# The Gold Standard for Assessing Creativity

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### ABSTRACT

*The most widely used creativity assessments are divergent thinking tests, but these and other popular creativity measures have been shown to have little validity. The Consensual Assessment Technique is a powerful tool used by creativity researchers in which panels of expert judges are asked to rate the creativity of creative products such as stories, collages, poems, and other artifacts. The Consensual Assessment Technique is based on the idea that the best measure of the creativity of a work of art, a theory, a research proposal, or any other artifact is the combined assessment of experts in that field. Unlike other measures of creativity, the Consensual Assessment Technique is not based on any particular theory of creativity, which means that its validity (which has been well established empirically) is not dependent upon the validity of any particular theory of creativity. The Consensual Assessment Technique has been deemed the “gold standard” in creativity research and can be very useful in creativity assessment in higher education.*

*Keywords: ConsensualAssessment Technique, Creative Products, Creativity Research, Divergent Thinking Tests, Gold Standard*

### INTRODUCTION

Assessment of creativity presents a unique challenge in higher education. Although there are tools on the market for assessing creativ- ity, most are designed for young children, and all tend either to lack sufficient validity and reliability or to assess only rather trivial as- pects of creativity (or, in many cases, both). If creativity is to be assessed in college settings in a meaningful way, divergent-thinking tests like the Torrance Tests of Creative Thinking and other commonly used creativity tests are inadequate because they fail to meet even the

loosest standards of validity (Baer, 2008, 2009, 2011a, 2011b). Self-report measures of creativ- ityandglobalassessmentsofstudents’creativity by others (such as teachers) have also failed to demonstrate sufficient validity to be trusted for most uses. (Baer, 1993; Kaufman, Plucker, & Baer, 2008). Despite the importance of creativ- ity, its assessment has proven to be extremely difficult (Baer, 2011c, 2011d).

The ConsensualAssessment Techniqueisa fairly new method of measuring creativity that could open up new avenues for creativity as- sessmentinhighereducation. First proposedby Teresa Amabile in 1982 and further developed

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by her and other researchers in the last quarter century (Amabile, 1982, 1983, 1996; Baer, 1993, 1994a, 1994b; Baer, Kaufman,& Gentile, 2004; Hennessey, 1994; Kaufman, Baer, Cole, & Sexton, 2008; Kaufman, Baer, Cropley, & Reiter-Palmon, in press; Kaufman, Baer, & Skidmore, 2013; Kaufman, Cole,& Baer, 2009), the Consensual Assessment Technique is now a well validated tool for assessing creativity. It hasbeencalledthe“goldstandard” ofcreativity assessment (Carson, 2006), but its use has been limited primarily to research settings. It can be used in any field; for example, it can be used for judging the creativity of (a) students’ research designs or theories in science, (b) their artistic creations and their musical compositions, or (c) the poems, stories, and essays that they write. It therefore has enormous potential for assessing creativity in higher education settings.

### BACKGROUND

Why do you believe that Van Gogh’s paintings of sunflowers are creative? On what basis do you judge the special theory of relativity to be highlycreative? Whydoyouthink Shakespeare was a more creative dramatist than Marlowe? And how would you judge the creativity of some recent ten- and eleven-dimensional string theories?

You may be comfortable answering some of these questions, but unless you are truly a Renaissance person, it’s unlikely that you feel qualified to make a defensible response to all four of them. And even though you might know enough about, say, the works of Shakespeare and Marlowe to give an informed opinion, does your opinion really “count” as much as the opinions of recognized experts in the field of English literature?

How is creativity judged at the highest levels? Why are some works of art treasured and others forgotten? Why do some theories, compositions, books, and inventions win prizes? These kinds of decisions aren’t based on a procedure or rubric that awards points for different attributes of a painting, composition,

or theory. There is no test to determine which historian’stheories, whichbiochemist’smodels, or which screenwriter’s movies are the most creative. Nobel Prize committees don’t apply rubrics, complete checklists, or score tests. What do they do? They ask experts. The most valid assessment of the creativity of an idea or creation in any field is the collective judgment of recognized experts in that field. And while it’s true thatexpertsindifferenttimesandplaces may come to different conclusions (and pity the unfortunate artists and scientists whose genius is only recognized when it is too late for them to enjoy their posthumous fame), at any given time, the best judgment one can make of the creativity of anyone’s ideas, poems, theories, artworks, compositions, or other creations is the overall judgment of experts in their field1.

The Consensual Assessment Technique is based on the rather simple idea that the best measure of the creativity of a work of art, a theory, or any other artifact is the combined assessment of experts in that field. Whether one is selecting a short story for a prestigious award or judging the creativity of the painting in an undergraduate art show, one doesn’t compute a creativity score by following some checklist or applyingageneralcreativity-assessmentrubric. The most valid judgments of the creativity of such artifacts that can be produced -- imperfect though these may be -- are the combined opin- ions of experts in the field. That’s what most prize committees do (which is why only the opinionsofafewexpertsmatterwhenchoosing, say, thewinnerofthe Fields Medalinmathemat- ics -- the opinions of the rest of us just don’t count). The ConsensualAssessment Technique uses essentially the same procedureto judge the creativity of more everyday creations.

Creativity assessment is made difficult by manythings, not the least ofwhicharedisagree- ments about the nature of creativity. One of the mostfundamentalquestionsincreativitytheory and research is the issue of domain specificity. Are the skills, talents, personality characteris- tics, ways of thinking, and other determinants of creative performance *general-purpose* traits

that a person possessing them can bring to bear on any kind of task? Can one’s creativity as a composer of music help her produce more creative paintings? Can one’s creativity as a chef help him write more creative short stories? Is a creative biologist likely also to be rather creative as a teacher, a poet, and a dancer? Or, on the other hand, is creativity quite *domain specific*, such that whatever leads to creativity in one domain may be different from that which leads to creativity in other domains?

In the only Point-Counterpoint exchange in its history, the *Creativity Research Journal* asked two leading researchers in the field to make the case for these opposing conceptu- alizations of creativity (Baer, 1998a; Plucker, 1998). Thisissueremainsunresolved(forrecent developments, see Baer, 2012, 2013a, 2013b, 2013c, 2013d; Baer& Kaufman, 2005; Kaufman & Baer, 2005a), and because most creativity tests are tied to one or the other of these models (almost all assume domain-generality, which until recent years was the most commonly ac- cepted hypothesis), the validity of creativity assessment is tied to the validity of particular models of creativity (in addition to all the usual issues that validity raises regarding any test).

Unlike just about every other technique for creativity assessment, the Consensual As- sessment Technique is *not* tied to any particular theory of creativity2. It works equally well no matter how the domain generality/specificity issue may one day be resolved (or not resolved; as in many contentious issues, the truth is prob- ably somewhere in between this polarity, and the most likely resolution is perhaps a hierar- chical model of some type that includes both domain-general and domain-specific features, such as the theory proposed by Kaufman and Baer (2005b; see also Baer & Kaufman, 2005)). The ConsensualAssessment Techniqueisbased on *actual creative performances or artifacts*, and it mimics the way creativity is assessed in the “real world.” This approach is not without limitations, however. The Consensual Assess- ment Technique relies on comparisons of levels of creativity *within a particular group*, and it is therefore not possible to create any kind of

standardized scoring using Consensual As- sessment Technique ratings that might allow comparisons to be made across settings. Its widest use to date has been in research, but it can also be used for many kinds of assessment in higher education, as will be explained below.

### PROCEDURES FOR USING THE CONSENSUAL

**ASSESSMENT TECHNIQUE**

The basic technique is quite simple:

1. Subjects are asked to create something (e.g., a poem, a short story, a collage, a composition, an experimental design);
2. Experts in the domain in question are then askedtoevaluatethecreativityofthethings they have made.

Theexpertsworkindependentlyanddonot influence one another’s judgments in any way. The most common kinds of tasks have been writing poems, creating collages, and writing short stories, but the potential range of creative products that one could use is quite wide. No at- temptismadetomeasuresomeskill, attribute, or dispositionthatis *theoreticallylinked* tocreativ- ity; instead, it is the *actual* creativity of things that subjects have produced that is assessed. The focus is therefore on creative products, not creativity-relevant talents or attributes that are hypothesized to influence creativity. It is the product or performance itself that is of interest. As Csikszentmihalyi(1999) wrote,“Ifcreativity is to have a useful meaning, it must refer to a process that results in an idea or product that is recognized and adopted by others. Originality, freshnessofperception, anddivergent-thinking ability are all well and good in their own right, as desirable personal traits. But without some sort of public recognition they do not constitute creativity. . . The underlying assumption [in all creativity tests] is that an objective quality called ‘creativity’ is revealed in the products, and that judges and raters can recognize it” (p. 314). So instead of trying to measure things

that might be associated with creativity or that mightbepredictiveofcreativity, the Consensual Assessment Technique goes right to the heart of creativity by looking at the creative (or not-so- creative) products that subjects have produced. Here’s the basic Consensual Assessment Technique procedure: Subjects are given some basic instructions and, where necessary materials, for creating some kind of product. All subjects are given the same materials and instructions. Then a group of experts, each workingindependentlyofoneanother, assesses the creativity of those creations. In one study, for example, “students were given a line draw- ing of a girl and a boy . . . [and] asked to write an original story in which the boy and the girl played some part” (Baer, 1994a, p. 39). Experts in the area of children’s writing were then asked to rate the creativity of the stories on a 1.0-to-

5.0 scale. (The range of the scale is a matter of choice, but should have at least three score points so that there can be some diversity of ratings. Typically judges are free to use frac- tions if they choose -- e.g., a judge might give a creativity rating of 3.5 -- but in practice, few judges actually employ fractions even when the option exists.) The judges are *not* asked to explain or defend their ratings in any way, and it is important that no such instructions be given. Judges are simply instructed to use their expert sense of what is creative in the domain in question to rate the creativity of the products in relation to one another. That is, the ratings can be compared only *within* the pool of artifacts being judged by a particular panel of experts. High or low levels of creativity, as revealed by the Consensual Assessment Technique, refer to differences within the group of artifacts judged, not in comparison to any external standard. Judges are asked to use the full scale (that is, not to rate all the artifacts as 1s or 2s, or all as 4s or 5s. The goal is to get ratings of the *com- parative* creativity of the things being judged. For this reason, a poem that might be judged to be highly creativity in one group of rather pedestrian poems might receive a much lower creativity rating if it were included in a group of much more creative poems.

### VALIDITY AND RELIABILITY

The ConsensualAssessment Techniqueassesses creativity at all levels -- everyday creativity as well as creativity at the highest levels -- in the samewaythatcreativityisassessedatthegenius level, by asking experts in that field. This is the standard against which any other judgment of creativity would be measured. Rather than use a test, a rubric, or some other device to approxi- mate the judgments of experts, the Consensual Assessment Techniquegoesdirectlytothemost validyardstick, theexpertsinagivendomain. It is of course true that experts don’t always agree and expert opinion may change over time, but at any point in time there is no more objective or valid measure of the creativity of a work of art than the collective judgments of artists and art critics, just as there is no more valid measure of the creativity of a scientific theory than the collective opinions of scientists working in that field.Andforthemoreeveryday, garden-variety creativity of most creativity research and most creativity assessments in higher education, the fact that fields may experience paradigm shifts over time is of little significance because few if any of the products being judged will be at the cutting edge of a domain.

But do experts agree? Are they of one opinion regarding which poems, collages, theories, etc. are the most and least creative? A very large number of studies have shown that they consistently *do* agree, and to a remarkable degree (especially when judging everyday, garden-variety creativity), although of course they do not agree completely (which is why a *group* of experts, working independently, is needed). Inter-rater reliability using the Consensual Assessment Technique is typically measured using Cronbach’s coefficient alpha, the Spearman-Brownpredictionformula, or the intraclass correlation method. These methods generally yield similar inter-rater reliability es- timates.Amabile(1983) describedaseriesof 21 studies of artistic (collage-making) and verbal (poetry-writingandstory-telling) creativity. The inter-rater reliabilities rangedfrom.72 to .93. In hermorerecentworkAmabile(1996) hasfound

a similar range of inter-rater reliability correla- tions (from .70 to .89), and other researchers have generally reported similar inter-rater reli- abilities among expert judges, typically in the

.70-to-.90 range (e.g., Baer, 1993, 1997, 1998b; Baer, Kaufman, & Gentile, 2004; Conti, Coon, & Amabile, 1996; Hennessey, 1994; Kaufman, et al., 2008; Runco, 1989). Just as longer tests generally have better reliability, the greater the number of judges who assess the products independently, the higher the overall inter-rater reliability correlations. The average number of expert judges reported by Amabile (1966) was just over 10, with a low of 2 and a high of 40. But perhaps these ratings are really judg- ments of something other than creativity. To find out,Amabile (1982, 1983) had raters judge creativity and also a number of other attributes of the products they were evaluating. For ex- ample, working with the artistic creativity task of collage-making, Amabile found that while experts tended to agree in their judgments of creativity, these creativity ratings were *not* the same as judgments of such attributes as technical goodness (correlation with creativ- ity ratings = .13), neatness (correlation with creativity ratings = -.26), or expression (cor- relation with creativity ratings = -.05). There were significant positive correlations with many other judgments, such as novel use of materials (correlation with creativity ratings

= .81), complexity (correlation with creativity ratings = .76), and aesthetic appeal (correlation with creativity ratings = .43), but these are all aspects of a collage that *should* be related to the creativity of that collage.Afactor analysis of 23 different ratings produced two factors, creativ- ity and technical goodness, and a similar study using poetry-writing produced similar results, with three factors emerging: creativity, style, and technical correctness (Amabile, 1983). So the creativity ratings obtained using the Consensual Assessment Technique have been shown to have good discriminant validity and to be assessments of *creativity,* not of unrelated attributes of the artifacts being judged.

ConsensualAssessment Technique ratings of stories, collages, poems, and many other

artifacts have been shown to be highly valid measures of creativity in their respective do- mains, but a caution is in order. The Consensual Assessment Techniquedoes *not* claimtoprovide evidence of more general creativity-relevant abilities, a topic about which there has been much debate (see, e.g.., Amabile, 1983, 1996; Baer, 1993, 1994a, 1996, 1998a, 2010; Conti,

Coon,&Amabile, 1996; Plucker, 1998; Plucker & Runco, 1998; Runco, 1987). Some have argued that such general creativity-relevant skills simply do not exist, and therefore there is nothing to measure and any creativity tests that purports to measure such a general skill cannot possibly be valid, which is perhaps why it has been so difficult to produce a valid creativity test of that kind (Baer, 2011d, 2013a, 2013b). This is to many people a counter-intuitive idea. *Of course* creativity (as a general skill or trait) exists, many will protest: we see it all the time. And there are many people who are creative in many areas, and others who seem to show little creativity in any endeavor. But this is exactly what one would expect if creativity were totally domain specific (that is, if creativity in one domain did not predict creativity in other domains). If creativity were totally domain specific, creativity in different domains would be *un*correlated (not negatively correlated). There would therefore be a normal distribution of creativity in each domain, and these abilities would be essentially randomly distributed across domains, with some people evidencingcreativityinmanyareas, mostpeople exhibiting varying levels of creativity across domains, and some people showing very little

creativity in any domain3.

If creativity were a general trait or set of skills that could be applied in any field (so that the *same* creativity-relevant skills could help a person be a more creative dramatist, a more creative chemist, or a more creative accoun- tant), then one could use one’s poetry-writing creativity to be a more creative chef. Feist (2004) commented on the long-standing (but now fading) assumption of domain generality of creativity:

*It is a very appealing, and ultimately firmly American, notion that a creative person could be creative in any domain he or she chose. All the person would have to do would be to decide where to apply her or his talents and efforts, practice or train a lot, and voila, you have cre- ative achievement. On this view, talent trumps domain and it really is somewhat arbitrary in which domain the creative achievement is expressed. Indeed, we often refer to people as “creative,” not as “a creative artist” or “cre- ative biologist”* (p. 57)*.*

Feist (2004) went on to dispute this view, however, arguing “that this is a rather naïve and ultimately false position and that creative talent is in fact domain specific. There are some generalizedmentalstrategiesandheuristicsthat do cut across domains, but creativity and tal- ent are usually not among the domain general skills” (p. 57).

The two competing theories -- domain generality and domain specificity -- make very different predictions regarding actual creative performance. Becausedomaingeneralityargues that the same creativity-relevant skills, traits, anddispositionsinfluencecreativeperformance across domains, domain generality predicts that people who are creative in one domain are likely to be creative in many domains. This has allowedresearcherstotestthosetheories. Here’s how one creativity researcher summarized how these predictions should differ:

*Domain generality would be supported by high intercorrelations among different creative behaviors and a common set of psychological descriptors for those behaviors, while domain specificity wouldbe supported byrelatively low correlations among different behaviors, and a diverging set of psychological descriptors of those behaviors.* (Ivcevic, 2007, p. 272)

This has been tested using Consensual Assessment Technique ratings of creativity in diverse domains, and these in fact show very

little domain generality. Correlations of ratings of subjects’creativity in different domains tend to hover near zero, especially if differences attributable to general intelligence is removed (Baer, 1992, 1993, 1998a, 2010; Han, 2003;

Kaufman& Baer, 2005a; Runco, 1989). Creativ- ity researchers are not in complete agreement on the question of how much domain generality there may be, and the best bet is probably on a hierarchical model of some kind (with some abilities contributing modestly to creativity across domains, others only to creativity with a given domain, and others only on specific tasks within a domain, such as poetry within the largerdomainofcreativewriting; see, e.g., Baer & Kaufman, 2005; Kaufman & Baer, 2005b). In research assessing the impact of a wide variety of interventions, training, or ex- perimentalconstraintsoncreativeperformance, Consensual Assessment Technique ratings have been shown to work well. The technique is not tied to any one theory of creativity, and because it is uncommitted (and therefore un- biased) regarding most of the big questions in creativity research, it can be used equally well by researchers on either side of most research questions. Consensual Assessment Technique ratings are also generally quite stable across time (Baer, 1994b), but they nonetheless re- spond well to real within-subject changes in

motivation. For example:

1. Amabile (1996) found in a series of studies that experimental conditions that make ex- trinsic constraints salient (such as offering rewards for completing a task, or leading subjects to expect that their work would be evaluated) leadstogenerallylowercreative performance;
2. Baer (1997, 1998b) discovered that this decrement in creative performance under conditionsofrewardorexpectedevaluation is much more prominent among girls than boys;
3. Baer (1994a) found that increases in skill based on training were very narrowly

domain-specific. Subjects trained using divergent-thinking exercises aimed in poetry-relevant skills wrote more creative poems, but not more creative short stories, than subjects who had not received such training.

This has made the Consensual Assessment Technique useful in assessing the impact of varying constraints on creative performance.

### GENDER, RACE, AND ETHNICITY AND THE CONSENSUAL ASSESSMENT TECHNIQUE

Most intelligence, aptitude, and achievement tests report different mean scores for different races, ethnicities, and sometimes genders. The validity of such assessments has been fiercely debated (see, e.g., Gould, 1981; Halpern, 2000; Herrnstein & Murray, 1994; Jacoby & Glauber- man, 1995; Pinker & Spelke, 2005), and we won’t enter that contentious arena. Consen- sual Assessment Technique scores, in contrast, show very *little* evidence of differences based on race/ethnicity. Kaufman, Baer, & Gentile (2004) conducted the largest study of this type. They performed three separate analyses of the creativity ratings of 103 poems, 104 fictional stories, and 103 personal narratives written by Caucasian, African American, Latino/a, and Asian eighth-grade students as a part of a study usingstudentworkcollectedbythe NationalAs- sessment of Educational Progress. Each poem, story, andnarrativewasratedforcreativityby 10 expertsinthoseareas. Therewerenosignificant African American-Caucasian differences, and no gender differences4, on any of the writing tasks. The only significant difference on any of the tasks was in poetry, where there were small but statistically significant differences between the Latino/a-Caucasian groups and Latino/a- Asian groups. Latr studies have confirme this (Kaufman, Baer, Agars, & Loomis, 2010).

### HOW THE CONSENSUAL ASSESSMENT TECHNIQUE IS USED

The Consensual Assessment Technique has been used in many ways:

1. Tocomparecreativeperformanceunderdif- ferent (intrinsic v. Extrinsic) motivational constraints (e.g., Amabile, 1983,1996);
2. Tomeasuretheimpactofteachingdifferent skills and content knowledge on creative performance (e.g., Baer, 1993, 2003);
3. To study how varying motivational con- straints influencethecreativityofboysand girls differently (e.g., Baer, 1997, 1998b);
4. To look for possible gender and ethnicity differences in creativity (e.g., Kaufman, Baer, & Gentile, 2004);
5. To compare and evaluate domain-general and domain-specific models of creativity (e.g., Baer, 1993; Conti, Coon, &Amabile, 1996; Runco, 1987; Ruscio, Whitney, & Amabile, 1998);
6. To study the relationship between process and product in creativity (e.g., Hennessey, 1994);
7. To look at creativity in cross-cultural set- tings (e.g., Niu, 2007; Niu & Sternberg, 2001);
8. To investigate the long-term stability of creativity in a given domain (e.g., Baer, 1994a); and
9. To analyze ways that people with different levels of expertise in a domain conceptual- ize creativity differently (e.g., Kaufman et al, 2008; Kaufman, Gentile,& Baer, 2005).

The ConsensualAssessment Techniquehas also been used to judge the creativity of such diversetasksasdramaticperformance(Myford, 1989), musical compositions (Hickey, 2001), mathematicalequationscreatedbychildrenand adolescents (Baer, 1993), captions written to pictures (Sternberg & Lubart, 1995), personal

narratives (Baer, Kaufman, & Gentile, 2002), and mathematical word problems (Baer, 1993). The standard format for the Consensual Assessment Technique is to have experts judge the creativity of products that have been cre- ated under identical conditions (with all sub- jects receiving the same instructions and time limits), but recent research has shown that the Consensual Assessment Technique also works when the things to be judged have been created under different conditions (Baer, Kaufman, & Gentile, 2004). This makes possible such uses as comparing how different prompts or assign- ments impact creative performance differently. One important caution: It can be tempt-

ing when using the Consensual Assessment Technique to use less-than-expert judges, because assembling panels of experts can be time-consuming and expensive. Recent re- search has shown, however, that, in most areas, experts’ judgments and those of novices in a domain do not match. Quasi-experts -- people who have experience working in the field but who have not quite reached what what might deem expert-level credentials -- can often be used successfully (Baer, Kaufman, & Riggs, 2009; Kaufman & Baer, 2012; Kaufman, Baer, & Cole, 2009)

### USING THE CONSENSUAL ASSESSMENT TECHNIQUE IN HIGHER EDUCATION

The Consensual Assessment Technique is not limited to use in fields most commonly associ- atedwithcreativity, suchastheartsandsciences. As Emerson (1837/1998) reminded us, “There are creative manners, there are creative actions, and creative words; manners, actions, words, that is, indicative of no custom or authority, but springing spontaneous from the mind’s own sense of good and fair” (p. 4; and four paragraphs later he adds “creative reading as well as creative writing” to the list). One might use the Consensual Assessment Technique to judge the creativity of just about anything in

which one finds imaginative or original work, such as wedding cakes, cartoons, or even the graffiti found on the walls of buildings.

To date, the Consensual Assessment Technique has not been widely used in higher education, except as a research tool. Although its primary use has been in research, it has also sometimes been used in elementary and secondary education to judge student creativity in a particular area (or several areas) for such purposes as admission to a program for gifted and talented students.

Here are a few arenas in which the Con- sensual Assessment Technique could be used in higher education:

1. **Research on the effectiveness of college majors or programs:** Colleges want to knowhowwelltheyaresucceedingintheir various missions (an interest accreditation boards share). Nurturing student creativity is a goal of some college programs, and in those areas the Consensual Assessment Technique could be helpful. For example, in a program in which students produce a portfolio of creative work, samples of students’ creations from different years in a program could be taken. A group of experts in that field could be asked to rate the creativity of the various creations (not knowing which students produced which work, or in what academic year the work was produced, of course). If the creativity ratings are higher the longer students are in a program -- a very easily computed statistic -- that is very strong evidence that the program is successfully nurturing student creativity. (One could also ask the expert judges to rate the artifacts on other dimensionsaswellascreativity, ofcourse);
2. **Selection for admission to competitive programs:** Colleges have long been using an informal Consensual Assessment Tech- nique for selecting students for programs in creative writing, music, art, theater, and other areas. Validation of the Consensual

Assessment Technique supports such se- lection techniques and can help guide their use. We know that it is important to use multiple judges; for the judges to make their creativity ratings independently; and for the judges to do what are in effect blind reviews -- that is, they should not know anythingaboutthecandidateotherthanthe work being judged. (This is why selections ofmusiciansthesedaysarenowoftendone with the candidate playing from behind a screen, so that other student characteristics

-- such as appearance, gender, race, etc. -- cannot be factors in the judges’ decisions);

1. **Evaluations of students in regular courses:** In many courses creativity is one aspect of students’ work that is to be evaluated, and in such cases it is often the most difficult evaluation professors need to make. Professors might find it helpful to ask colleagues who do not know the students to make independent judgments of the creativity of students’ work. This is a bit tricky because Consensual Assess- ment Technique ratings are always, in effect, norm-referenced ratings based on comparisons within the group of creations being judged. As such, a moderately cre- ative work that is part of a group of very uncreative works will earn top ratings, but the same work would receive low ratings in a group of very creative works. Because some classes have higher levels of creativ- ity than others, this could lead to unfair grading-on-the-curvekindsofassessments.

To get around this and to make the creativ- ity ratings more criterion-referenced, one can do what testing companies like the Educational Testing Service do to make sure different ver- sions of tests are of equal difficulty, and what holistic rating systems do to make sure that multiple raters are using the same standards. One needs to include in one’s sample of work someitemswhosecreativityhasbeenpreviously assessed and for which one has a creativity rat-

ing that one trusts. Including a handful of such items that one knows show varying levels of creativity allows one to make adjustments for thevaryingcreativityoftheworksbeingjudged. Rather than base one’s ratings on how well the students in the class perform in comparison to each other, one can use these extra, previously vetted works as one’s standards. If a student’s work receivesacreativityratingequaltoa work that one knows to be highly creative, then that is the “score” one would use, not how well it did in comparison to others in the class. (Of course, norm-referenced and criterion-referenced scores typically line up rather closely, but this technique avoids the danger of mis-judging a student’s creativity because of the varying creativity of the group of students who happen to be in her class.)

One can also use the Consensual Assess- ment Techniquetocomparetheworkofstudents at the beginning and the end of a course, as discussedaboveinthe *researchontheeffective- ness of college majors or programs* section if students will have produced several different works during the semester:

1. **Selecting winners of prizes, fellowships, and other honors:** Many colleges already use a procedure similar to that used by major prize committees to select win- ners of competitions -- that is, by having experts in the domain in question judge submissions. Following the procedures of the Consensual Assessment Technique ensures that this process is conducted in a fair and well validated manner. As noted above under *selection for admission to competitiveprograms*, it is importanttouse multiplejudges, forthejudgestomaketheir creativityratingsindependently, andforthe judges to make their judgments without knowing whose work is whose among the artifactsbeingjudged. Incompetitionssuch as these, in which some of the judges may know some of the candidates, blind review is especially important.

### CONCLUSION AND RECOMMENDATIONS

The Consensual Assessment Technique is a powerfultoolforassessingcreativity. Ithasbeen well validated and is used widely in creativity research. Unlike most “tests” of creativity, the Consensual Assessment Technique does not measure skills or traits that are hypothesized to be part of creative thinking or performance. The ConsensualAssessment Techniqueassesses actual creative performance.

The ConsensualAssessment Techniquehas manypotentialapplicationsinhighereducation assessment, but it is not without limitations and drawbacks. It is very resource intensive: assembling groups of expert judges is not simple and it may be expensive. And one can- not replace expert judges with novices (such as by having students judge one another’s work) unlessthestudentsthemselveshaveahighlevel of expertise. While gifted and highly creative students have been shown to rate creativity in ways very similar to experts, college students in general do not (Baer, Kaufman, & Riggs, 2009; Kaufman & Baer, 2012; Kaufman, Baer, & Cole, 2009; Kaufman, Baer, Cole, & Sexton, 2008; Kaufman, Gentile, & Baer, 2005).

The Consensual Assessment Technique is not linked to any particular theory of creativity, and its validity does not rise or fall with the success or failure of any theory. It has also been shown to be free of gender and race/ethnicity biases. It has great potential for creativity as- sessment in many areas of higher education.

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### ENDNOTES

1 Even within a given field, different experts might be more appropriate for judging dif- ferent kinds of works. For example, Pulitzer Prize committees might not be ideal judges of the creativity of compositions by 12-year-old writers; it might be better in that case to have writers and critics who also have familiarity with writings by students of that age serve as judges. Similarly, one might find judgments of the Academy of Motion Picture Arts and Sciences or the Directors Guild useful for judging the creativity of a film, but for judg- ing a film’s likely commercial success (or its entrepreneurial film-making creativity) one might instead consult the People’s Choice Awards.

2 Tests of divergent thinking -- the most com- monlyusedtoolsformeasuringcreativity-- are examples of a kind of creativity test that *is* anchored to a particular theory of creativity. Divergent thinking tests that ask test-takers to do things like list as many uses for empty tin cans as they can in a short period of time. The theory behind these tests claims that (a) this kind of thinking is important in creativ- ity and (b) the particular content or domain

from which the exercise is drawn does not matter. If this kind of divergent thinking is an important component of creativity, *and* if it doesn’t matter what domain one uses to test it, then divergent thinking tests might indeed be valid measures of creativity. But if either the divergent thinking theory is wrong or the domain generality theory of creativity is wrong, then these tests cannot be valid ways to assess creativity. In contrast, the validity of the Consensual Assessment Technique is not dependent on the validity of any theory of creativity. It is equally valid no matter which creativity theories prove to be most useful or widely accepted, and because it is not linked to any theory, it can also be used to compare and evaluate theories.

3 Thisargumentisparalleltothatmadeby Gard- ner’s (1983) Theoryof Multiple Intelligences. Gardner argues that his intelligences are orthogonal, and therefore one should expect essentially zero correlations between any two intelligences. That does not mean that there will not be some people who have a great deal of all eight intelligences, however (or some who might score low on all eight). It simply means that the intelligences are randomly dis- tributed, and one’s level of intelligence in one area does not in any way predict one’s levels of intelligence in any other areas. Creativity, it has been argued, shows even more domain specificity than Gardner’s eight intelligences (Baer, 1993).

4 This is in line with hundreds of studies of creativity using a variety of assessment tech- niques. Genderdifferencesinsuchstudiestend to be the exception, not the rule (Baer, 2005; Baer & Kaufman, 2005).