

Positive Attitudes for Creativity

1. Curiosity. Creative people want to know things—all kinds of things—just to know them. Knowledge does not require a reason. The question, “Why do you want to know that?” seems strange to the creative person, who is likely to respond, “Because I don’t know the answer.” Knowledge is enjoyable and often useful in strange and unexpected ways.

For example, I was once attempting to repair something, without apparent success, when an onlooker asked testily, “Do you know what you’re doing?” I replied calmly, “No, that’s why I’m doing it.”

Next, knowledge, and especially wide ranging knowledge, is necessary for creativity to flourish to its fullest. Much creativity arises from variations of a known or combinations of two knowns. The best ideas flow from a well equipped mind. Nothing can come from nothing.

In addition to knowing, creative people want to know why. What are the reasons behind decisions, problems, solutions, events, facts, and so forth? Why this way and not another? And why not try this or that?

The curious person’s questioning attitude toward life is a positive one, not a destructive one reflecting skepticism or negativism. It often seems threatening because too often there is no good reason behind many of the things that are taken for granted—there is no “why” behind the status quo.

So ask questions of everyone. Ask the same question of different people just to be able to compare the answers. Look into areas of knowledge you’ve never before explored, whether cloth dying, weather forecasting, food additives, ship building, the U.S. budget, or the toxicity of laundry detergents.

2. Challenge. Curious people like to identify and challenge the assumptions behind ideas, proposals, problems, beliefs, and statements. Many assumptions, of course, turn out to be quite necessary and

solid, but many others have been assumed unnecessarily, and in breaking out of those assumptions often comes a new idea, a new path, a new solution.

For example, when we think of a college, we traditionally think of a physical campus with classrooms, a library, and some nice trees. But why must college be a place (with congregated students and faculty) at all? Thus, the electronic college now exists, where students “go” to college right at home, online. Correspondence courses have existed for years, too, beginning with the challenging of the school-as-centralized-place idea.

When we think of an electric motor, we *automatically* think of a rotating shaft machine. But why assume that? Why can’t an electric motor have a linear output, moving in a straight line rather than a circle? With such a challenged assumption came the linear motor, able to power trains, elevators, slide locks, and so on.

Problem: We make brandy, and for this special edition of our finest kind, we want a fully-grown pear in one piece inside each bottle. The bottle is narrow necked. How can we do it? As you think, watch for the assumptions you are making. Possible solutions (assuming fully grown pear): close the neck or bottom after insertion, use a plastic bottle like heat-shrink tubing, change to a wide mouth bottle. If we do not assume a fully grown pear: grow the pear from a bud inside the bottle.

3. Constructive discontent. This is not a whining, griping kind of discontent, but the ability to see a need for improvement and to propose a method of making that improvement. Constructive discontent is a positive, enthusiastic discontent, reflecting the thought, “Hey, I know a way to make that better.”

Constructive discontent is necessary for a creative problem solver, for if you are happy with everything the way it is, you won’t want to change anything. Only when you become discontent with something, when you see a problem, will you want to solve the problem and improve the situation.

One of the hallmarks of the constructively discontented person is that of a problem seeking outlook. The more problems you find, the more solutions and therefore improvements you can make. Even previously solved problems can often be solved again, in a better way. A constructively discontent person might think, “This is an excellent solution, but I wonder if there isn’t another solution that works even better (or costs less, etc).”

Another mark of constructive discontent is the enjoyment of challenge. Creative people are eager to test their own limits and the limits of problems, willing to work hard, to persevere and not give up easily. Sometimes the discontent is almost artificial—they aren’t really unhappy with the status quo of some area, but they want to find something better just for the challenge of it and the opportunity to improve their own lives and those of others.

4. A belief that most problems can be solved. By faith at first and by experience later on, the creative thinker believes that something can always be done to eliminate or help alleviate almost every problem. Problems are solved by a commitment of time and energy, and where this commitment is present, few things are impossible.

The belief in the solvability of problems is especially useful early on in attacking any problem, because many problems at first seem utterly impossible and scare off the fainter hearted. Those who take on the problem with confidence will be the ones most likely to think through or around the impossibility of the problem.

5. The ability to suspend judgment and criticism. Many new ideas, because they are new and unfamiliar, seem strange, odd, bizarre, even repulsive. Only later do they become “obviously” great. Other ideas, in their original incarnations, are indeed weird, but they lead to practical, beautiful, elegant things. Thus, it is important for the creative thinker to be able to suspend judgment when new ideas are arriving, to have an optimistic attitude toward ideas in general, and to avoid condemning them with the typical kinds of negative responses like, “That will never work; that’s no good; what an idiotic idea;

that’s impossible,” and so forth. Hospital sterilization and antiseptic procedures, television, radio, the Xerox machine, and stainless steel all met with hohums and even hostile rejection before their persevering inventors finally sold someone on the ideas.

Some of our everyday tools that we now love and use daily, were opposed when they were originally presented: Aluminum cookware? No one wants that. Teflon pans? They’ll never sell. Erasers on pencils? That would only encourage carelessness. Computers? There’s no market for more than a few, so why build them?

Remember then that (1) an idea may begin to look good only after it becomes a bit more familiar or is seen in a slightly different context or clothing or circumstance and (2) even a very wild idea can serve as a stepping stone to a practical, efficient idea. By too quickly bringing your judgment into play, these fragile early ideas and their source can be destroyed. The first rule of brainstorming is to suspend judgment so that your idea-generating powers will be free to create without the restraint of fear or criticism. You can always go back later and examine—as critically as you want—what you have thought of.

Proverb: “A crank is a genius whose idea hasn’t yet caught on.”

6. Seeing the good in the bad. Creative thinkers, when faced with poor solutions, don’t cast them away. Instead, they ask, “What’s good about it?” because there may be something useful even in the worst ideas. And however little that good may be, it might be turned to good effect or made greater.

Example problem: How can we get college students to learn grammar better? Solution: Spank their bottoms with a hickory stick. This isn’t a good solution, partly because it’s probably illegal. But should we just toss it out? Why not ask what’s good about it? (1) it gives individual attention to the poor performers, (2) it gives them public attention, (3) it motivates other students as well as the student being spanked, (4) it’s easy and costs nothing. The next question is, Can we adapt or incorporate some of these good

things into a more acceptable solution, whether derivative of the original or not?

We easily fall into either/or thinking and believe that a bad solution is bad through and through, in every aspect, when in fact, it may have some good parts we can borrow and use on a good solution, or it may do inappropriately something that's worth doing appropriately. And often, the bad solution has just one really glaring bad part, that when remedied, leaves quite a good solution. In the above example, changing the physical spanking to a verbal spanking changes the entire aspect of the solution while keeping all the good points we identified.

7. Problems lead to improvements. The attitude of constructive discontent searches for problems and possible areas of improvement, but many times problems arrive on their own. But such unexpected and perhaps unwanted problems are not necessarily bad, because they often permit solutions that leave the world better than before the problem arose.

For example, the first margarine was made from beef fat, milk, water, and chopped cow udder. It wasn't extremely tasty or healthy. Then about the turn of the century a shortage of beef fat created a problem. What to use? The margarine makers turned to vegetable fats from various plants and the soybean, corn, and sunflower oils they used are still used today. The margarine is healthier and tastes better.

Or think about exams or papers. When you don't do as well as you want, you think, "Oh no!" But actually, you have a good insight into what you don't know and still need to learn. You are aware of the geography of your knowledge in a much more detailed form than before the errors showed up.

8. A problem can also be a solution. A fact that one person describes as a problem can sometimes be a solution for someone else. Above we noted that creative thinkers can find good ideas in bad solutions. Creative thinkers also look at problems and ask, "Is there something good about this problem?"

For example, soon after the advent of cyanoacrylate adhesives (super glue), it was noted

that if you weren't careful, you could glue your fingers together with it. This problem—a permanent skin bond—was soon seen as a solution, also. Surgeons in Viet Nam began to use super glue to glue wounds together.

Another example, also involving glue: 3M chemists were experimenting with adhesives and accidentally came up with one that was so weak you could peel it right back off. Hold strength, shear strength, all were way below the minimum standards for any self-respecting adhesive. A glue that won't hold? Quite a problem. But this problem was also a solution, as you now see in Post-It Notes.

9. Problems are interesting and emotionally acceptable. Many people confront every problem with a shudder and a turn of the head. They don't even want to admit that a problem exists—with their car, their spouse, their child, their job, their house, whatever. As a result, often the problem persists and drives them crazy or rises to a crisis and drives them crazy.

Creative people see problems as interesting challenges worth tackling. Problems are not fearful beasts to be feared or loathed; they are worthy opponents to be jostled with and unhorsed. Problem solving is fun, educational, rewarding, ego building, helpful to society.

Miscellaneous Good Attitudes

1. Perseverance. Most people fail because they spend only nine minutes on a problem that requires ten minutes to solve. Creativity and problem solving are hard work and require fierce application of time and energy. There is no quick and easy secret. You need knowledge gained by study and research and you must put your knowledge to work by hard thinking and protracted experimentation. You've surely read of the difficulties and setbacks faced by most of the famous inventors—how many filaments Edison tried before he found a working one, how many aircraft designs failed in the attempt to break the sound barrier. But planning to persevere is planning to succeed.

2. A flexible imagination. Creative people are comfortable with imagination and with thinking so-called weird, wild, or unthinkable thoughts, just for the sake of stimulation. During brainstorming or just mental playfulness, all kinds of strange thoughts and ideas can be entertained. And the mind, pragmatist that it is, will probably find something useful in it all. We will look at several examples of this later on.

3. A belief that mistakes are welcome. Modern society has for some reason conceived the idea that the only unforgivable thing is to fail or make a mistake. Actually failure is an opportunity; mistakes show that something is being done. So creative people have come to realize and accept emotionally that making mistakes is no negative biggie. One chief executive of a big American corporation warns all his newly hired managers, “Make sure you make a reasonable number of mistakes.” Mistakes are educational and can lead to success—because they mean you are doing something.

Sir Francis Pettit Smith, one of the early developers of the screw propeller, tried one design in 1836. During the test, half of it broke off—what a failure—but then the boat increased in speed substantially, revealing the efficiency of a new design, formed from a mistake.

In sum, as Vergil once said, “They can who think they can.” Having the proper positive attitude about generating new and useful ideas and solving problems is really a large part of the whole process.

A few years ago, the pipes in my mom’s house had finally rusted through and I was faced with the task of finding a plumber to get a bid. Knowing how much they charge for small repairs, I knew that doing a whole house would cost a fortune. I thought, “You know, I’d really like to do this job myself, but I wonder if I can.” My neighbor happened to be around once when I said this, and he said, “Oh, you can do it.” Just that simple expression gave me the positive attitude I needed to do it. So I did.

Characteristics of the Creative Person

- curious
- seeks problems
- enjoys challenge
- optimistic
- able to suspend judgment
- comfortable with imagination
- sees problems as opportunities
- sees problems as interesting
- problems are emotionally acceptable
- challenges assumptions
- doesn’t give up easily: perseveres, works hard

Reprinted from Robert Harris, 1998 Introduction to Creative Thinking