

# Critical Thinking: The Nature of Critical and Creative Thought

By Richard Paul and Linda Elder

*The critical and creative functions of the mind are so interwoven that neither can be separated from the other without an essential loss to both.*

— Anonymus

To the untutored, creative and critical thinking often seem to be opposite forms of thought: the first based on irrational or unconscious forces, the second on rational and conscious processes; the first undirectable and unteachable, the second directable and teachable. Although there is no known way to generate creative geniuses, or to get students to produce novel, ground-breaking ideas, there are manifestations of creativity that we do not fully understand. The same is true of forms of criticality. To teach simultaneously for both creative and critical thinking requires focusing on these terms in practical, everyday contexts; keeping their central meanings in mind; and seeking insight into how they overlap and interact with one another. In understanding critical and creative thought truly and deeply, they are recognized as inseparable, integrated, and unitary. Creative thinking, especially, must be demystified and brought down to earth.

In learning new concepts, in making sense of our experience, in apprehending a new subject field or language, in reading, in writing, in speaking, and in listening, our minds engage in full-fledged (though commonplace) creative acts. To live productively, one needs to internalize and use intellectual standards to assess thinking (criticality). Individuals also need to generate—through creative acts of the mind—the products to be assessed.

That minds create meanings is not in doubt; whether they create meanings that are useful, insightful, or profound is. Imagination and reason are an inseparable team. They function best in tandem, like the right and left legs in walking or running. Studying either one separately only ensures that both remain mysterious and puzzling, or, just as unfortunate, are reduced to stereotype and caricature.

## The Inseparability of Critical and Creative Thought

For several reasons the relationship between criticality and creativity is commonly misunderstood. One reason is cultural, resulting largely from the mass media's portrayal of creative and critical persons. The media frequently represent the creative person as a cousin to the nutty professor, highly imaginative, spontaneous, emotional, and off-beat but often out of touch with everyday reality. The critical person, in turn, is often represented as given to faultfinding, skeptical, negative, captious, severe, and hypercritical.

These cultural stereotypes are not validated by precise use of the words *critical* and *creative*. For example, in *Webster's Dictionary of Synonyms*, the word *critical* implies an effort to see a thing clearly when applied to persons who judge and to their judgments. In such a true perception, not only the good in a judgment may be distinguished from the bad and the perfect from the imperfect, but also the perception as a whole may be fairly judged and valued. In *Webster's New World Dictionary*, the word *creative* has three interrelated meanings: 1. creating or able to create, 2. having or showing

imagination and artistic or intellectual inventiveness (creative writing), and 3. stimulating the imagination and inventive powers.

## Criticality Assesses; Creativity Originates

Critical and creative thought are both achievements of thought. Creativity masters a process of making or producing, criticality a process of assessing or judging. The very definition of the word *creative* implies a critical component (e.g., having or showing imagination and artistic or intellectual inventiveness). When engaged in high-quality thought, the mind must simultaneously produce and assess, generate and judge the products it fabricates. In short, sound thinking requires both imagination and intellectual standards.

In this column we elaborate on the essential idea that intellectual discipline and rigor are at home with originality and productivity and also that these supposed poles of thinking are inseparable aspects of excellence of thought. It is the nature of the mind to create thoughts, though the quality of that creation varies enormously from person to person, as well as from thought to thought. Achieving quality requires standards of quality—and hence, criticality.

All thinking is not of the same quality. High-quality thinking is thinking that does the job set for it. If thinking lacks a purpose—if it is aimless—it may chance upon something of value to the thinker. But more often it will simply wander into an endless stream of unanalyzed associations from one's unanalyzed past: "Hotdogs remind me of ballgames, ballgames remind me of Chicago, Chicago of my old neighborhood, my old neighborhood of my grandmother, of her pies, of having to eat what I didn't like, which reminds me..." Few people need training in aimless thinking such as this, or in daydreaming or fantasizing.

However, individuals often have trouble in purposeful thinking; especially purposeful thinking that requires posing problems and reasoning through intricacies. Such thinking requires both critical and creative thinking. Both are intimately connected to figuring things out. Indeed, all truly excellent thinking combines these two dimensions. Whenever thinking excels, it excels due to successful designing, originating, or producing results and outcomes appropriate to ends of that particular thinking. It has, in a word, a creative dimension.

To achieve any challenging end, though, *criteria* must be applied: gauges, models, principles, standards, or tests to use in judging that end. What's more, criteria must be applied in a judicious manner. One must continually monitor and assess how thinking is going, whether it is on the right track, whether it is sufficiently clear, accurate, consistent, relevant, deep, or broad for intended purposes.

When the mind thinks aimlessly, its energy and drive are typically low; its tendency is generally inert; its results are usually barren. But when thinking takes on a challenging task, the mind must come alive—ready itself for intellectual labor—until such time as it succeeds in originating, formulating, or producing what is necessary for the achievement of its goal. Intellectual work is essential to creating intellectual products, and that work, that production, presupposes judiciously applied *intellectual standards*. When this happens, creativity and criticality are interwoven into one seamless fabric.

Like the body, the mind has its own form of *fitness* or excellence. That fitness is caused by and reflected in activities performed in accordance with standards (criticality). A fit mind can engage successfully in fashioning, formulating, or producing intellectual products worthy of its challenging ends. To achieve this fitness, the mind must learn to take charge of itself; energize itself; press forward when difficulties emerge; proceed slowly and methodically when meticulousness is necessary; become attentive, reflective, and engrossed; circle back on a train of thought; and

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recheck to ensure that it has been thorough, accurate, and deep.

The mind's *generative power* (creativity) and its *judiciousness* (criticality) can be separated only artificially. In the process of actual thought, they are one. Such thought is systematic when being systematic serves its end. It also can cast system aside and ransack its intuitions for a lead when no clear strategy is evident. And the generative, the productive, the creative mind has standards for what it generates and produces. The fit mind generates and produces precisely because it has high standards for itself, because it cares about how and what it creates.

Serious thinking originates in a commitment to grasp some truth, to get to the bottom of something, to make accurate sense of that about which it is thinking. This figuring out cannot simply be a matter of arbitrary creation or production. Specific restraints and requirements must be met: something outside the will to which the will must bend. This severe, inflexible reality is exactly what forces intellectual criticality and productivity into one seamless whole.

In a sense, of course, all minds create and produce in a manner reflective of their fitness or lack thereof. Minds indifferent to standards and disciplined judgment tend to judge inexactly, inaccurately, inappropriately, or prejudicially. Prejudices, hate, fears, and stereotypes and misconceptions, too, are created by minds. Yet they are not the products of creative minds; they reflect an undisciplined, uncritical mode of thinking and therefore are not properly thought of as products of creativity. In short, except in rare circumstances, creativity presupposes criticality and criticality creativity. This essential insight is often missed or obscured.

The most important sense of creativity in thinking is the sense of thinking as a process of creating thought: bringing thoughts into being to organize, shape, interpret, and make sense of the world. A mind that does not systematically and effectively embody intellectual criteria and standards is not disciplined in reasoning things through. Such a mind is not creative.

In other words, there is a reciprocal logic to both intellectual creation and critical judgment. There is an intimate interrelation between the intellectual *making* of things and the ongoing *critique* of that making. This reciprocal logic can be more closely examined through some examples.

Painters alternate the application of small amounts of paint to a canvas with the act of stepping back to appraise or assess their work. There are hundreds of acts of assessment that accompany hundreds of brush strokes. In a parallel fashion, dancers use mirrors in the studio to observe themselves while dancing. They use what they see as data to assess their performance. They practice with a conception in their minds of what they are striving to create. They both create and assess their dancing.

## Conclusion

In this column we have introduced the intimate relationship between critical and creative thought. In the next few columns, we will elaborate on this relationship. It is important to understand the inseparability of these two forms of thought: Critical thinking without creativity reduces to mere skepticism and negativity, and creativity without critical thought reduces to mere novelty. When students develop their rational, critical capacities, they develop their creative capacities. When students develop their creative capacities, they develop their critical capacities. The two processes are best understood as two sides to the same coin, developing simultaneously as they enhance and augment one another.

*Richard Paul is the director of the Center for Critical Thinking and Linda Elder is president of the Foundation for Critical Thinking at Sonoma State University, Rohnert Park, CA 94928. ☎*

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