whether they find the

creative process difficult in the ways just indicated. For a discussion of creativity and "ill-being," see Kieran (2014a).

³⁶ See Balkin (1990: 30).

³⁸ See, for example, Csikszentmihalyi (1996).

⁴⁰ [Acknowledgements.]

³⁷ Zagzebski's discussion of creativity in (1996: 123-5) suggests that, while perhaps not *irrational*, creativity typically functions *arationally* or outside the purview of rational control. For discussions of this and related issues, see Gaut (2012: 259-63) and Kieran (2014a: 209-14).

³⁹ The one intuitive judgment that appeared to pose a problem for the account was (7), which underscores the muse-like quality of creativity. However, we saw above that, at least on one natural understanding of this quality, it can be accommodated by the present account of intellectual creativity.