TMI fallout: Demoralization

While the immediate physical health consequences of last March's Three Mile Island accident appear at this point to be minimal, the emotional aftershocks were significant enough to cause concern among those studying the mishap. "The major health effect of the accident appears to have been on the mental health of the people living in the region of Three Mile Island and the workers at TMI," the President's Commission on the Accident at Three Mile Island reported recently.

According to the Commission's staff report on behavioral effects, "there was immediate, short-lived mental distress produced by the accident among certain groups of the general population living within 20 miles of TMI." And although these problems were temporary for most persons, workers at the plant "continue to show relatively high levels of demoralization," the report states.

Among a representative sample of interviewees living within the 20-mile radius, the commission found last April that "a substantial minority, perhaps 10 percent, experienced severe demoralization ... at the time of and in the two or three weeks following the accident." This was more than a simple feeling of uneasiness about the accident; when assessed by standard mental health measures, the TMI-induced demoralization was "as severe as that reported by persons suffering from chronic mental disorders [measured among patients at mental health centers]," according to the staff report. "This is not to say that 10 percent of the sample became mentally ill as a result of the accident," the investigators quickly note. But it "is a clear sign that something is wrong."

While the "unusually high levels" of demoralization "apparently subsided after April," according to the staff report, "some of the other behavioral effects of the accident did not dissipate so rapidly." Although it declined after April, the level of distrust of authorities "has remained relatively constant from May on," says the report.

Though the demoralization — most apparent among mothers and teenage siblings of preschool children and among persons within five miles of the plant — seemed to subside among the general population, workers at TMI "were clearly still more demoralized than men in the general population in late August and September," report the researchers. In addition, the TMI workers were rated more demoralized than workers at the Peach Bottom nuclear plant, about 40 miles away. " ... the TMI workers' predicament has not been resolved," states the report. "Their level of demoralization has not returned to normal following the accident as has been the case with our other samples of adults in the general population of the TMI area." □

'Boozing' versus heart attacks

A couple of shots a day keeps heart disease away — at least that's the implication of recent research findings. Daily consumption of small to moderate amounts of alcohol is supposed to protect the drinker against death due to heart disease by increasing the levels of high-density lipoproteins and decreasing low-density lipoproteins in the blood (SN: 8/13/77, p. 102). But does alcohol really protect against heart disease deaths, or might it be some other chemical or chemicals in the alcoholic drinks that do the trick? The answer, according to Charles H. Hennekens of Harvard Medical School and his colleagues, is that alcohol, not some other chemical, is providing the protection. The researchers found that the lowered risk of coronary deaths is remarkably similar among light to moderate users of liquor, beer and wine, after adjustments are made for the differences in alcoholic content of each of these beverages. Their report is in the Nov. 2 JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

Hennekens and colleagues studied 284 men who had died from heart disease and 284 men who were still living and who matched the deceased subjects for age and neighborhood. Spouses of both groups of subjects were interviewed about their husbands' drinking habits. The investigators then compared the risk of heart disease deaths for light to moderate drinkers with those for nondrinkers, and for heavy drinkers versus nondrinkers. The researchers defined a light to moderate drinker as one whose consumption was less than or equal to two ounces of alcohol daily. This would be comparable to 40 ounces of beer, 12 ounces of wine or 4 ounces of liquor. The investigators defined a heavy drinker as anyone consuming more than two ounces of alcohol daily.

As Hennekens and his team report, daily consumption of small to moderate amounts of alcohol is correlated to low levels of coronary death, and the relationship is virtually the same for beer, wine or liquor. In contrast, there is no association between heavy alcohol consumption and heart disease deaths.

It is possible, of course, that the protective effect against heart disease deaths found among light and moderate drinkers isn't due to any chemical, alcohol included, but to some other factor, Hennekens and his co-workers concede. For instance, they point out that light to moderate drinkers may be easygoing, "Type B" personalities, whereas abstainers and heavy drinkers may be excessive, hard-driving, "Type A" personalities. Type B personalities have been found to be considerably less prone to heart attacks than are Type A personalities (SN: 9/20/75, p. 182). More study will be needed to determine whether alcohol, personality or some other factor is the coronary protector.

However, as W. P. Castelli of the National Institutes of Health points out in an accompanying JAMA editorial, there are 17 million alcoholics in the United States, and there is a strong genetic component to alcoholism. "The problem," he cautions, "is that it may be dangerous to tell some people to take two drinks a day when, given their constitutional makeup, one could fairly predict they could not stop at two." □

Innovation policy on the right track

Billed as the administration's "first steps" to ensure the nation's continued role as a world leader in technological development, President Jimmy Carter last week unveiled his industrial-innovation package. While congressional leaders greeted the long-awaited initiatives with reserve and lukewarm praise, the small-business community was somewhat more receptive, although not totally satisfied.

"What I find especially troublesome is the glaring omission of any tax incentives," complains Rep. John J. LaFalce (D-N.Y.), chairman of the House oversight subcommittee on small business. Echoing many of his colleagues, LaFalce said it could take years before industry and government respond to the President's proposals with changes in laws and investment policies, whereas tax-break stimuli could effect immediate change.

Sen. Donald Stewart's (D-Ala.) major complaint was that Carter's initiatives lack prescriptive goals that would force federal agencies to alter the proportion of research-and-development money going to small businesses and that of the procurement contracts awarded to small businesses. Citing testimony by National Science Foundation administrators last year, Stewart said experience has proved that agencies don't change the way they do business unless forced.

Others complained that the funds that would be committed to the program — about $400 million, roughly 90 percent of which would be redirected from other federally budgeted items — represents a paltry commitment to such an allegedly vital area. But Dave Kramarsky of the National Small Business Association took exception to that, saying that "the existing funds for R&D are sufficient if they're applied properly." Given the choice between new government money and new programs to encourage innovative development, "we'll take the new programs," he told SCIENCE NEWS. And new programs provide the