

Animal Crackers

Adaptations to Capture the Problem-Solving Imagination by Stephen Grossman and Peter Lloyd

Within the past 25 years, much of the research conducted on the mental mechanisms involved in creative thought has indicated that these are precisely analogous to Charles Darwin's ideas on evolution first published in his book *On the Origin of Species* in 1859.

In 1994 Stephen Grossman published an article in *The Journal of Creative Behavior* titled "Transcendence as a Subset of Evolutionary Thinking: A Darwinian View of the Creative Experience," outlining these ideas and suggesting applications for facilitators, teachers, and practitioners of creative problem solving. Subsequently Grossman and Peter Lloyd developed a unique integrated system for solving difficult business problems. "Animal Crackers" can be used solo or with groups--and is both fun and easy. (<http://gocreate.com/animal>)

The theory behind each of the three phases of our evolutionary approach, which we call "Animal Crackers," is based on evolutionary science.

Natural Selection

Darwin proposed that all creatures adapt to the ever-changing world by a process called Natural Selection. As species adapt from generation to generation, nature "selects" those species better suited to survive over their competitors. The intellectual essence of Darwin's argument is that change need not be planned or guided by

some overarching intellect. On the contrary, it occurs simply because some random mutation wins the chance to survive.

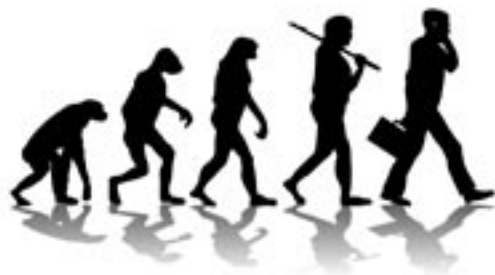
Darwin posits a three-phase process for evolutionary change. [Animal Crackers guides human creativity through the same three phases, mimicking the natural human creative process.

Each of these phases will be explored in what follows. Each phase integrates the thinking of some giants in the creative field. We gratefully acknowledge their contributions and give attribution where appropriate.

1. Extinction: Dissatisfaction with existing ideas as remedies for a situation causing concern.

2. Mutation: A chance event or random occurrence that produces a new idea.

3. Selection: A recognition system able to seize upon the new idea and use it to successfully replace existing patterns.



Extinction

Robert Weisberg, in "Problem Solving and Creativity," emphasizes the need for the initial process of idea rejection in order to create. "Novel solutions to problems come about in an evolution as one gradually moves away from the conception with which one began. This incremental process is set in motion by feedback concerning the inadequacy of initial thoughts and ideas" (in *The Nature of Creativity*, R. Sternberg, editor, 1988).

The more convinced the problem solver that the old ideas don't work, the more receptive he can become to the new and unusual, which may hold the key to a brilliant solution.

As an example, consider what you do when you misplace your car keys.

- a. You look in places you habitually leave them. When this fails, you...
- b. Look again in places you habitually leave them, this time with more focus, intensity, and a touch of frustration. When this fails, you...
- c. Think about where you were prior to losing them and try to retrace your steps. When this fails, you finally...
- d. Make a random search in places you would not expect to find your keys, and if you're lucky—Eureka! You see them. Then, in a flash of recognition, you remember why they were there in the first place.

The most arresting part of this search episode is that your keys might have actually been on the periphery of your vision field when you began your search, but because you didn't expect to find them there, you couldn't see them. This process parallels new thinking: in which you must first extinguish old ideas before you can seize on or see a new one.

Animal Crackers “creates extinction” in its users by redirecting their concentration from the problem to their previous attempts to solve it. By focusing on their failed ideas, rather than on the problem itself, users not only can finally reject them, but also experience a form of “self-watching.” This is a powerful creative tool with which problem solvers become acutely aware of their own viewpoint. This awareness makes it easier to shift perspectives (Grossman, Rogers, & Moore, *Innovation Inc.*, 1988).

Mutation

Having set the stage for accepting the unexpected as a potential solution, we now introduce seemingly random and provocative stimuli for consideration. Many well-known experts have written extensively about what these stimuli might be. DeBono introduced the notion of “provocation” (deBono, *Lateral Thinking*, 1972). Gordon and Prince use “mental excursions” and analogies as a fundamental construct in their Syntectics model.

We have chosen surprising animal behaviors as provocations for a variety of reasons:

- a. Many great inventions, from the snowshoe to sonar and jet propulsion, have been inspired by studying animal behaviors and structures.
- b. Animal features offer a virtually unlimited variety of complex adaptations from which to choose.

c. Animals generally elevate the problem solver's mood; a positive mental state can create a greater receptivity to new ideas.

d. From early childhood, humans demonstrate an affinity for animals.

e. We love animals.

In the Mutation phase of the Animal Crackers process, we introduce steps to help users make new connections. While teaching creative problem solving, we have discovered that the most difficult task for our students is forming new relationships between two or more previously unconnected elements — what the great philosopher and writer Arthur Koestler called “bisociations” (Koestler, *The Act of Creation*, 1964). We demystify this task by leading users through a thorough process of considering animal traits in order to derive insights from each.

Selection

In the third and final phase of the Animal Crackers process, which in Natural Selection Darwin calls the “Struggle for Existence,” users translate and modify their selected animal adaptations from the Mutation phase to arrive at a workable solution.

The Selection phase is by far the most difficult. It's hard to make new ideas work. We are all too familiar with the sobering consequences of Murphy's Law. For this reason, we provide a technique for accessing the problem solver's deepest creative reserves by employing a modification of a technique suggested by George Prince (Prince, *The Practice of Creativity*, 1970). With the help of Survival and Extinction prompts, we allow users to both amplify the positive and eliminate the negative aspects of their solution — all without diminishing its original

and wonderful power.

There is also a fail-safe feature within the Selection phase. This important mechanism does not let the user give up. If, after all this work, the user encounters a barrier that seems insurmountable, he is sent back through the Animal Crackers process — this time, however, with an enhanced idea in the Extinction phase of what doesn't work. And that very clarity means a better chance of finding an idea that will. The essence of the creative act is the continual redefinition of the problem until an elegant solution presents itself. ⊕

The Animal Crackers Manual explains the Animal Crackers philosophy in detail, and can be downloaded from <http://gocreate.com/animal>.

