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COMMENTS AND CORRECTIONS

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This Correction focuses on issues surrounding definitions of creativity. No topic is more central to research on creativity. There is a clear need to "correct" at least one all-too-common oversight found in definitions within the creativity literature.

Not surprisingly, nearly every article in the *CRJ* at least briefly defines creativity. The problem is that many articles cite books or articles from the 1990s or, at best, the 1980s, when defining creativity, when, in fact, the definition they are using—which is broadly accepted and thus can be called the *standard definition*—actually has a long history. It is a shame that the early discussions of the standard definition are ignored. Some of them are rich and remain entirely relevant. They are cited in the following.

The overarching purpose of all Corrections is to remind researchers that the field of creativity studies predates online literature searches. Although the science of creativity is, in some ways, unique and unlike other scientific endeavors (see Runco, in press, for details), the field of creativity studies relies on the scientific method and is implicitly collaborative. Research builds on previous research. Originality is a core value in creativity studies, but this does not justify ignoring relevant research that was done previously. Good research is integrated into the larger field, citing what came before, in addition its originality and utility. Corrections in the *CRJ* ensure that due credit is given to earlier research.

The field of creativity studies has roots in the 1950s, 1940s, and 1930s. *Domain differences* were examined in the 1930s (e.g., Patrick, 1935, 1937, 1938), and social criteria of creativity relying on *consensual agreement* go back at least to 1953 (Stein, 1953), just to name two examples. When was the standard definition of creativity first proposed?

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THE STANDARD DEFINITION

The standard definition is bipartite: Creativity requires both originality and effectiveness. Are two criteria really necessary?

Originality is undoubtedly required. It is often labeled novelty, but whatever the label, if something is not unusual, novel, or unique, it is commonplace, mundane, or conventional. It is not original, and therefore not creative.

Originality is vital for creativity but is not sufficient. Ideas and products that are merely original might very well be useless. They may be unique or uncommon for good reason! Originality can be found in the word salad of a psychotic and can be produced by monkeys on word processors. A truly random process will often generate something that is merely original.

So again, originality is not alone sufficient for creativity. Original things must be effective to be creative. Like originality, effectiveness takes various forms. It may take the form of (and be labeled as) *usefulness, fit,* or *appropriateness*. The Inaugural Editorial of the *CRJ,* which appeared nearly 25 years ago, referred to *utility* when describing what kind of research would be published (Runco, 1988). Creative research on creativity would be published, and the standard definition was used: "Originality is vital, but must be balanced with fit and appropriateness" (Runco, 1988, p. 4).

Effectiveness may take the form of value. This label is quite clear in the economic research on creativity; it describes how original and valuable products and ideas depend on the current market, and more specifically on the costs and benefits of contrarianism (i.e., originality; Rubenson, 1991; Rubenson & Runco, 1992, 1995; Sternberg & Lubart, 1991). Value was also recognized by Bethune—in 1839! He described value as:

> The stability of the fabric which gives perpetuity to the decoration. To mingle the useful with the beautiful, is

> the highest style of art. The one adds grace, the other value. It would be a poor summing up of a life upon earth, to find that all the powers of an immortal intellect had been devoted to the amusement of idle hours, or the excitement of empty mirth, or even the mere gratification of taste, without a single effort to make men wiser and better and happier. If the examination be made, it will be found, that those works of Genius are the most appreciated, which are the most pregnant with truth, which give us the best illustrations of nature, the best pictures of the human heart, the best maxims of life, in a word, which are the most useful. (p. 61)

Bethune referred to art, and genius, but he assumed that creativity played a role in each. Continuing,

> Yet familiar as the effects of Genius are, it is not easy to define what Genius is. The etymology of the term will, however, assist us. It is derived from the verb, signifying to engender or create, because it has the quality of originating new combinations of thought, and of presenting them with great clearness and force. Originality of conception, and energy of expression, are essential to Genius. (p. 59)

It was common to conflate creativity and genius in Bethune's (1839) era, and, in fact, that same blend can be seen well into the 1900s.

Bethune (1839) quoted Shakespeare when describing the two facets of genius:

> The poet's eye, in a fine frenzy rolling,
> Doth glace from heaven to earth, from earth to heaven—
> And as imagination bodies forth
> The forms of things unknown, the poet's pen
> Turns them to shape, and gives to airy nothing
> A local habitation and a name. (p. 59)

This is from *A Midsummer Night's Dream* (Act 5, Scene 1, which was probably written after 1590 but before 1596) and not surprisingly is only two lines below what is probably the Shakespearean quotation most often cited in creativity research, namely, "The lunatic, lover, and the poet/Are of imagination all compact."

The poetic description of imagination finding "a local habituation and a name" is as suggestive as it is artful, but it is not a clear statement of originality and effectiveness. Thus, neither Shakespeare nor Bethune (1839) should be credited with the original standard definition of creativity. They seemed to be thinking about two requirements that parallel originality and effectiveness, but their wording leaves a fair bit of ambiguity. In fact, some of the difficulty in finding the first occurrence of the *standard definition* is that the word *creativity* has a fairly short history.

Royce (1898) was on the right track, and, like Bethune (1839), he worked before 1900:

> In general, whether with or without deliberation, the effort to make the unlike results in a pretty constant and subtle modification of the style of the original habits, a modification small, but visible, and due, if you like, to suggestion. Here is a blending of one's own style with the results of outer stimulus. It is just such blending that, in some arts and even in some sort of scientific work, constitutes valuable inventiveness. (p. 145)

Royce's (1898) mention of "variation" is quite interesting, given the ongoing debate about blind variation and selective retention as requirements for the creative process (Gabora, 2011; Runco, 2007a; Simonton, 2007; Weisberg & Hass, 2007), but what is most pertinent is the phrase "valuable inventiveness." Still, Royce did not use the words *originality, creativity*, nor even *usefulness*, and although invention is sometimes associated with creativity, it is certainly not a synonym (Runco, 2007b).

Hutchinson (1931, p. 393) did use the word *creativity* and included "practicality" in his view of it. In his words, "In general. such contributions bear on the implications of creative thought for ethics, rather than on the technique of attaining creativeness itself. From *a more practical standpoint*... creative thought makes transformations in the world" (emphasis added). That "practical standpoint" could be the perspective of the author (and not the practicality of the creative act), but Hutchinson tied it to events "in the world." Presumably, these are realistic or useful in or for our lives. It could be that he was referring to a method for finding creative ideas (the transformation of what already exists "in the world"), in which case we still do not have an unambiguous proposal for the standard definition of creativity.

It is often a good tactic to work backwards. With that in mind: The two-criterion view was already the standard definition in the 1960s. Bruner (1962), for example, in one of the true classics in the field, described how creativity requires "effective surprise" (p. 18). Cropley (1967) pointed to the need for creative things to be "worthwhile" (p. 67) and reflect some "compelling" property (p. 21). Jackson and Messick (1965, p. 313) felt that products must be "appropriate" and Kneller (1965, p. 7) stated that products must be "relevant." Cattell and Butcher (1968) and Heinelt (1974) used the terms *pseudocreativity* and *quasicreativity* to describe products that were not worthwhile or effective. Thus we must look for the first presentation of the standard definition before 1960.

A second good tactic is to use base rates. This suggests a close examination of Institute for Personality and Social Research and the first generation of scholars committed to scientific research on creativity (see Helson, 1999). Indeed, it will come as no surprise to serious

students of creativity research that Barron (1955) mentioned the standard definition over 50 years ago. He wrote,

> A second criterion that must be met if a response is to be called original is that it must be to some extent adaptive to reality. The intent of this requirement is to exclude uncommon responses which are merely random, or which proceed from ignorance or delusion. (p. 479)

This quotation might be enough to credit Barron (1955) with the first explicit statement of the standard definition, but then again, "adaptation to reality" was in his discussion of originality and not creativity per se. In fact, Barron referred to two criteria, but one was a criterion for originality, not creativity. He wrote,

> The first criterion of an original response is that it should have a certain stated uncommonness in the particular group being studied. A familiar example of this in psychological practice is the definition of an original response to the Rorschach inkblots, the requirement there being that the response should, in the examiner's experience, occur no more often than once in 100 examinations. (pp. 478–479)

The title of Barron's (1955) paper was "The Disposition Towards Originality," and the two criteria he discussed were uncommonness and adaptation to reality. He was therefore right on target for effectiveness (or usefulness, utility, and value) but he was not explicit about how this all fits with creativity! Creativity was a concern for Barron (1955); he opened this article by criticizing the tendency

> to disembody the creative act and the creative process by limiting our inquiry to the creator's mental content at the moment of insight, forgetting that it is a highly organized system of responding that lies behind, the particular original response which, because of its validity, becomes an historical event. (p. 479)

He was interested in creativity, but did not define it. He defined originality instead.

Guilford (1950) is often credited with publishing the first compelling argument that creativity can be studied scientifically. How did he define creativity? In his own words:

> In its narrow sense, creativity refers to the abilities that are most characteristic of creative people. Creative abilities determine whether the individual has the power to exhibit creative behavior to a noteworthy degree. Whether or not the individual who has the requisite abilities will actually produce results of a creative nature will depend upon his motivational and temperamental traits. To the psychologist, the problem is as broad as the qualities that contribute significantly to creative productivity. In other words, the psychologist's problem is that of creative personality. (p. 444)

That is probably best viewed as a recommendation of what to study. It does not define creativity, other than tautologically "creativity is the characteristic of creative people."

Guilford (1950) did point to criteria for creativity when he stated that "the creative person has novel ideas. The degree of novelty of which the person is capable, or which he habitually exhibits... can be tested in terms of the frequency of uncommon, yet acceptable, responses to items" (p. 452). He thus emphasized originality and operationalized it as novelty and, even more precisely, in terms of uncommon behaviors.

What of the second part of the standard definition? Guilford (1950) did refer to *acceptable* ideas, the implication being that novelty by itself is not sufficient for creativity. He explored this point further when he wrote, "Creative work that is to be realistic or accepted must be done under some degree of evaluative restraint. Too much restraint, of course, is fatal to the birth of new ideas. The selection of surviving ideas, however, requires some evaluation" (p. 453). Thus, Guilford seemed to be assuming that creativity requires originality and effectiveness. He used the terms *realistic* and *acceptable* for the latter, which is slightly problematic, but still he was thinking about creativity in a fashion that is entirely consistent with the standard definition.

The reason *acceptable* is a problematic way of labeling the criterion of effectiveness is that it begs the question, "Acceptable for whom?" Long ago, Murray (1958) asked, "Who is to judge the judges? And the judges of the judges?" Simonton (in press) and Runco (2003) also saw the question of judges to be a part of issues of definition. Stein (1953) seemed to be aware of this issue and, for this reason, distinguished between the *internal and external frames of reference* that might be used when defining creativity.

As a matter of fact, to our reading, the first clear use of the standard definition seems to have been in an article on creativity and culture, written by Stein (1953). In his words,

> Let us start with a definition. The creative work is a novel work that is accepted as tenable or useful or satisfying by a group in some point in time . . . . By "novel" I mean that the creative product did not exist previously in precisely the same form . . . . The extent to which a work is novel depends on the extent to which it deviates from the traditional or the status quo. This may well depend on the nature of the problem that is attacked, the fund of knowledge or experience that exists in the field at the time, and the characteristics of the creative individual and those of the individuals with whom he [or she] is

> communicating. Often, in studying creativity, we tend to restrict ourselves to a study of the genius because the "distance" between what he [or she] has done and what has existed is quite marked . . . . In speaking of creativity, therefore, it is necessary to distinguish between internal and external frames of reference. (pp. 311–312)

Stein (1953) was the first to offer the standard definition in an entirely unambiguous fashion, and unlike his predecessors, he was without a doubt talking about creativity *per se*. He was not discussing originality, although novelty, and therefore originality, are vital for creativity, and he was not discussing genius, although he offered a useful perspective on it (the "distance").

Stein (1953) is also quoted in detail because he offered several other ideas that are still in use and were well ahead of their time. These include his ideas that (a) creative work tends to be useful for some group, and thus that social judgment is involved; (b) a creative insight "arises from a reintegration of already existing materials or knowledge, but when it is completed it contains elements that are new" (p. 311); and (c) it is important to separate personal from historical creativity (cf. Boden, 1994; Runco, 1996). Stein also foresaw that environments never have a completely predictable impact. Their influence is always dependent on the individual's perception. This view is usually described as a trait × state interaction and was clearly apparent in the early definition of *press* (one of the four strands of research identified by Rhodes, 1961). Stein was aware of the role of both sensitivity and problem finding ability ("The creative person has a lower threshold, or greater sensitivity, for the gaps or the lack of closure that exist in the environment" [p. 312]), recognized the benefits of broad attention and loose associations (cf. Dailey A. et al., 1997), and in 1953 was already studying domain differences, as is so common in creativity research today. Stein reported data from artists and chemists and concluded that creativity benefits from permeable cognitive structures, "for persons in one area (physics, for example) it may mean greater flexibility in the intellectual sphere, while for other... the artist, it appears as a greater flexibility in the emotional or affective sphere" (p. 313).

CONCLUSIONS

Although there were hints that creativity requires originality and usefulness in publications before 1900, it seems to us that Barron (1955), and especially Stein (1953), should be cited whenever the standard definition is used.

This does not imply that no further work is needed and that the standard definition is completely adequate. Important research is being done on several fronts. One involves the basis of judgments. The standard definition only pinpoints which criteria must be used; it does not say anything about who is to judge each, and who is to judge the judges.

Then there are questions about the number of criteria that should be used in a definition of creativity. The standard view points to two criteria, but perhaps there are more—or fewer! Simonton (in press) made a strong case for three criteria—*surprise* being the third—and Runco (in press) raised the possibility that only one criterion is needed. Simonton based his argument on guidelines from the U.S. Patent office; Runco felt that parsimony was the best guide. These two theories of creativity are easy to find in other issues of the *CRJ*.

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