

I gotta love me

The mythical Narcissus gazed at his reflection and found true, tragic love. He couldn't even leave his alluring image long enough to grab a bite to eat, so he died of starvation.

Real-life narcissists take considerable inspiration from their namesake, a new study finds. These self-ordained fonts of excellence report even more bloated admiration of their personal qualities after viewing videotapes of themselves.

Moreover, narcissists seek out and enjoy situations—such as looking in a mirror—in which they can focus attention on themselves and sustain their self-regard, assert Richard W. Robins of the University of California, Davis and Oliver P. John of the University of California, Berkeley.

"The motive to enhance self-esteem is stronger and more easily activated in narcissistic individuals because of their heightened sensitivity to threats to their [grandiose] self-views," the psychologists propose in the just-released January *PSYCHOLOGICAL SCIENCE*. Thus, allowing narcissists to see themselves from the outside may swell their personal evaluations beyond already distended levels.

To assess the prevalence and characteristics of this type of personality, Robins and John tested 130 college students and found that 51 rated high in narcissism. Unlike their peers, narcissists preferred to watch themselves rather than others on a videotape, enjoyed looking in mirrors as a way to feel better, and endorsed such items on a questionnaire as "If I ruled the world, it would be a much better place."

In a second experiment, 124 college students—almost half of whom qualified as narcissists—received background information on concocted candidates for merit pay raises in an organization. In small groups, each volunteer tried to obtain as much money as possible for the candidate assigned to him or her by the researchers, while also working toward a consensus on how to divvy up available funds.

Narcissists did no better than other volunteers in obtaining more money for their candidates. Yet narcissists evaluated their achievements far more positively, especially when shown videotapes of themselves in action. Students low in narcissism rated themselves more negatively after seeing the videotape.

The results do not stem from a surfeit of self-esteem in narcissists versus those low in narcissism, Robins notes. A wide range of self-esteem was observed in both groups, but only narcissists liked to look at themselves often in mirrors and magnified their self-evaluations after videotape viewing. —B.B.

Bent on intent in the brain

A swath of tissue centrally located in the brain's outer layer, or cortex, serves as a way station between perception and action by signaling the intention to carry out a behavior, according to an investigation in the March 13 *NATURE*.

Neural pathways responsible for spatial perception wend their way into this region, known as the posterior parietal cortex, which itself maintains connections to brain areas that help to execute eye and hand movements.

"Our thoughts are more directly tied to our actions than we had imagined, and the posterior parietal cortex appears to be organized more around our intentions than our sensations," remarks neuroscientist Richard A. Andersen of the California Institute of Technology in Pasadena, who directed the study.

Three monkeys were trained to press a light when it turned green or to look toward another light when it turned red, in either case after waiting for about 1 second. Different parts of the posterior parietal cortex showed elevated electric activity during the brief delay. Where that cortical activity occurred depended largely on whether hand or eye movements were in the offing, not on the location of the lights in the animals' visual field. —B.B.

Roller-coaster sperm counts—and births

Danish scientists astounded the fertility community 5 years ago when they reported signs that sperm counts appeared to have fallen globally over the past two generations (SN: 1/22/94, p. 56). The controversy they evoked only became more heated as a host of follow-up studies, conducted elsewhere, alternately confirmed and refuted the suggested trend.

Fertility specialist Harry Fisch of Columbia University's College of Physicians and Surgeons now thinks he's uncovered what's behind many of the apparent contradictions.

Last year, this urologist and his colleagues showed that even within the United States, sperm counts can vary dramatically between regions (SN: 6/8/96, p. 365). In the March *JOURNAL OF UROLOGY*, Fisch's team now reports that in data collected over 24 years in Minnesota, sperm counts fluctuate from a high of 123 million per milliliter (ml) of semen in 1980 to a low of 46.5 million per ml in 1974.

Ironically, Fisch says, whether changes in the average sperm count within a population actually affect regional fertility, as measured by birth rates, had never been formally addressed. In the new study, his team looks at that question and finds that annual Minnesota birth rates indeed tracked trends in sperm counts, with a low of 13.8 live births per 1,000 residents in 1973 and a high of 16.7 in 1981.

Whether the reported data depict a rise or fall, he says, "depends on when you start the study." For instance, he notes, his group last year found U.S. sperm counts to be rising—but only because that analysis began in 1971, when sperm counts were low. Had his team instead initiated its analysis with data for "1977, 1980, or 1984, when mean sperm counts were high," Fisch observes, "we would have likely reported a decrease in sperm counts with time," as have recent studies from Scotland and France (SN: 2/25/95, p. 127).

The Minnesota data, based on sperm that had been banked before the 660 donors underwent vasectomies, constitute the world's longest record for this fertility factor at a given site.

Though no one knows what's behind the sperm count fluctuations, Fisch strongly suspects it may be some environmental factor, such as climate. —J.R.

Tamoxifen's other anticancer hat

Tamoxifen is the best-known of several drugs that have been designed to starve estrogen-hungry breast cancer cells. Pharmacologists had thought that these antiestrogens shut down cancer growth merely by binding to receptors for the natural hormone—thereby blocking estrogen's ability to activate genes that enhance cell growth. It now appears that the anticancer role of these drugs is far more complex.

In the March 18 *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES*, Monica M. Montano and Benita S. Katzenellenbogen of the University of Illinois at Urbana-Champaign describe experiments showing that such antiestrogens themselves use the estrogen receptor to turn on genes—but different genes from those triggered by estrogen. In fact, the antiestrogen-triggered genes enhance the production of an enzyme vital to protecting cells. Called quinone reductase, this detoxifying enzyme heads off the production of hydroxyl radicals, a type of chemically reactive molecular fragment.

Because such radicals can damage DNA in ways that foster cancer in the breast and elsewhere (SN: 2/22/97, p. 126), Katzenellenbogen says that the enhanced production of this enzyme could represent a new, independent mechanism by which antiestrogens fight cancer. She says that the "surprising" finding also opens up the prospect that antiestrogens might one day be harnessed to limit the production of the free radicals that underlie a host of other degenerative conditions, including atherosclerosis. —J.R.