



Understanding the Minds of Smokers

JONATHAN R. YOUNG
SCIENCE & TECHNOLOGY EDITOR

Gaining an understanding of the minds of devoted cigarette addicts can be instrumental in the development of effective anti-smoking campaigns and policies. By finding out precisely what motivates smokers to continue to smoke in spite of all the scientific evidence that highlights the great dangers associated with cigarettes, researchers may find the key to stopping smoking addiction. Scientists have been exploring this topic, and they have found that smokers experience greater rates of depression, anxiety disorders, and other mental illnesses. In addition, nicotine may help smokers cope with these problems.

These findings may explain why some smokers ignore the advice of medical professionals and keep smoking. Studies have shown that those who smoke are almost five times more likely to experience episodes of major depression. Additionally, smokers are more likely to suffer from schizophrenia, attention-deficit hyperactivity disorder, and anxiety disorders. Smokers are more vulnerable to become addicted to drugs and alcohol. Studies have also shown that those who smoke demonstrate poor impulse control and are more likely to be neurotic.

Scientists have found that people who smoke on a daily basis are more likely to try to commit suicide. After adjusting for prior depression, researchers still found that daily smokers are 174 percent more likely than occasional smokers and nonsmokers to attempt or seriously consider suicide. However, it is still uncertain whether smoking on a daily basis causes people to experience suicidal thoughts. It is possible that deeper psychological issues lead to both smoking and suicidal thoughts. Scientists have been intrigued by the possibility that smoking may increase the risk of suicide.

The information gathered from smoker profiles has helped with both public anti-smoking campaigns and the development of medical interventions that treat both cigarette addiction and depression at the same time. However, to the dismay of smokers, both public and private employers are now using these smoker profiles as justification for employment decisions. For instance, researchers employed by the Naval Postgraduate

School in Monterey, California, studied the smoking habits of new recruits, and they recommended that the Navy exclude longtime smokers, since they found that these smokers are more likely to get expelled.



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Some businesses are no longer hiring smokers because of studies linking smoking with problematic behavior. Smokers' rights advocates note that these studies are not productive and merely

promote workplace discrimination against smokers. They are currently rallying for legislation to prevent this type of discrimination.

Researchers, however, contend that using these studies to deny smokers opportunities overlooks the medical implications of the research. They argue that these studies suggest that smoking addiction can be treated. One treatment that is receiving consideration is the use of nicotine to treat depression. David Gilbert, a professor at Southern Illinois University, has demonstrated through experiments that both smokers and former smokers alike are better able to focus on positive thoughts after receiving nicotine from a patch.

This indicates that nicotine may help treat symptoms of depression, such as pessimism and lethargy. According to Gilbert, nicotine helps some people combat depression by altering brain chemistry. The effects of nicotine on the brain are still uncertain, but studies suggest that nicotine affects neurotransmitters in a process that may be similar to the effects of antidepressants. Gilbert notes that many smokers self-medicate with nicotine while smoking. However, they are also dangerously exposing themselves to carcinogenic materials.

These recent studies provide insight into why some smokers ignore the advice of health care professionals and continue to smoke. As more research is completed, more information can be used to develop more effective anti-smoking campaigns and medical interventions for smoking addiction.

Fossils Suggest Dinosaurs Evolved into Birds

RACHAEL FEDERICO
STAFF WRITER

Several recent paleontological discoveries of fossils from dinosaurs that lived between 65-130 million years ago strengthen scientists' hypotheses that some dinosaurs evolved into birds. All of the discoveries have been made in China (the Liaoning and Jiangxi provinces). The fossils all belong to the theropod categorization—the one that includes the T. Rex. The theropods have short forelimbs and strong hind legs and are considered the closest relatives to birds.

A unique fossil of a female oviraptorosaurian (a subgroup of theropods), was the first ever found

with the intact fossils of eggs preserved in her body. The dinosaur was about 6.5-10 feet in length, and the eggs are about 18 cm long and 6-8 cm wide. It is bipedal and carnivorous, although believed to be an early ancestor to modern birds.

Finding the eggs gives interesting information about the dinosaur's reproductive system, and shows the transition from the reptilian to avian structure. The oviraptorosaurians have two ovaries and two oviducts as crocodiles do, but like birds, they lay only two eggs at a time, whereas a crocodile lays approximately fifty. Paleontologists have found nests with about fifteen eggs in the same region (as well as in parts of Mongolia), which indicates that the dinosaurs' bodies produced the eggs, they were laid, and then the process was repeated until the nest was

full. The eggs have a slightly pointed ends which also indicates that they were laid from the center of the nest in circular clutches (groups of eggs) to the outside. The fossil has been labeled "yo br in good condition," and research will continue to help understand how and why it died.

Another twenty-one inch-long theropod that was found in October was found in the "tuck-in position" that is exclusive to birds; a position that is commonly seen in ducks and geese. The dinosaur is believed to have died while sleeping, although some paleontologists worry that it was simply in "the death position." While the cause of death is unknown, some theorize that it was due to poisonous volcanic gas or a caved-in nest. The dinosaur, fossilized by volcanic and riverbed sediment, had its head tucked under its forelimb. Scientists speculate that this position evolved

from dinosaurs as a method of conserving heat. The find also supports the theory that some dinosaurs were actually endothermic, warm-blooded.

Finally, the most convincing support for the claim comes from the recent discoveries of dinosaurs covered with "a partial coat of hair-like feathers." A five foot-long carnivore, a tyrannosaurid, was found with the covering, as well as a smaller specimen in very good condition that has fossilized feathers clearly attached to its wing-like forelimbs.

While the discoveries do not offer conclusive proof for the transition between dinosaurs and birds, paleontologists continue to build evidence for their conjectures. The north-east region of China is undergoing continual excavation because of the new and promising finds.

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