

# The impact of stress on professional life

We regularly encounter the term "stress" in connection with all aspects of living. However, the condition referred to is one that is far from clearly defined. It is a broad process that involves complex biochemical, physiological, behavioural and psychological dimensions, many associated with health and sickness. Broadly, it refers to the interaction between an environmental event threatening the total wellbeing of an individual and the attitude to it of the individual, often resulting in that unhappy state known as depression.

It has been stated that women are two to three times as likely to become clinically depressed as men, for reasons that are unclear. One suggestion is the awareness of the disadvantage still placed on women in terms of opportunities for paid employment, with an

increasing social responsibility for childcare. It is thought that hormonal influences may also play a part in this phenomenon.

The distinction regularly drawn between endogenous and exogenous depression has only served to make the situation more complicated. Moreover, the diminution of zest for living brought on by cold and cloudy winters, the so-called seasonal affective disorder, plays an important role in our enjoyment of life.

An interesting discussion about stress in medical researchers in the US by a New York commentator appears in the 19 January issue of *Nature*. It appears that one in five faculty members in medical schools in the US report signs of depression. The fact emerged from a survey of 3,500 workers from four medical schools questioned about their

mental and physical health as well as life and job satisfaction.

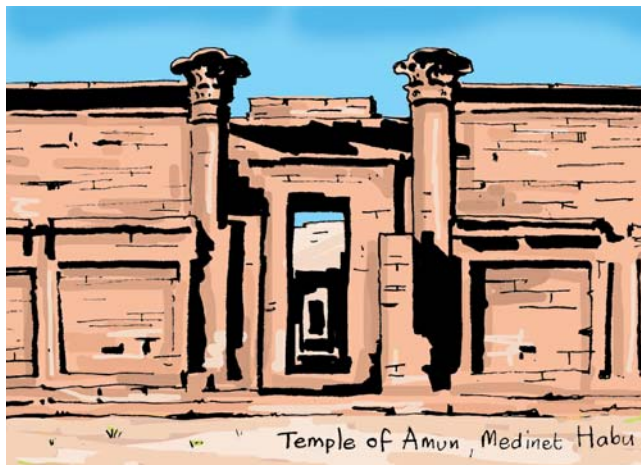
A fifth of both male and female researchers showed symptoms of clinical depression, about twice the incidence in the general population and a rise from the 14 per cent seen in a similar study in 1984. Younger individuals showed more symptoms of depression than did older ones, and those who dealt with patients showed more stress than those engaged in basic research.

Various reasons for the findings were suggested. Medical school workers claimed to suffer increasing pressure to see fee-paying patients, making them less able to pursue research and publications that bring promotion. Relaxation was made increasingly difficult. Mentoring and support are called for to compensate.

## Why urgent action is needed to avoid a watery grave for the pharaohs of Luxor

Much consternation has been expressed over the threat of a rising sea level to the magnificent architecture of Venice. Yet water is also making its insidious onslaught on the relics of our ancestors elsewhere in the world.

In the 20 January issue of *Science* there is a survey of a threat looming over the banks of the Nile. The temple of Amun in Medinet Habu has survived the ravages of 21 centuries in the desert, but today its foundations are



Temple of Amun, Medinet Habu

being eaten away by saline ground water following a rise in the water table. The soft sandstone of the temples absorbs the ground-water and much salt. On evaporation the salt crystallises in the porous rock and causes disintegration.

There is disagreement in official circles over the prime cause of the problem, but a combination of agricultural practices and increasingly inadequate sewers appears to have acted to raise the water table by several meters in the neighbourhood of Luxor. This involves a threat to the continued existence of scores of temples and tombs that are important to scholars and critical to the tourist industry.

Efforts are being made to reduce the scale of the damage, including digging drainage channels round threatened monuments, reports the director of the Egyptian Supreme Council of Antiquities. It will be difficult, however, to convince local rice farmers to

alter their cropping programmes, which involve periodic deliberate flooding of areas.

Projects envisaged by the international development agency concerned will lower the immediate water level by some two metres. However, most of the blame is levelled at inadequate sewers on the east bank near the temples of Luxor and Karnak. One new scheme at Karnak has reduced ground-water levels by half a metre.

The cultivation of sugar cane on the west bank is especially blamed for inundation, since its farmers derive water from the Nile and regularly flood their fields. The local canals are never allowed to dry out. One solution would be to discontinue growing cane near monuments and plant beans and flowers instead. Unfortunately the Egyptian government heavily subsidises the sugar industry.

Meanwhile an increase in humidity and rainfall further threatens fragile carvings and paintings. Immediate action is called for.

## A look at the latest developments in agents of destruction

A book review in the 26 January issue of *Nature* reviews the development of biological weapons programmes throughout the world since 1945. Recent terrorist attacks have drawn considerable attention to this problem from the mass media and the scientific community. There are many unscientific prophecies, a lack of discrimination between bio-warfare, bio-terrorism and bio-crime, and a lack of uniformly accepted definitions for the situations involved.

Biological threats have been posed for many decades, aimed at killing livestock or warring people, and researched since the 1920s. Programmes have been developed in Canada, France, Iraq, South Africa, Britain, the US and the Soviet Union. Weapons aimed at killing crops and animals, and non-lethal products have featured. Attempts have been made to prevent proliferation of such products.

Before 1945 several countries started bio-warfare programmes because of an imagined biological threat from Nazi Germany. Then Canada, Britain and the US imagined a similar threat from the Soviet Union, with the result that the Soviets stepped up their activities into biological weapons. This should be taken as a warning to avoid activities that could be interpreted in a sinister manner.

Today we have to keep an eye on the manufacture of deadly viruses and be aware that a few laboratories still maintain stocks of cultures that have no likely value in treating peacetime epidemics. A misguided report about weapons of mass destruction supposedly stored in Iraq has had disastrous consequences, and such assumptions need to be closely examined before any action is taken in retaliation.