

plan—costs are not merely out-of-pocket expenditures. Consumer convenience carries with it a very real economic value. For example, mandatory car-pooling would reduce out-of-pocket commuting costs for gasoline and for other expenses that are shared. But there is a reason besides cheap gas and subsidized parking why freeways in Los Angeles and other urban areas are choked with single-passenger cars: people place a high value on being able to go to work when they want, come home when they want, and go to business appointments during the day at their own convenience. Giving this up would be a “cost” that would have to be reckoned into the evaluation of any regulatory program affecting consumer-commuters.

Lents comments that clinical studies always underestimate health effects in the field. In fact, the reverse is quite possible. Individuals engaged in normal day-to-day activities often can take steps to avoid actions that place them at risk from pollution. Subjects in clinical studies generally do not have this option. For instance, individuals in clinical studies are sometimes required to exercise moderately (or even heavily) while being exposed to varying concentrations of ozone or other pollutants. In everyday settings, however, many of these individuals would avoid or postpone such exercise on account of high pollution levels.

Lents is correct that nitrate particles are more prevalent than sulfates in the South Coast area. We concentrated on the latter because there is at least some epidemiological evidence linking them to premature mortality. Had convincing epidemiological studies existed for nitrates, we would have been happy to use them. On this point, we note that the benefit-cost analysis commissioned by Lent’s own agency (1) did not use dose-response functions for nitrates either. In fact, that study used an older epidemiological analysis based on a more aggregate measure of particulates than the one we used; in any event, both studies find mortality effects of similar magnitude.

Lents also references the work of Detels *et al.* (2) to suggest that the mix of air pollutants found in Los Angeles may be related to permanent loss in lung function. *If* this finding is substantiated, and *if* this loss in lung function is significant enough to affect the way people live or the time at which they die, all bets are off on our estimates of the benefits of the South Coast plan. We make this clear in our article.

Lents raises “moral principles” toward the end of his letter. We leave it to readers to decide this question: at a time when so many households in Los Angeles and in the nation suffer from hunger, crime, poor health, homelessness, addiction, illiteracy, and other prob-

lems, can it *really* be wrong to ask whether the best use of society’s next million, billion, or ten billion dollars lies in reducing urban ozone concentrations? That seems to us to be exactly the kind of question that we, and Lents, should be asking all the time.

Miller objects to the dollar values assigned to the improvements in human health (fewer asthma attacks) that would accompany reduced ambient ozone concentrations. Few economists are content with the valuation of reduced morbidity or premature mortality, including the empirical implementation of theoretical measures believed to be correct (3). We can only reemphasize the point we made in our article—that values like \$25 per avoided asthma attack come from questionnaires administered to ordinary citizens, *including asthmatics*, and that these values represent average responses after mitigation measures are taken. We have no doubt that more careful extensive questioning in the future would lead to revisions in the value of avoiding acute illness and also to an improved understanding of the value of preventing chronic illness (4). For now, however, we can only make use of the best results available and indicate, as we did quite carefully, that uncertainties are great. Readers uncomfortable with our approach should remember that values are assigned implicitly whenever policy decisions are made; difficult as it may be, we prefer to see such assignments made explicitly and in the open.

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2. R. Detels *et al.*, *Am. J. Public Health* **81**, 350 (1991).
3. M. Cropper and A. M. Freeman III, in *Health Benefits of Air Pollution Control: A Discussion* (Congressional Research Service Report for Congress, Library of Congress, Washington, DC, 1989).
4. M. Cropper and A. J. Krupnick, *J. Risk Uncertainty*, in press; *Valuing Chronic Morbidity Damages* (Report to the Environmental Protection Agency, Washington, DC, March 1989).

Erratum: In Kirk M. Wolter’s Policy Forum “Accounting for America’s uncounted and miscounted” (5 July, p. 12), there were two errors. The “Net undercount (%)” expression in the left column of page 13 should have read

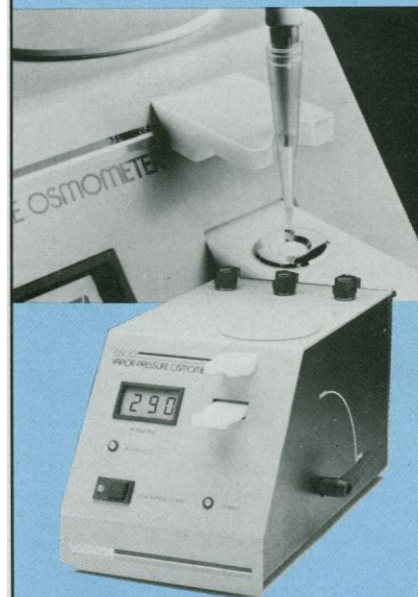
$$\text{Net undercount (\%)} = 100 \times (\text{total population} - \text{OE}) \div \text{total population}$$

On page 14, equation 2 should have read

$$\hat{N} = (\hat{N}_{11} + \hat{N}_{12} + \hat{N}_{21}) + \theta \frac{\hat{N}_{12}\hat{N}_{21}}{\hat{N}_{11}}$$

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