

To what extent does the dream influence the creative process?

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When we say: "I've had an idea!" we rarely wonder where it came from. We just accept it as part and parcel of the ordinary stream of thoughts. Even when we are facing a seemingly insurmountable problem and then suddenly have an idea that provides the solution to it, we don't see the need of enquiring about the possible origin of the idea, but are content and relieved that it did come to us. In fact, in most cases a sense of privilege and pride and a distinct notion of ownership will override any other considerations.

Indeed, ownership of ideas, of inventions and the creation of works of art is certainly paramount in the social context. There are patents and copyrights to prove this. Yet interest in the origin of ideas will surface on odd occasions. I have watched a program of "The Inventor of the Year" (ABC TV) some time ago where a judge asked an inventor, "where did your idea come from?" Without hesitation the inventor replied: "I woke up in the middle of the night, and there it was!"

To me this was a signal that his idea more likely than not, came from a dream. Had I been able to ask him if he ever took notice of his dreams he might well have said, as so many busy people do, "I don't dream!"

To this I would have said: "You don't *recall* a dream!" implying, of course, that everyone has dreams without everyone remembering them. I would also have suggested to him that the first thoughts upon waking were from the tail end of a dream from which he just had awoken.

At a weekend dream workshop I gleaned some support for this idea when one of the dreamer's complained that she didn't ever recall a dream. I suggested that she lay still upon waking and instead of asking, "what did I dream?" she should watch what was going on in her head. On the next day she reported that there was no dream, but merely the word 'gas', which had entered her head upon waking.

At morning tea break I put the kettle on but it refused to boil. The electricity had been interrupted and the only way I could heat the water was by means of the camping oven run on gas! Of course to most readers this looks much like a coincidence rather than the suggestion that a) the content of the dream from which we wake up naturally flows over to our waking awareness, and b) that dreams might well be predictive.

But not all inventors and artists wake up dreamless. There are numerous cases where an invention had been based on a dream. Perhaps the most well known example of this is Elias Howe's dream, or rather nightmare, of being chased

by natives, who upon having captured him, threatened to spear him to death, unless within twenty-four hours, he could produce a working sewing machine." **(1)**

When he woke up shivering from this nightmare, he recalled that the spears of the natives all had a hole in the tip. This was enough for him to realise at once why the machine he had built had for months on end steadfastly refused to emulate his mother's stitching. The hole in the needle had to be at the tip instead of at the tail end! At last he was able to produce the first workable sewing machine; not as a result of his musing and pondering, his trials and errors, straining and stressing, but thanks to the enlightening drama of a nightmare.

No less known is the discovery by the chemist Friedrich August Kekulé von Stradonitz of a workable bonding between the carbon and hydrogen molecules.

Today we know his discovery as the Benzene Ring. It came to Kekulé as he was taking 40 winks in front of his fireplace. He saw his atoms gambolling in front of his eyes. Recounting his dream he reported: "One of the snakes grabbed its own tail and mockingly the shape whirled before my eyes. I awoke as if struck by lightning...I spent the rest of the night working out its consequences." **(2)**

It is claimed that 80% of biochemistry resorts to this discovery made in a dream. Small wonder that Kekulé is reported to have said at one of his lectures, "Gentlemen, let us learn to dream." But there is something else worth mentioning in this context. This is the grabbing by the snake of its own tail. Here we are face to face with an ancient icon of life perpetual. The interesting thing is, of course, that the Benzene Ring too, represents in its abstraction, the same kind of perpetual process. As well as that Hindus say that life is a monster that eats its own tail, thus illustrating that the tail end of becoming is dying.

But what is even more to the core of this study is that mythology is, if we can trust Jung's and Joseph Campbell's findings, born of a dream, which takes the icon of the serpent back to the same origin as the Benzene Ring. **(3)**

Not unlike Kekulé, Edison too had been able to capture many solutions to various problems he encountered in course of his experimentations. And like in Kekulé's case, his dream booties dropped in his lap while sitting in a chair as well. But in Edison's case, this was all deliberate rather than accidental as in Kekulé's venture. He knew how to exploit what we know as hypnagogic visions that arise as we fall asleep. While sitting in his chair, a silver dollar rested on his head and a metal bucket waited in between his legs for the 'penny to drop'. Then, as he dozed off, his head lunged forward and the silver dollar slipped off his head and dropped clanging into the metallic vessel. This woke him often to the solutions of the problem he was grappling with as he took to his inspirational chair.

While Edison regarded such hypnagogic moments as essential to the solutions of his inventor problems, he was

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quick to say that: "Invention is 1% of inspiration and 99% of perspiration". (4) Nevertheless his hypnagogic visions were doubtless an indispensable ingredient to his 1093 patents. In fact without them it is likely that his 99% of perspiration would have been of no avail.

While most creative individuals would most likely align themselves to Edison in the matter of 'perspiration', when it came to the work after an inspirational dream, Robert Louis Stevenson had something of greatest interest to say about the creative phase subsequent to the inspirational dream. Not many people are aware that this author of such well known tales as *Treasure Island* and *The Strange Case of Dr. Jekyll and Mr. Hyde*, relied almost exclusively on his dreams for his inspiration on which to base his writings. What is perhaps even less known is that he expressed a certain doubt regards the phase of 'perspiration' when he said: "*Dreams must be shaped and honed, plotted and structured, before they can become readable stories*", adding to this, that his Brownies or little people of the night "*do one-half my work for me while I am fast asleep, and in all human likelihood, do the rest for me as well, when I am wide awake and fondly suppose I do it for myself.*" (5)

More modern writers occasionally share his suspicion that the creative person might be a mere puppet in the hands of his dreams. Gloria Naylor, for instance, writes, "So much of what I do is unconscious. I choose not to dissect why certain images appear when I'm writing. I just let them take me where they will...Because, when the process is going on, it lives at the level where dreams are born." (6)

This takes us back to Freud when he said that the driving force of the unconscious implied for him "a determinism that rules both the conscious and the unconscious life absolutely" (7) and, as if to ascertain that we would make no mistake about this, he enlarged upon it saying: "*the actions we ascribe to coincidence or free choice are in reality subject to unconscious mechanisms.*" (8)

When reading this, we are at once taken aback by this sweeping statement since it directly contradicts his assertion that dreams are not giving us '*knowledge of the future*', but only of the past. (9) We wonder how this can be when he clearly implied that the dream was a reflection of the unconscious forces which in turn drive us onwards on a *predetermined* course. *Predetermined* is the operative word here. It can only mean that we are driven quite against our own will towards the future. Put another way, our dreams, being reflections of the unconscious forces that forge our life, could only be harbingers of things to come. Thus, without realising it, he supported the ancient perception of dreams that maintained they not only looked towards the future, but also 'brought it on'.

There is a case, which unambiguously supports Freud's assertion that our actions are predetermined, and that Stevenson's suspicion that it was his Brownies rather than he himself that honed and structured the dreams they had given him.

What is especially interesting in this case is the fact that unlike Howe and Kekulé, the inventor in question had no desire for inventing anything whatsoever all through a twenty (20) year long phase of nocturnal terror. In view of this he could have had no idea what the apparent 'switchboard' that regularly appeared in his nightmare was really for. All he knew for certain was that the wires of the curious apparatus of his regular nightmare were higgledy-piggledy and they had to be put in order.

Clearly, what was happening here, took place mainly 'below' the level of ordinary waking awareness. The only thing that managed to rise above it was the recollection of a nightmare in which a certain task, whose purpose remained the night terror's secret, was to be performed. And as is customary in the realm of nightmares, they will recur until the dreamer has grasped the message and initiated appropriate action. That he couldn't do, of course, since there was no visible problem or current project to which it might be applied. Thus this dreamer, whose name was Michael Barnsley, had no choice but to suffer his regular night terror until twenty years later when it was revealed to him what the 'switchboard' was really about, what functions it would have and in what realm it should come into existence.

Sometime after meeting with Benoit Mandelbrot and his revolutionary fractal mathematics, Michael Barnsley began work on a practical application of Benoit's discovery of the formula of infinite iterations ($Z=Z^2 + c$). He speculated that one such practicality could be the construction of a particular software that allowed the compression, and hence clarification, of photographic images that were fuzzy, such as those taken from satellites. It was at this point that the scene of his old nightmare reappeared, but no longer in its former, terrifying shape, but as an eureka experience. Here is what he said about the crucial time: "*The discovery of how to automatically calculate the collage of an arbitrary picture came to me in a dream. (In it) I saw how you could straighten out the switchboard, how all the wires would come untangled and be nicely connected and how you would join all the wires from big blocks to little blocks in the grid. I woke up in the morning and I knew I had discovered the total secret to fractal image compression. How to automatically look at a digital picture and a) how to turn it into a formula, and b) an entity of infinite resolution. So the goal is now to be able to capture this fire of Prometheus, this fractal wonder, put it in a box and being able to make this available to everyone.*" (From a documentary film, 'Colours of Infinity', hosted by Arthur C. Clark.)

There is no better example I know that demonstrates the long arm and guiding intelligence of the gifts of scientific discoveries and inventions. As the recurring nightmares, yet still meaningless to the dreamer, reveal, ideas for inventions or inklings of discoveries may be present in the secret realms of the carrier's 'hard disk' long before they will show up on his 'monitor' or 'desk top'. The incredibly long gestation of the matrix with its secret processes not understood by the dreamer, suggest quite irrefutably, that the task of creating the ultimate image compression software was not really Michael Barnsley's choice, but the choice of his nightmares and illuminating final dream. There is only one word for such a happening: *predetermination*.

This is strengthened by the fact that the nightmare was resolved at the time when Barnsley actually began to ponder the idea of image compression. The sense that the dream was here in charge all the way to the finished product is overwhelming. No less so is the thought that the dream not only knew in what form and how it was to become manifest, but also where and when.

This is easily established, for image compression could only have become a reality at the particular point in time when Barnsley would come in contact with Mandelbrot and his fractal mathematics, the indispensable ingredient and motivation to the designing of the invention in question. And let's keep in mind that it obviously knew this at a time when

fractal math had not yet been developed to the point where it could be forming the basis of image compression.

True, two French mathematicians (Pierre Fatou & Gaston Julia; 1918) had thought of the theory of fractals long before Barnsley was born. But the facilities to make it visible and functional for practical purposes, a suitable computer technology had yet to be developed, and that became available only towards the end of Barnsley's legendary nightmares. This case reinforces the notion that the inventor or the discoverer is not the creator, not the originator, not the instigator of the invention or discovery, but merely the vehicle, the tool in the hands of the dream.

The immense gap of twenty years between the first occurrence of Barnsley's nightmare and his last dream of resolution that fixed the matrix he couldn't sort out himself, suggests that intelligent dreaming is not an haphazard process, that dreams are not just coming to the inventor's help when he is stumped as was the case with Edison, for instance, but that they are an on-going guide, step by step through his entire life. It suggests that the 'hard disk' of the inventor and of every person, determines when and what should appear on the 'monitor screen', which in turn will signal when and what to do.

That this is more likely than not, is underpinned by the experiments undertaken by Benjamin Libet. In an article in 'The New Scientist' from 14 September 2002 the following paragraph penned by John Gray demands that we seriously consider this suggestion: *"If cognitive science is right, the picture of humans that philosophers conjure up when defending ideals of personal autonomy is at least partly a chimera. Other research supports this conclusion. Work by Benjamin Libet at the University of California showed that the electrical impulse in the brain that initiates action occurs up to half a second before we take the decision to act. Our actions are initiated unconsciously."*

The paragraph then continues: *"True, Libet allowed that we can veto what the brain has initiated, but it is unclear how we can even know that we have deliberately exercised this capacity. For all practical purposes, it might as well not exist."*

A rather uncomfortable conclusion for all those who are unable to share Stevenson's suspicion that our 'Brownies' might well do our work even while we are awake and fondly suppose to be sovereign creative individuals.

Indeed, in light of Libet's research, together with Michael Barnsley's nightmare, choice looks very much like an illusion. True it comes into our mind as a feeling, but that may very well be the end of it.

References and Footnotes

- (1) Dreamers" by John Grant, "A Geography of Dreamland", Grafton books 1986, page 129
- (2) *ibid* page 125
- (3) Joseph Campbell probably articulated this best when he said, *"Myths are public dreams. Dreams are private myths."* "Jung believed the value of myths was highly significant within the dream state." Dreaminterpretation.com-dictionary.com
- (4) Think exist.com
- (5) "Dreamers" by John Grant, "A Geography of Dreamland", Grafton books 1986, page 94.
- (6) Writers Dreaming, Naomi Epel, Bookman Press, Melbourne, page 170

(7) "Freud", Octave Mannoni, Rohwolt's Monographien, August 1975, Rohwolt Taschenbuch Verlag GmbH, page 80 (my translation)

(8) "Freud", Octave Mannoni, page 80 (my translation)

(9) Freud, "The Interpretation of Dreams" Penguin Books, 1977 page 783