

## CREATIVE ABILITY DEVELOPMENT

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This morning we celebrate Mothers' Day. Many mothers, indeed many parents, would be pleased and proud if their children were to distinguish themselves in some way, perhaps through some significant creative achievement. Not that a child would be any more worthy of love as a result of a significant creative achievement; but how could a parent not enjoy seeing a child rise to the challenge of accomplishing some demanding task, or seeing a child envision and then bring into being something new and distinctive?

Some people assume that creativity is a gift, bestowed or withheld by some capricious divinity. Some people assume that creativity is random good fortune over which one has no control. Some people assume that creativity is a personal characteristic that one either has or has not. But I would invite us to consider another point of view, that creativity is a talent widely distributed among human beings, a talent which can be cultivated and developed, if one understands something of how creativity works. Accordingly, let us consider two personal statements from three extraordinarily creative individuals, the composer Mozart, the mathematician Poincare, and the painter Van Gogh.

In a letter, Mozart wrote this about his own creative process in composing music:

“When I am, as it were, completely myself, entirely alone, and of good cheer—say, traveling in a carriage, or walking after a good meal, or during the night when I cannot sleep; it is on such occasions that my ideas flow best and most abundantly. Whence and how they come, I know not; nor can I force them. Those ideas that please me I retain in memory, and am accustomed, as I have been told, to hum them to myself. If I continue in this way, it soon occurs to me how I may turn this or that morsel to account, so as to make a good dish of it, that is to say, agreeably to the rules of counterpoint, to the peculiarities of the various instruments, etc.

“All this fires my soul, and provided I am not disturbed, my subject enlarges itself, becomes methodized and defined, and the whole, though it be long, stands almost complete and finished in my mind, so that I can survey it, like a fine picture or a beautiful statue, at a glance. Nor do I hear in my imagination the parts successively, but I hear them, as it were, all at once. What a pleasing lively dream. Still the actual hearing of the

entire ensemble is after all the best. What has been thus produced I do not easily forget, and this is perhaps the best gift I have my Divine Maker to thank for.

“When I proceed to write down my ideas, I take out of the bag of my memory, if I may use that phrase, what has been previously collected into it in the way I have mentioned. For this reason the committing to paper is done quickly enough, for everything is, as I said before, already finished; and it rarely differs on paper from what it was in my imagination. At this occupation I can therefore suffer myself to be disturbed; for whatever may be going on around me, I write, and even talk, but only of fowls and geese, or of Gretel and Barbel, or some such matters. But why my productions take from my hand that particular form and style that makes them Mozartish, and different from the works of other composers, is probably owing to the same cause which renders my nose so large or so aquiline, or in short makes it Mozart’s and different from those of other people. For I really do not study or aim at any originality.”<sup>1</sup>

The mathematician Poincaré similarly described his own creative process in what he called “mathematical invention.” In what follows, you are advised to ignore the technical language and focus on the details of how the creativity happened:

“For fifteen days I strove to prove that there would not be any functions like those I have since called Fuchsian functions. I was then very ignorant; every day I seated myself at my work table, stayed an hour or two, tried a great number of combinations and reached no results. One evening, contrary to my custom, I drank black coffee and could not sleep. Ideas rose in crowds; I felt them collide until pairs interlocked, so to speak, making a stable combination. By the next morning I had established the existence of a class of Fuchsian functions, those which come from the hypergeometric series; I had only to write out the results, which took but a few hours. . . .

“Just at this time I left Caen, where I was living, to go on a geological excursion under the auspices of the school of mines. The changes of travel made me forget my mathematical work. Having reached Coutances, we entered an omnibus to go some place or other. At the moment when I put my foot on the step the idea came to me, without anything in my former thoughts seeming to have paved the way for it, that the transformations I had used to define the Fuchsian functions were identical with those of non-Euclidean geometry. I did not verify the idea; I should not have had time, as, upon taking my seat in the omnibus, I went on with a conversation already commenced, but I felt a perfect certainty. Upon my return to Caen, for conscience’s sake I verified the result at my leisure.

“Then I turned my attention to the study of some arithmetical questions apparently without much success and without a suspicion of any connection with my preceding researches. Disgusted with my failure, I went to spend a few days at the seaside, and thought of something else. One morning, walking on the bluff, the idea came to me, with just the same characteristics of brevity, suddenness and immediate certainty, that the arithmetic transformations of indeterminate ternary quadratic forms were identical with those of non-Euclidean geometry.

“Returned to Caen, I meditated on this result and deduced the consequences. . . .

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<sup>1</sup> Wolfgang Amadeus Mozart, quoted in Creative Ability Development: The Philosophy and Method, Book 1, Piano by Alice Kay Kanack (Miami, FL: Summy-Birchard, 1996), pp. 7-8.

“Most striking at first is this appearance of sudden illumination, a manifest sign of long, unconscious prior work. The role of this unconscious work in mathematical invention appears to me incontestable . . . Often when one works at a hard question, nothing good is accomplished at the first attack. Then one takes a rest, longer or shorter, and sits down anew to the work. During the first half-hour, as before, nothing is found, and then all of a sudden the decisive idea presents itself to the mind. It might be said that the unconscious work has been more fruitful because it has been interrupted and the rest has given back to the mind its force and freshness. But it is more probably that this rest has been filled out with unconscious work and that the result of this work has afterward revealed itself to the geometer . . .

“There is another remark to be made about the conditions of this unconscious work: it is possible . . . only . . . if it is on the one hand preceded and on the other hand followed by a period of conscious work. These sudden inspirations . . . never happened except after some days of voluntary effort which has appeared absolutely fruitless and whence nothing good seems to have come, where the way taken seems totally astray. These efforts then have not been as sterile as one thinks; they have set agoing the unconscious machine and without them it would not have moved and would have produced nothing. The need for the second period of conscious work, after the inspiration, is still easier to understand. It is necessary to put in shape the results of this inspiration, to deduce from them the immediate consequences, to arrange them, to word the demonstrations, but above all is verification necessary.”<sup>2</sup>

The painter Van Gogh described his creative process to a friend as follows:

“I draw repeatedly till there is one drawing that is different from the rest, which does not look like an ordinary study, but . . . with more feeling. All the same it was made under circumstances similar to those of the others, yet the latter are just studies with less feeling and life in them. . . . HOW [DOES IT HAPPEN] THAT I CAN EXPRESS SOMETHING OF THAT KIND? Because the thing has already taken form in my mind before I start on it. The first attempts are absolutely unbearable. I say this because I want you to know that if you seem something worthwhile in what I am doing, it is not by accident but because of real intention and purpose.”<sup>3</sup>

These three accounts of the creative process, from Mozart, Poincaré, and Van Gogh, appear in a book called Creative Ability Development by Alice Kay Kanack. Kanack is a music educator who uses methods originally developed by Shinichi Suzuki for teaching music to young children. But Kanack has extended Suzuki’s method to include the development of creative ability in young children by encouraging them to learn to improvise and compose music of their own.

Kanack is particularly intrigued by moments of inspiration when the solution to a problem suddenly appears in the mind with an intense clarity, or when an instance of artistic creativity fills the mind for some period of time. Mozart, Poincaré, and Van Gogh all testify, in different ways, to having experienced such moments of inspiration. Kanack defines inspiration in this way: “Inspiration, the highest point in the creative process, occurs when the subconscious having reached a solution to the creative problem,

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<sup>2</sup> Poincaré, quoted ibid., pp. 9-10.

<sup>3</sup> Vincent Van Gogh, quoted ibid., p. 13.

communicates that solution to the conscious. It is characterized by a quality of sudden illumination of thought. It will occur often without warning as a waking dream, complete or nearly complete in form, structure, length, etc. It always occurs in the form of an answer to the problem—not in a theoretical explanation of how that solution was arrived at.”<sup>4</sup>

Significantly, however, Kanack places inspiration within a process that includes several other elements. Thus, creativity is not simply waiting passively for inspiration to occur. It also includes hard work, careful preparation, and, once inspiration has occurred, putting the results of one’s creative process into a tangible expression that can be communicated to others. For Kanack, creativity begins with conscious work. This includes understanding the nature of the challenge and considering various solutions or points of view. The next step is unconscious work or subconscious work or subliminal work. “Whence and how [my ideas] come, I know not; nor can I force them,” said Mozart. “The role of this unconscious work in mathematical invention appears to me incontestable,” said Poincaré. “Because the thing has already taken form in my mind before I start on it,” said Van Gogh. Leonardo da Vinci also attested to the role of the unconscious in these words which appear at the top of your order of service: “Every now and then go away, have a little relaxation. For when you come back to work, your judgment will be surer, since to remain constantly at work, you lose power of judgment. Go some distance away, because then the work appears smaller, and more of it can be taken in at a glance, and a lack of harmony or proportion is more readily seen.”

Kanack offers this advice about maintaining a fruitful bridge between the conscious and unconscious parts of the mind: “One of the great challenges of teaching the creative process lies in developing trust in the subconscious. There are two parts to this trust: One is in understanding that each individual has some control over his subconscious; the information which it is given by way of conscious work will in part determine the subconscious response by way of inspiration. Two, one must allow the loss of conscious control over the subconscious. It is not possible to control and one must be relaxed and responsive to the inspiration when it comes since it is the only communication possible between the subconscious and conscious parts of the brain.”<sup>5</sup>

The final stage of the creative process is giving tangible form to inspiration. Mozart was blessed with an amazing memory such that even while engaged in more ordinary pursuits, he could write down on paper what he had created in his head. Poincaré similarly stated that writing down a demonstration of his mathematical insights was relatively straightforward. For many others, giving tangible form to inspiration may be more laborious; but that should not in itself be any reason for discounting the result.

What is perhaps most helpful about Kanack’s understanding of the creative process is her insistence that inspiration is the result of hard work and careful preparation. Thus, repetition, practice, self-discipline, study, effort, focus, perseverance, patience, and attention are not to be dismissed by someone aspiring to be creative, since they all can be essential to the creative process. Also helpful about Kanack’s understanding of the creative process is her insistence that a person engaged in some creative endeavor needs to have criticism kept to a bare minimum. She writes: “Since creativity is essentially the

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<sup>4</sup> Ibid., p. 5.

<sup>5</sup> Ibid., p. 7.

art of making choices a child must be left free to practice making choices . . . The freedom of choice is simple to achieve by the complete removal of criticism in the child's creative environment."<sup>6</sup> Is Kanack saying that a child (or any other creative person) should be free from criticism in all areas of life? Absolutely not! One may refrain from criticizing a musical composition or a painting or a story and still insist that a child clean up his or her room. Kanack is referring only to an individual creative process. Thus, her basic formula is: Freedom of Choice + Disciplined Practice = Creative Ability.

Yet another helpful part of Kanack's understanding of the creative process is her belief that creativity is a human activity. She writes: "Since we cannot witness the subconscious process except for its end result, we tend to give credit to a power outside of ourselves, i.e., God. Throughout history creative geniuses in all fields gave credit to God for their inspirations, failing to recognize that it was their hard work which triggered the inspired thoughts. . . . The idea that inspiration is a gift from God is not a surprising one, given the qualities of sudden perfection, beauty, and emotional power that usually accompany an inspiration. . . . But, whether one believes in a God or not the evidence is strong to support the idea that inspiration comes from within the human brain, and can only be triggered by conscious repetitive work on a creative problem."<sup>7</sup>

This need not deny any divine role in human creativity. The feminist theologian Mary Daly has written: "It is the creative potential itself in human beings that is the image of God." Daly's comment opens the door to a less hierarchical understanding of creativity, namely, the view that because human beings are capable of creativity on their own, human beings can be co-creators with God rather than dependent upon God as the sole source of creativity. But that is a sermon for another day!

Kanack directs her attention toward developing creative ability in children, but her insights can also be helpful for adults who wish to develop their own creative ability. And surely our world could use more creativity, more inspiration, more imagination: and not just in music, or mathematics, or painting, but also in architecture and medical research and municipal government, and also in international relations and social justice and environmental responsibility, and also in eliminating poverty and ensuring basic human rights for all people and solving long-standing, destructive conflicts, and also in understanding more deeply what we truly want when we speak of a good society or a good life. In all these diverse aspects of life, we could use more creativity.

So make your Mom even more proud of you. Develop your creative ability, and be more creative.

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<sup>6</sup> *Ibid.*, p. 3.

<sup>7</sup> *Ibid.*, p. 16.