

Incubation: A Neglected Aspect of the Composing Process?

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Remember when you were staring at the ceiling in elementary school, and the teacher asked you whether the answer was on the ceiling? Maybe it was.

"Composition is not enhanced by grim determination." (Frank Smith, Writing and the Writer).

In a discussion of possible therapies to remediate writing apprehension, Daly (1985) includes these suggestions:

"One potentially appropriate therapy for procrastination lies in teaching something akin to time management. The writer learns to go to a specific location each day at a certain time and do nothing but write: No distractions are permitted ... What may be appropriate for (blocked writers) is 'forced' writing, where something must be put down on paper whether it is meaningful or not (e.g. writing whatever comes to mind, free-flowing brainstorming)." (p. 71).

In other words, procrastinators need to have a set time when they do nothing but write, and blocked writers need to do forced writing.

There is a problem with these recommendations. It denies what I think is one of the most important parts of the composing process: incubation, a term introduced by Wallas (1926) for the process by which the mind goes about solving a problem, subconsciously and automatically. Elbow (1972, 1981) refers to incubation as "cooking."

Incubation seems to happen best when we take a break from creative work. During this time, we need to do something completely different, something that does not involve conscious and deliberate problem-solving. Wallas suggests that "in the case of the more difficult forms of creative thought ... it is desirable that not only that there should be an interval free from conscious thought on the particular problem concerned, but also that that interval should be so spent that nothing should interfere with the free working of the unconscious or partially unconscious processes of the mind. In those cases, the stage of incubation should include a large amount of actual mental relaxation" (p. 95).

Examples of incubation

Wallas (1926) reports that he first heard of the idea of incubation from the physicist Helmholtz. In a speech delivered in 1891, Helmholtz described how new thoughts came to him: After previous investigation, "in all directions," .. " happy ideas come unexpectedly without effort, like an inspiration ... they have never come to me when my mind was fatigued, or when I was at my working table ... They came particularly readily during the slow ascent of wooded hills on a sunny day" (p. 91).

Einstein clearly knew about incubation: According to Clark (1971), Einstein would "allow the subconscious to solve particularly tricky problems. 'Whenever he felt that he had come to the end of the road or into a difficult situation in his work,' his eldest son said, 'he would take refuge in music, and that would resolve all his difficulties.'" (p. 106). Clark notes that for Einstein, "with relaxation, there would often come the solution" (p. 106).

Csikszentmihalyi and Sawyer (1995) interviewed nine "creative" individuals, all of whom had made creative contributions in their field, were 60 or older, and were still actively involved in creative work. All mentioned that insights occurred during idle time, and several mentioned that they occurred while they were doing something else, during a "repetitive, physical activity" such as gardening, shaving, taking a walk, or taking a bath (p. 348).

Mind on, mind off

This is not to say, of course, that hard work is unnecessary. Quite the opposite is true. Many studies confirm that high achievers put in a tremendous amount of work, far more than less accomplished colleagues. They engage in the "preliminary period of conscious work which also precedes all fruitful unconscious labor" (Poincare, 1924). This preliminary work is labeled "preparation" by Wallas, and as "wrestling with ideas" by Elbow (1972, p. 129). Wallas notes that the educated person "can 'put his mind on' to a chosen subjects, and 'turn his mind off'" (p. 92). The educated person knows how, in other words, to prepare and then incubate.

Of course, the "illumination" that is the result of incubation needs to be followed by more conscious work. Ideas that arise as a result of incubation need to be evaluated (Smith, 1994); our new insight may not be right.

Long and short incubation periods

Incubation sometimes requires a very long break: Feynman noted that "You have to do six months of very hard work first and get all the components bumping around in your head, and then you have to be idle for a couple of weeks, and then - ping - it suddenly falls into place ..." (Csikszentmihalyi and Sawyer, 1995, p. 350).

Incubation can also occur with breaks of shorter duration. Piaget told Gruber (1995) that after he worked for a few hours, "he would go for a walk, not think about very much, and when he went back to his desk his ideas would be clearer ..." (p. 526).

And it can also happen in very short breaks, a few minutes or even moments. In my experience, extremely short breaks are all that is necessary to solve many problems and loosen many blocks. In agreement with Wallas, I have found that these breaks work best when they are devoted to something fairly mindless: washing just a few dishes, filing just a few papers, or doing some light exercise.

The incubation phenomenon helps to explain why accomplished people need to put in so much time; it may be that not all of the time is "industrious." In fact, high achievers may actually take more time. C.P. Snow, cited in Clark (1971), noted that Churchill "was not a fast worker ... but he was essentially a non-stop worker" (p. 106); perhaps some of the "non-stop" working was staring at the ceiling. If high achievers appear to accomplish tasks more quickly than others, I suspect it is only because they put in so much more time.¹

Scheduling incubation time and not being ashamed of it

Some of Csikszentmihalyi and Sawyer's subjects actually scheduled "a period of solitary idle time that follows a period of hard work ... many of them told us that without this solitary, quiet time, they would never have their most important ideas" (p. 347). One respondent actually began his interview with this statement: "I'm fooling around not doing anything, which probably means this is a creative period ... I think that people who keep themselves busy all the time are generally not creative, so I'm not ashamed of being idle" (p. 352).

Incubation and the composing process

The core of the composing process is using writing to come up with new ideas: As Elbow (1972) has stated it, in writing, meaning is not what you start out with but what you end up with. Incubation is thus an important part of the composing process and might be an essential component of revision; at least some writers need to take breaks, breaks ranging from a few moments to several weeks or months.² I suspect, in fact, that one secret to coming up with good ideas through writing is understanding the importance of incubation, and realizing that the process entails patient revision, takes time, and often requires some time off-task.

For many writers, good writing can't be rushed. Forcing writers to sit without a break and write nonstop denies the possibility of incubation: As Smith (1994) notes, "composition is not enhanced by grim determination" (p. 131). In fact, in-class writing assignments and sit-down written tests actually teach students that incubation is not part of the composing process.

I suspect that this false belief is one of the causes of writing apprehension and writer's blocks. Blocked and fearful writers may be under the false impression that writing should always flow, and that hesitations are a sign of incompetence. Writer's blocks, however, may simply be signs that a problem has come up, and taking a break may help the subconscious solve the problem. This happens to me probably a hundred times a day: a problem with word choice, a discovery that I have contradicted myself, a vague malaise that the arguments are not in the right order, etc.. At least half the time, a very short break, even two minutes or less, is enough to solve the problem. And a solved problem often means new learning, a deeper understanding. In this sense, some "blocks" are good. (Note: I took five breaks in writing this paragraph, during which time I filed some papers, took some vitamins, and checked e mail.)

NOTE

1. Thus, a high achiever may finish a task in one year, while an average achiever might take two years. But the high achiever might have put in more than twice the amount of time, working two and a half hours a day, compared to the moderate achiever's one hour a day. Sloboda (1996) calculated the amount of practice time music students in the UK devoted in order to reach certain levels of performance, as measured by the national system of music examinations. Those who became high achievers put in much more time practicing, but there was no evidence for a "fast track" for high achievers. All groups took about the same amount of practice time to reach a given level. High achievers reached the levels at younger ages but they practiced a lot more. In fact, "there is a nonsignificant trend for high achievers to practice more than low achievers to reach a particular grade" (p. 112).

2. Smith (1994) points out that the kind of incubation discussed here may not be universal: "I cannot argue that the fallow period is essential, because a few writers seems capable of doing without it. They can write - at least by their own report - a certain number of words in a certain period of every day, and forget about writing the rest of the time ... But many other writers have written graphically about their need for silent periods" (p. 126).

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