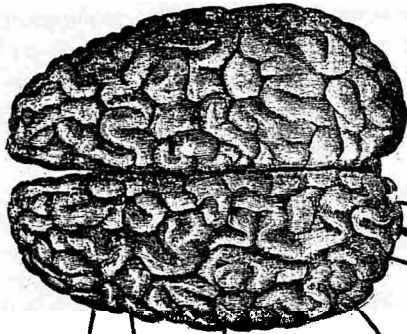


# Brainstorming Updated

Introduced by Walt Disney in the late 1920s and expanded by Alex Osborne in the 1950s, brainstorming is a popular but often misunderstood group process for generating and evaluating creative ideas. But there are new techniques for making it effective.

By STEPHEN R. GROSSMAN



**B**rainstorming rests on two important arguments, according to Alex Osborne.<sup>1</sup> The first hypothesis is that the mind uses two different types of thought processes. In one, termed judgmental, the mind evaluates the rightness or wrongness of any idea that comes to consciousness. In the other, called creative, all criteria of an idea's worth are suspended temporarily. Osborne argued that if we purposely separate these two modes of thought and do the creative thinking before the judgmental thinking, we are more likely to generate "good" ideas.

Osborne and Disney argued that the worth of an idea by itself is not important. More important are the concepts the idea may trigger in its originator or in the minds of other group members. The more ideas that an individual or group can generate, the more chances there are that a good idea will develop. If individuals judge the rightness or wrongness of ideas, they will shut off the flow of ideas that do not meet internally prescribed criteria.

Out of these arguments, Osborne developed four rules of brainstorming:

**Rule out criticism.** This rule, often termed the principle of deferred judgment, states that the group agrees not to make any judgments about ideas that are generated in a given time. Judgments will occur eventually, but later. This rule is a mixed blessing, for it causes much confusion as to its meaning and function.

**Encourage quantity.** The greater the number of ideas generated, the greater the chance that a good idea will develop.

**Be freewheeling.** Participants are urged to verbalize ideas as soon as they come to consciousness. This allows a person to be internally nonrestrictive about the connections between ideas.

**Combine and build.** This rule encourages group members to build on ideas by modifying them. Hence, one or two ideas may trigger 10 or 20 additional ideas in the minds of the group members. Some seemingly unrelated connection by one group member might stimulate an extremely useful modification by another member.

Although brainstorming has been modified often (story-boarding, reverse brainstorming and stop-go brainstorming), its tenets remain unchallenged. The principle of *deferred judgment* is still the foundation of all the alterations and embellishments.

I believe that deferred judgment is a concept that confuses a heterogeneous group as much as it helps. Even if groups pay strict attention to the four rules, it is still uncertain that good solutions to problems will present themselves. I believe that classic brainstorming allows creative people a venue in which to play with ideas, while the uncreative people in the group are generally "along for the ride." This does not permit the most productive use of the group, as published studies confirm.<sup>2,3</sup> While a host of ideas will be generated under the umbrella of deferred judgment, a significant number will be restatements of old material, and many of those remaining will be unique rather

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than creative. There are a number of alternative concepts and additions that can make brainstorming a more efficient and focused process for generating creative solutions to problems.

### Theory: Deferred judgment

The concept of deferred judgment is an outgrowth of the theory that everyone has a "natural" ability to be creative; it's only because we block ourselves that creativity is stifled. Prince describes creative thinking as having two selves: the experimental self and the safekeeping self.<sup>4</sup> All we have to do is get out of our own way to let creativity flow or, as Prince would say, to let the experimental self out to play.

If we can make it "o.k. to play" in a structured manner, we will have a creative flow of ideas. Deferred judgment is offered as such a structure. It assures people they will be able to judge later, to quell their anxieties and to evaluate. The process also rewards appropriate behavior (asking groups to compete against each other or against a norm for idea quantity) and discourages judgments (ringing a bell or having a facilitator intervene). Eventually no verbal judgments are made, and the group generates quantities of ideas.

However, the creative value of ideas generated this way is questionable. To understand why, it is important to understand how creativity and the creative act are different from mere uniqueness.

### Creativity

We may define creativity many ways, but certain concepts should be common to all definitions.

- Every creative act is a problem-solving exercise. People do not create just for the joy of creating, although the exercise itself may be a joyous release from anxiety.
- The creative act is, in part, sequential. A series of steps precedes the moment of creative connection. Creativity is often described as consisting of preparation, incubation, illumination and verification.
- Creativity is the act of the whole brain. Most people mistakenly attempt to separate logical (judicial) thinking from creative thinking, as if they were independent variables. In fact, creativity should be considered a dependent variable. It combines right-brain (perceptual) thinking and left-brain (logical) thinking. In creativity, logic and perception are equal partners.

When we say that people are left brain-

ed, we really mean that they use logic to develop perception. Perception is dependent. Children, who are deemed creative and whose logic systems are not developed, use perception to develop logic. If one accepts the need for co-dependence, then children are capable of uniqueness in perception but not of profound creativity.

We may define creativity as a complex event in which logic and perception combine independently to solve a problem. Brainstorming, therefore, can be a structure or framework in which perception may be altered independently of logic. It is presumptuous to call brainstorming a process because it does not tell people *how* to alter perception independently. It encourages them to do so.

A recent study attempted to determine the steps in a creative insight.<sup>5</sup> The subjects were selected on the basis of two criteria: they were recognized as creative, and they had the ability to recall the creative instant and to report the mental process that took place.

The common sequence reported: I get an image of some object that is connected to the problem; the image becomes fuzzed; blackout occurs; and the new object (new connection) takes it place. These reports suggest that creativity might depend on the ability to image and the ability to fuzz or distort that image.

### Techniques for brainstorming

*Be more specific.* Individuals in a brainstorming group should strive to generate ideas that are imageable for other participants—ideas that have high "specificity value." The specificity value of an idea is the amount of sensorily concrete data it contains, or the degree to which a concept may be categorized in sensory terms.

Example: (1) Hold the meeting on the moon. (2) Hold the meeting somewhere else.

Statement number one has a higher specificity value than statement two because the "moon" is more concrete than "somewhere else." We know what the moon might look like and how one might feel on the moon, but "somewhere else" doesn't give us the same sensory input.

To increase the specificity value of an idea, the group members might ask the question "How?" One useful technique is to develop a fantasy that the more general idea suggests. Give an example. Find a metaphor that expresses the idea—a

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## How many times have we heard "we tried that before"—probably one of the top creativity killers.

figure of speech that replaces the idea with a visual image.

**Encourage judgments.** Making judgments does not determine our ability to independently alter perception. In fact, being told to defer judgment may inhibit the very thought forms that are being encouraged. A type of internal paralysis may set in, where a person judges and forces the judgment away at the same time. This prevents the flow of ideas in an

arena where perception and logic act independently.

During brainstorming it is important to make dynamic rather than static judgments.<sup>6,7</sup> In static judgment the observer evaluates an idea for its degrees of rightness and wrongness. Does it fit one's internal criteria? Is it synchronous with known logic patterns? In static judgment, the evaluator has a "window of acceptance" like a space in a jigsaw puzzle.

Testing the shape of the idea against the window, one accepts or rejects it as a function of the fit.

In dynamic judging, one looks at the "movement value" of the idea, asking "What can I do with this? Where does it take me? What would happen if this were true?"<sup>7</sup>

DeBono asks four questions for developing movement value in an idea: What are the moment-to-moment consequences if this idea is operative? What is good about this idea? What general principles are involved? What are the differences?

If we recall the study on the steps in creativity, we can see that moment-to-moment consequences and general principles may be the same as fuzzing the image or making it more general.

DeBono's second and fourth questions speak directly to independent perception alteration (IPA). When logic dictates perception, people tend to look for what's wrong with an idea and dismiss it because it's the same as something else. How

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many times have we heard "we tried that before"—probably one of the top creativity killers.

*Develop a provocation.* Another deBono technique that may be applied to brainstorming is to examine and list the assumptions a group member makes about an object or concept. These assumptions should be so basic that they are not used at a conscious level. Having listed the assumptions, the group member alters one in some way and then examines the movement value of the change.

Because the mind is a self-organizing patterning system, in order to change the pattern-recognizing path, we need to alter one of our logical constructs in that path. Here again, we are asking people to make judgments: consciously change "what is" to "what is not" so that IPA can take place.

*Use manipulative verbs.* Finally, the members of the brainstorming group should be aware of and use Osborne's manipulative verbs.<sup>8</sup> Every creative act is a manipulation. We take what exists and manipulate it to form a new context for problem solving. These verbs may be summarized in three categories: maxification (making something larger), minification (making something smaller) and rearrangement.

This, of course, is another example of image distortion or image fuzzing, one of the preconditions for the creative act.

Here is an example of these principles of brainstorming applied to a consumer focus group attempting to develop product improvement ideas.<sup>9</sup>

Consumers of disposable household products, when asked for product improvement ideas, often generate wild ideas but have difficulty developing relationships between these ideas and the product under consideration. Brainstorming sessions with such groups have produced abstract notions that defy analysis by the corporate sponsors. The role of the focus group has been primarily evaluative rather than creative.

Using fuzzed imagery concepts, however, it is possible to take consumers through an exercise in which they develop creative ideas for product improvement, even through they have not been trained in creative techniques prior to the session.

In a dark room, consumers see projected on overhead transparencies several photographs of the product under consideration. The moderator slowly unfocuses and refocuses each overhead,

making it larger and smaller, fuzzy and clear. While this is going on, the consumers verbalize any object that the fuzzed images might represent. This process is repeated until a list of objects is developed. Finally, the consumers are asked to force relationships between the product under consideration and the objects on the list. A significant number of tangible and practical product innovations usually result from this exercise.

This process primes the mental pump by replicating consciously the sequence of operations that seems necessary for the creative act to take place.

It is also recommended to encourage dynamic judgments by consciously forcing comparison in two areas. Ask consumers to identify objects from the fuzzed images, and then ask them to find specific relationships between the object list and the initial product.

To allow individuals to maximize their creative potential in groups, content issues, as well as process and structure, need to be guided and helped.



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