

## Old Rock Day

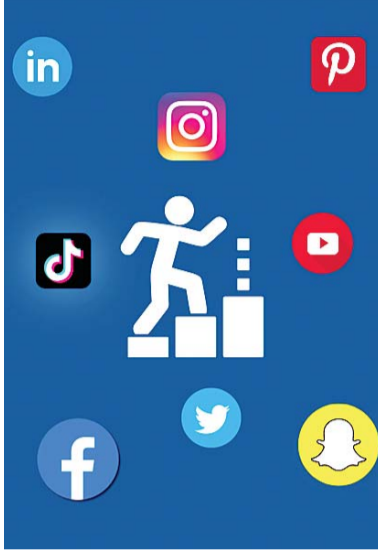
Old Rock Day, despite some misconception, is not a day of celebrating classic Rock 'n' Roll tunes of days gone by. Instead, this is the day that geologists and amateur rock enthusiasts take it upon themselves to show their appreciation of all things fossilized and stony. Discover the beauty and history of the earth with these timeless treasures, that offer a glimpse into the past, and a connection to the natural world. One of the best things to do is learn more about the different kinds of old rocks.



## #CAREER

### Use social media to propel your career forward

A well-curated and strong social media presence is just as crucial for a data scientist as it is for a marketing manager. The key lies in the way you use social media and its functions in your favour.



Over the last few years, social media has become an integral part of our everyday lives. Especially in today's digital age, it has become a tool that transcends its basic function of helping people stay connected and socialize. It has transitioned into a go-to method to strengthen professional identities.

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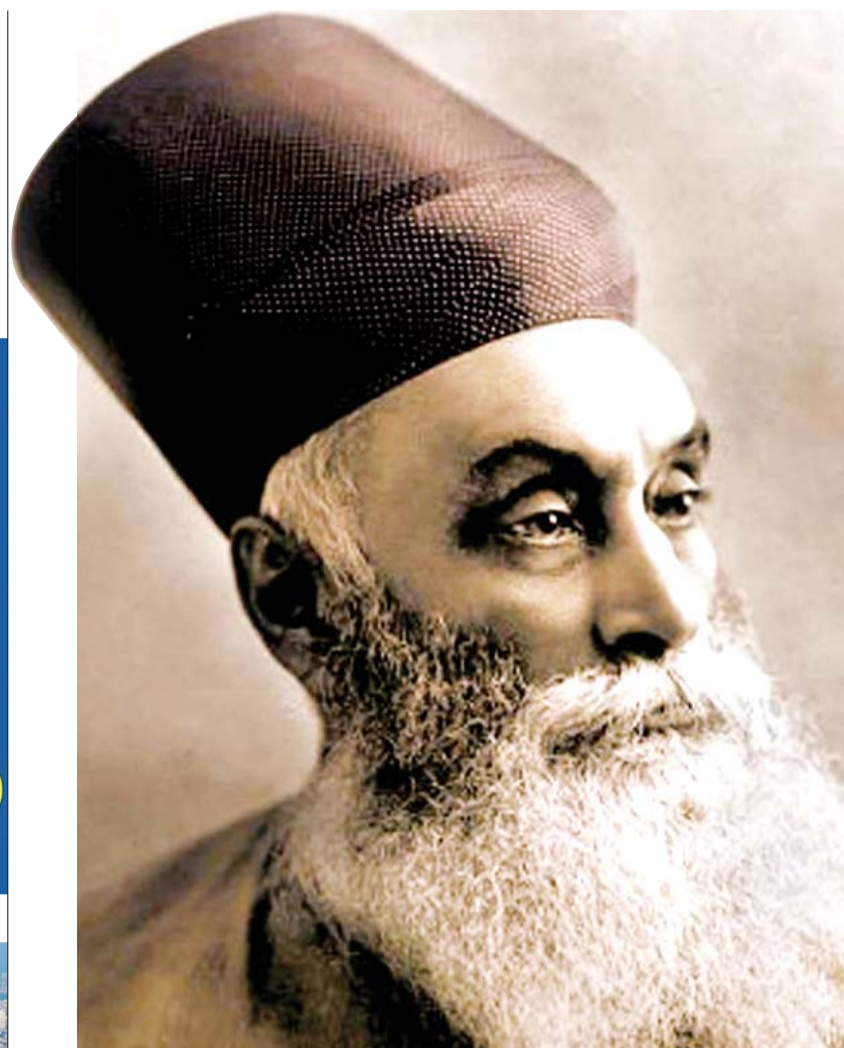
Here are a few highly effective strategies to use social media to reach greater heights in your career journey.

- 1. Build a personal brand:** Nowadays, it takes more than just your resume to convey your potential. The way you market yourself can set you apart from other individuals. Use platforms like LinkedIn, Twitter, and Instagram to showcase your achievements, skills, and expertise. Besides, to let people connect with you and get to know you better, you must regularly share insights, and express your views on the latest trends. For instance, if you are a marketing manager, you can create a post or a thread on innovative AI-driven marketing strategies and in-demand skills. A constant focus on showcasing thought leadership in the right way helps build the personal brand.
- 2. Leverage the art of content creation:** People connect with content that is short, crisp, and yet insightful. While you may be busy with your 9 to 5 job, even if just once a week, you can post inter-

esting blogs, short videos, and infographics to boost your visibility on your social media. Remember, the key here is to keep your content concise and easy to comprehend. No one has the time to read a 1000-word long piece delineating your views on a specific topic. Cut it down to a few points or a short clip summarizing it.

**3. Gain quick and direct access to job opportunities:** Gone are the days when job opportunities were accessible only through job portals. While LinkedIn is a one-stop platform for both networking and landing jobs, many companies have their social media pages or accounts even on Instagram where they post about upcoming job opportunities that you can keep track of. Along with this, there are many pages to only posting about vacancies across roles and sectors that you can follow. Also, they often use hashtags like #hiring, #jobssearch, #jobsseekers and more to make it easier for you to easily get your hands on multiple such pages.

**4. Network beyond geographical boundaries:** Whether you are just starting out as a fresher or you are a mid-career professional, with extensive experience looking to change careers, you can leverage social media to establish a strong network, which can further assist you in landing many of the unlisted or hidden job opportunities. At the same time, networking will help you get in touch with many of the industry veterans, who can act as your mentors and push you in the right direction.

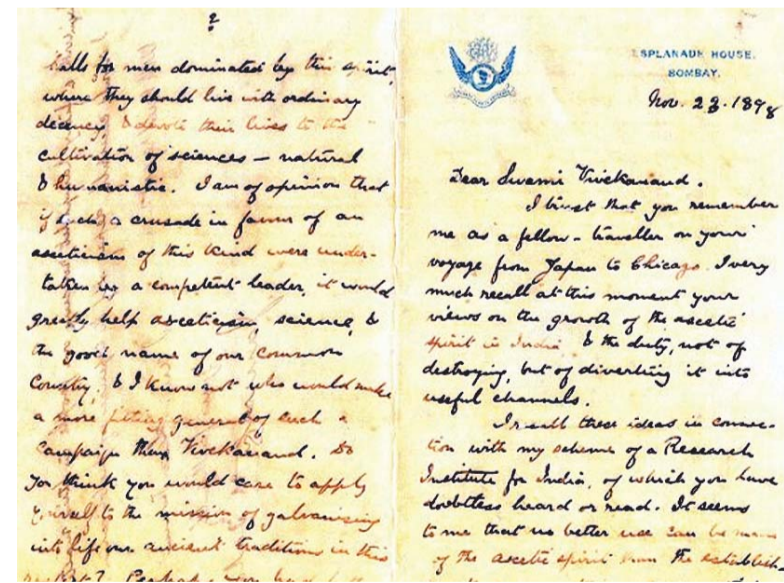


JAMSETJI TATA.



Vivekananda was not only a spiritual master, he was also a man of science and arts. If today, Bangalore is the Silicon Valley of India, and Indians are leading players in information technology, it is thanks to Swami Vivekananda. In September 1893, Jamsetji Tata and Vivekananda met by chance on board a ship travelling from Japan to North America. Raja Ajit Singh of Khetri had arranged for Swamiji to travel first class with a cabin to himself. Vivekananda requested Tata to establish a science research institute in India. The Maharaja of Mysore, Krishna Raja deva Wodeyar, pitched in with a grant of land in Bangalore and a generous financial donation. In 1909, the Tata, now Indian Institute of Science, was established, and it is the leading science institute in India.

Impressed by Swami Vivekananda's views on science and patriotism, Jamsetji sought his advice on the modalities of establishment of a research institute in India. Five years later, in 1909, Jamsetji Tata wrote to Vivekananda, requesting him to write a pamphlet on science education for Indians. Dear Swami Vivekananda, I trust that you remember me as a fellow traveller in your voyage from Japan to Chicago. I very much recall at this moment your views on the growth of the ascetic spirit in India, and the duty of not destroying but delivering it into useful channels. I recall these ideas in connection with my scheme of Research Institute of Science for India, of which you have, doubtless, heard or read. It seems to me that no better use can be made of the ascetic spirit than the establishment of monasteries or residential halls for men dominated by this spirit, where they would live with ordinary decency and devote their lives to the cultivation of sciences, natural and humanistic. I am of the opinion that, if such a crusade in favour of an asceticism of this kind were undertaken by a competent leader, it would greatly help asceticism, science and the good name of our common country, and I know not who would make a more fitting general of such a campaign than Vivekananda. Do you think you would care to apply yourself to the mission of galvanizing into our ancient traditions in this respect? Perhaps, you had better begin with a fiery pamphlet, rousing our people in this matter. I would cheerfully defray all the expenses of publication.

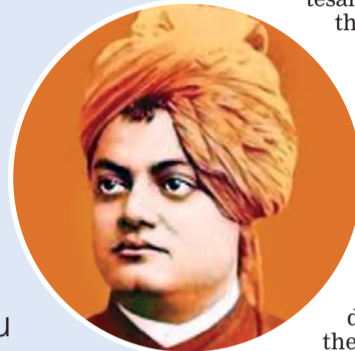


TATA'S LETTER TO SWAMIJI.

# SWAMIJI, SCIENTISTS AND PERFORMING ARTISTES

PART:2

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## IZIEYL

Here, it would not be out of place to describe the last scene of "Iziyyl," who is a courtesan madly in love with the Buddha, who, having taken the vow of celibacy, has so far spurned her. She is also despised by his followers for her persistent attempts at distracting the Buddha during his meditation and they condemn her to death. The setting of the scene is a Kali Temple. The New York Herald of 19 January 1896 summed up the scene. The fourth and last scene of the drama shows the place of execution. Iziyyl has been submitted to all forms of torture, and is dying of hunger and pain. By her side stands Prince Siddharth, whom she cannot see, as her eyes have been gorged out. Then, the Prince feels that he is still a man. "I love thee," he cries. "O faith that I have blasphemed. O faith that I betrayed! O faith let me be but a man like other men! Let me be meek and suffer like them! Let the world look elsewhere if it needs an apostle! I am but clay. Die not Iziyyl be reborn in thy carnal and despised beauty! Thy voice restores me to myself to the immortal duties I have for a moment deserted." "Oh! Master," she sighs. "Press me in thy arms. Lay thy hand on my heart. Give thy lips, there is



Buddha from Berenike.

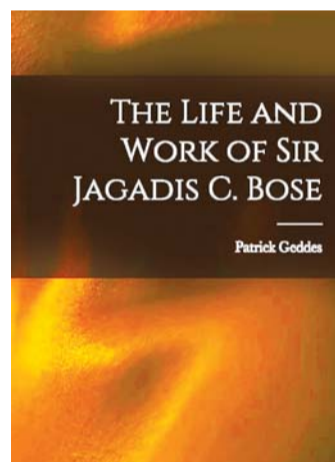
"time. I die" and Iziyyl then feeling that finally she is "his beloved" falls dead. I am reminded by this scene of an incident from the New Testament of The Bible where Jesus rescues the Samaritan woman from the mob. Certain similarities between Buddhist stories and those of the New Testament of the Bible should not be a surprise as many scholars now believe that early Christianity was influenced by Buddhism for just a century before Palestine was a part of the Greek Seleucid Empire whose official religion was Buddhism. Buddhist artifacts are still being uncovered in the Middle East, the most recent being a statue of the Buddha at Berenike.

## #THE SWAMI

### Swami and Sir Patrick Geddes



SISTER NIVEDITA.



JC Bose, who is considered the father of modern wireless telecommunication. He also published a book of his work and time in India. Nivedita introduced Geddes to Indian spirituality via the teachings of Ramakrishna Paramhansa.



NIKOLA TESLA.

Not being able to spare time, Swami Vivekananda, in turn, asked his follower by Sister Nivedita (born Margaret Elizabeth Noble) to write the pamphlet and prepare the plan. In turn, Sister Nivedita wrote to Sir Patrick Geddes, a Scottish Polymath, whom Vivekananda had first met in 1890 in America, when both were lecturing in that country, and then later in Paris at the World Fair where Geddes had a stall. Geddes was biologist, environmentalist, sociologist, geographer, pioneering town planner and a positivist in his philosophy who believed that all new discoveries in science can be beneficial to human beings. Geddes authored several books, including a biography of the famous Indian scientist

## Swami and Tesla

Were it not for the fact that Elon Musk, the maverick and the world's richest man not named his car Tesla after Nikola Tesla, Tesla would have been forgotten, which would have been sad because it was Tesla who laid the foundation stone for Einstein's Theory of Relativity and Max Planck's Quantum Theory. Tesla deserves more recognition than both Einstein and Max Planck because not only did he make new discoveries but also put them to practical use. He is maker of the electric AC Motor, which moves nearly all industrial machinery and much of road, rail, sea transport and some aircraft too, including the weaponised drones. The meeting in 1896 in Paris between Vivekananda and Tesla was at a party given by Sarah Bernhardt,



VIVEKANANDA WITH TESLA.



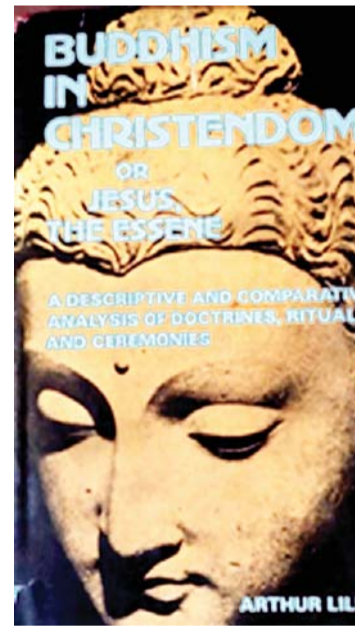
Sarah Bernhardt.

who is considered the greatest actress, not only of her time but of all time. Some days earlier, Bernhardt had been playing the leading part in the play "Iziyyl," a dramatized and fictional play based on an incident in the life of the Buddha. Bernhardt had spotted Swami Vivekananda in the audience, not a difficult thing to do, as he easily stood out in the crowd of spectators with his sar-

fron turban. Tesla had also been invited to the party, and so impressed was he by Swamiji and his explanation of Advaita Philosophy that he became his follower, and thereafter started using the language, explanation and metaphor of Advaita Philosophy and the Upanishads, to explain his own scientific theories as the normal spoken languages of Europe were inadequate for this purpose.

## SUGGESTED FURTHER READING

Basing himself on as diverse sources as the stones of Ashoka in the East and Philo in the west, the author contends that the origin of Christianity is to be found in the higher Judaism in Alexandria and Palestine. This Judaism was purely Buddhist, and the two remarkable works of higher Judaism, the Solar of the Kabalah and the Codes Nazareus reproduce the theogony of Buddhism. The author shows that the New Testament, Christian Rites and teachings bear minute a resemblance to the Buddhist scriptures.



Prof. Lille, in the preface to his book, first published in 1887, says, "Thus, it has been shown by the Orientalist Prof. Wilson that the three Avesthaka (states of consciousness) of the Trinity have come from India. Colebrooke has pointed out that the hymns of the Rig Veda, though avowedly addressed to many deities, are according to the most ancient annotations of Indian scriptures, resolvable into a triad, and ultimately one God. It seems to result from the meaning of this triad, may be more profitably sought in ancient Indian texts than as vaticinations of the blunt and literal monks that composed the Council of Niceae." These thoughts have been also expressed by Dr. Radhakrishna, our former philosopher president, in his seminal work, "Eastern Sources of Western Thought".

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## #SCIENCE

# Do black holes really evaporate?

In 1974, Stephen Hawking proposed that black holes could evaporate. But do we understand how this might happen?



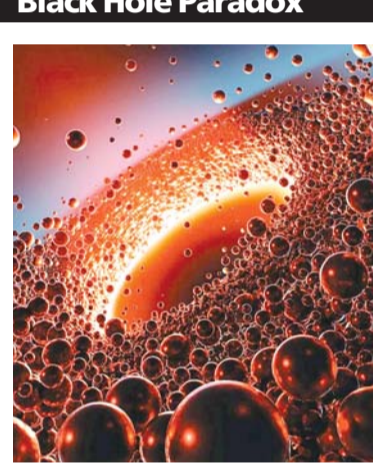
In 1974, Stephen Hawking put forward an intriguing idea. Using the principles of quantum physics, he predicted that even though nothing is supposed to escape a black hole's event horizon, these cosmic beasts can actually emit particles. And by ejecting these particles, black holes will shrink over a very long time, eventually evaporate and possibly explode. Hawking sparked a debate that has continued for more than 50 years. The idea that black holes evaporate puts two fundamental tenets of physics, general relativity and quantum mechanics, into conflict. But, assuming that Hawking and others are correct, how would a black hole evaporate, leaving nothing behind? Before we explore this mind-bending idea, it's important to know that theoretical physicists are still debating how it's possible. But in the past few decades, a number of potential explanations have emerged for how black holes seem to defy the rules of our universe by disappearing.

"We spent the last 50 years fighting about it," says Daniel Harlow, a physicist at MIT. "I would say now we understand it a lot better than Hawking did." Albert Einstein predicted the existence of black holes in 1915 with his theory of general relativity, which explains how gravity is a property of space-time's curvature. Based on this theory, black holes are objects with a lot of mass compressed into a singular area, where gravity is so strong that even light can't escape its pull. "According to general relativity, everything can

go inside (a black hole) and nothing can ever come out," said Heino Falcke, an Astrophysicist at Radboud University in the Netherlands, who was involved in capturing the first image of a black hole in 2019. "Everything thrown in is completely crushed into a point." But around 60 years later, Hawking's calculations showed that perhaps not everything is crushed by black holes. In quantum mechanics, pairs of particles, particles and antiparticles, blink in and out of existence. These particles usually cancel each other out.

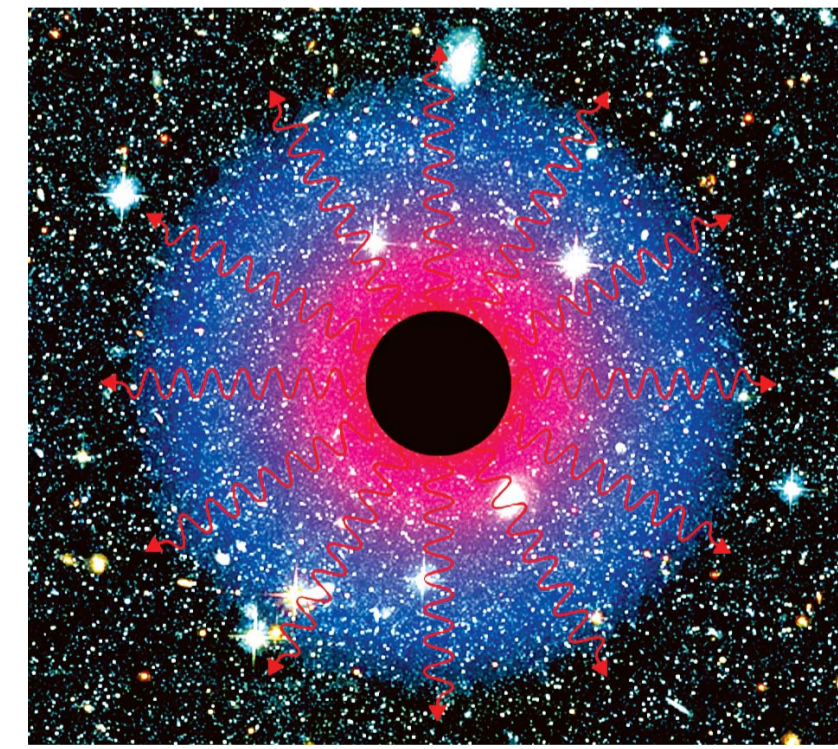
But Hawking argued that fluctuations of fields at the event horizon, a black hole's "point of no return," beyond which nothing can escape, means that these particles don't always cancel out. One of those particles can get sucked into the black hole, while the other gets ejected into space, leaving behind a cloud called Hawking radiation. As more and more particles are ejected, black holes begin to lose energy and mass, and eventually disappear, according to this theory. This process would be very slow. A black hole with a mass of the sun could take 10<sup>67</sup> years to fully evaporate, longer than the current age of the universe. And scientists are yet to find evidence for this. Black holes do not seem to release thermal radiation, meaning that Hawking radiation may not be detectable. Some scientists are trying to get a peek at this elusive radiation in labs and on tiny black holes, which are posited to evaporate more quickly than the ones in our galaxy would.

## Black Hole Paradox

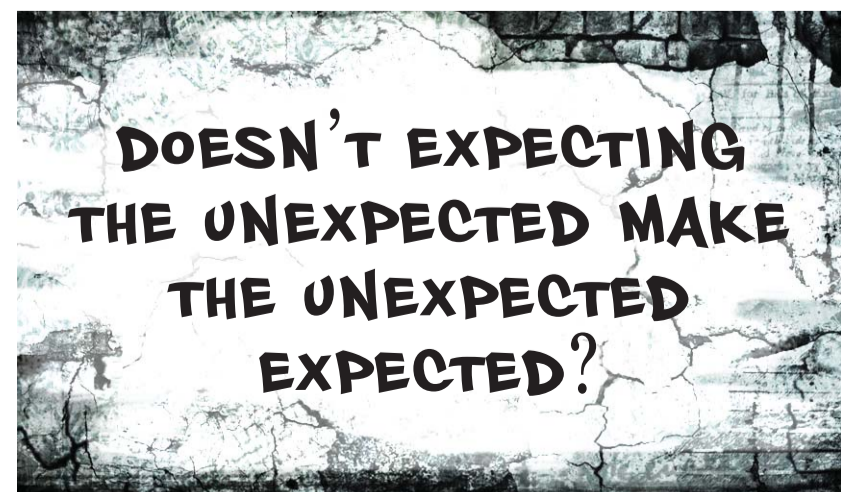


However, Hawking's idea has a few caveats that lead to confounding questions. Evaporation introduces a conundrum called the *black hole information paradox*. If a black hole evaporates and disappears, the particles it leaves behind are missing information on the matter's original state. This violates a core concept in physics, that a system in one point in time should determine, or reflect, its state in another, also known as predictability.

Scientists are still debating how to resolve this paradox. "The amazing thing about Hawking's paradox is that any resolution of it requires you to give up some sacred principle of physics," Harlow said. Hawking's solution was to give up predictability, as he lamented in a 1976 paper. Some physicists are examining the laws around thermodynamics to solve this discrepancy, and how entropy affects quantum information. Another group of physicists is examining locality, the principle that objects are directly influenced only by their immediate surroundings. They believe the information paradox can be resolved through something called quantum nonlocality, the idea that particles inside a black hole share their quantum state with correlated particles outside it. Despite the progress in understanding black hole evaporation, mysteries continue to pile up. In a 2023 study in the journal *Physical Review Letters*, Falcke and colleagues argued that the information paradox may not be limited to black holes. By rederiving Hawking's calculations, the team proposed that all objects may have the same problem. All things may be evaporating, thus deepening the puzzle. "There's something in the world we cannot explain," Falcke said. "But, you know, by creating more mysteries, we may actually be a step closer to a solution eventually."



## THE WALL



## BABY BLUES



By Rick Kirkman & Jerry Scott

## ZITS



By Jerry Scott & Jim Borgman

