

## What 'Post-Vietnam Syndrome'?

Despite a general lack of long-term, emotional depression among Vietnam-era veterans (SN: 5/27/78, p. 341), some behavioral researchers continue to cite the existence of a "Post-Vietnam Syndrome." Unlike veterans of other wars, or even non-combat veterans of the Vietnam era, veterans of combat in Vietnam have been described as being prone to a peculiar set of symptoms: alienation, the feeling of having been scapegoated, disturbances in close, interpersonal relationships, perceived capacity for violence, emotional anesthesia, or numbing, to war experiences and identity confusion.

Though these symptoms among veterans have been repeatedly reported, "no in-depth research has been carried out to empirically investigate the hypothesized 'Post-Vietnam Syndrome,'" says Jacob T. Buchbinder of Indiana University of Pennsylvania. Buchbinder and J. Sidney Shrauger now report, however, that they have investigated the proposed phenomenon among 212 psychiatric inpatients at a Veterans Administration Hospital in New York State. The report was presented recently in New York at the annual meeting of the American Psychological Association.

The researchers devised a 92-item self-report questionnaire, which they say would reflect the prevalence of Post-Vietnam Syndrome symptoms. Among the participants were 47 Vietnam veterans, 53 Vietnam-era veterans with no service in Vietnam, 51 combat veterans of wars preceding Vietnam and 61 pre-Vietnam-era veterans with no combat experience. "In agreement with [those] who believe the Vietnam war differed from previous wars in that the circumstances surrounding the Vietnam war were harsher, it was thought that Vietnam veterans might especially experience the symptoms [attributed them in previous case descriptions]," say Buchbinder and Shrauger.

But the results show that of the six symptoms attributed to many Vietnam veterans, just one was confirmed: perceived capacity for violence. Vietnam veterans scored significantly higher in this area than did any of the other control groups. In addition, and somewhat unexpectedly, younger veterans scored higher on violence capacity, identity confusion and feeling scapegoated than did older veterans.

A second hypothesis — predicting another set of symptoms unique for combat experience in any war — was also confirmed for only one symptom: sleep disturbances. But compared with combat veterans of other wars, Vietnam veterans scored higher among these symptoms on excessive rumination about service experiences, guilt and psychotic-like symptoms, as well as sleep disturbances. In a third part of the study, the researchers

report that neither Vietnam nor other combat veterans scored significantly higher on symptoms commonly attributed to psychiatric patients in general. The one exception was anxiety, where combat veterans scored surprisingly *lower* than non-combat veterans.

Overall, "the data provide little support for the existence of a Post-Vietnam Syndrome composed of a group of symptoms especially associated with Vietnam combat experience," report Buchbinder and Shrauger. "One explanation ... is that age differences among subject groups clearly overpowered the influence of Vietnam combat experience. ... Contemporary youth seem less likely to put up a front of emotional stability and are less subject to social desirability of response tendencies."

"Another explanation," they offer, "could be that the Vietnam combat experience was merely one of numerous life crises experienced by the subjects; that Vietnam veterans with current adjustment problems probably had poor pre-service adjustments as well." Buchbinder and Shrauger suggest that previous postula-

tions of a set of specific symptoms for these men "have been mistakenly judged to be especially associated with combat duty in Vietnam."

In a separate five-year study of returned army prisoners of war in Vietnam, army psychologist E.R. Worthington also reports that most are adjusting to life somewhat better than had been expected. "Prior to the release of the POW's and during the early phases of their readjustment to home and family, several dire predictions were forecast for their future," Worthington says. "Most of these predictions have not yet materialized."

In the study of 43 men, also presented at the APA meeting, Worthington reports that "only 9 percent of this group is experiencing moderate to severe adjustment difficulties. Almost three quarters of this group (70 percent) are successfully coping with the demands of life, raising families, pursuing careers and enjoying life." It is generally accepted, he adds, "that the experience of being captured in combat and subsequently becoming a prisoner of war in Vietnam is one of the most traumatic combat experiences one can be subjected to. ... The data presented shows that most of the POW's are adjusting normally." □

## Recipe for a gene in the primordial soup

Models of primitive life must be painstakingly constructed of the bones of experimental data and fleshed out with theory and imagination. In the case of the primordial gene, a Nobel prize winning chemist let theory point him toward the biochemical relics. At the recent American Chemical Society meeting in Washington, D.C., Manfred Eigen reported a good fit between data and theory in proposing a first gene: It is the RNA that has since evolved into transfer RNA, the smallest ribonucleic acid in modern cells.

Theoretical considerations of the behavior of competing, replicating molecules led Eigen (of the Max Planck Institute in Germany) to criteria for an early gene. Because that gene must have reproduced without the aid of enzymes or sophisticated proofreading mechanisms, it must have been fairly short (50 to 100 nucleotides); otherwise too many errors would have crept in. The first gene, in addition, should have been symmetrical for efficiency, so that both strands carried the information when it reproduced. Finally, for maximum stability, the molecule should have folded up on itself and should have contained mostly guanosine and cytosine, the more firmly bonding of the four possible nucleotides.

Those criteria pointed Eigen toward the transfer RNA molecules of living cells. Just the right size, about 76 residues, they fold into a stable clover-leaf pattern. There are, however, a large variety of slightly different transfer RNA molecules in modern life.

Cells have different transfer RNA's to carry each type of amino acid into protein synthesis and those transfer RNA's vary further among species. Molecular biologists have determined the sequences of more than 100 transfer RNA molecules, and Eigen used that data to track back to the ancestral form.

"We assume tRNA was fixed in early time," Eigen says. He also assumes that the various modern forms evolved by simple mutations of the primordial molecules. From 25 yeast and 30 bacterial (*Escherichia coli*) transfer RNA's, Eigen derived what he considers the "master copy." To his satisfaction, that master molecule meets the theoretical criteria for an early gene. For instance, it has an excess of guanosine and cytosine residues and is completely symmetrical.

If that model transfer RNA is a gene, it must have a gene product. The amino acids most likely to be coded by the nucleotides present are glycine, alanine, aspartate and valine, which also happen to be the amino acids believed most abundant in the primordial atmosphere. Recently Eigen synthesized a 25-amino acid polypeptide chain from the information in the "master copy" RNA. The resultant soluble polypeptide has a high affinity for the RNA chain. It may therefore be a primitive enzyme promoting RNA replication, a function that would have given the first gene a strong selective advantage over similar nucleic acids floating in the ancient soup. □