disease was classified as pneumoconiosis instead of silicosis, probably due to a different interpretation when reading the chest *x* ray films.

These papers, and the opportunity of a trekking holiday in Ladakh, prompted us to carry out a small study to obtain further information about the environmental risk for silicosis. In particular, the study aimed to characterise dust composition and size.

During our 170 km trek, we took four samples of dust in four villages (Padum, Lingshed, Hanupatta, Lamayuru) located in the Zanskar region, not far from the villages in which previous studies were carried out.[2 3] Because practical difficulties made collecting samples from house beams impossible, about 2 g of dust were collected from the upper surface of small buildings and put into plastic vials. These buildings were situated along the route in the proximity of or inside villages. The surfaces were at a height ranging from 1 to 1·50 m above the path. Small quantities of rock were also taken. Sedimented dust and previously milled rocks were examined by means of *x* ray diffractometry (Siemens Kristalloflex 810-D500/DACO) to determine the quartz content quantitatively and other minerals semi-quantitatively. Dust dimensions and fibre aspect ratios were determined by optical microscopy.

The percentage of quartz in the sedimented dust ranged from 6% to 9% (table). About 50% (by weight) of the material collected was of large particle size (>2 mm diameter) and agrees with the hypothesis that if finer material were examined, an amount of quartz greater than that reported would be detected. These values are slightly higher than those measured in previously ground rock samples (quartz content range 5%–7%).

These observations are consistent with the geological nature of the Himalayan range in Ladakh. In the same area, however, a quartz content of up to 42·8% has been measured in a recent survey.[4]

Dust granulometry was performed on previously sieved dust to remove particles larger than 50 μm. The percentage of particles with a geometrical diameter of between 0·5 and 5 μm ranged from 61% to 89%. Fibrous bodies (aspect ratio 3:1) and fibres of difficult mineralogical classification but of respirable size (length >5 μm and diameter ⩽3 μm) were also detected.

Air samples were obviously not available to us; nevertheless our findings agree with those of Norboo *et al*[2] —that is, that quartz, muscovite, and other minerals are present in the environmental dust. Norboo *et al* pointed out that "dust . . . included many particles within the range 0·5–5 μm diameter," but no data were given. Our granulometric findings show that the percentage of respirable particles in the sedimented dust reaches relatively high values.

Whether or not there truly are undiagnosed cases of occupational silicosis, as suggested by Valiante and Rosenman's paper[1] the possibility of environmental silicosis should not be forgotten. Perhaps the 4% of reviewed cases of silicosis, in which no occupational risk was identified[1] may be ascribed to environmental, non-occupational exposure. We suggest that environmental non-occupational exposure to dust, may represent a potentially important respiratory risk factor for people living in areas where there is a possibility of exposure to silicotigen rock dust.

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Analysis of dust samples collected in the villages (figures represent the percentages of quartz and the approximate percentage of other minerals)

Villages	*Quartz*	*Muscovite*	*Caolinite*	*Calcite*	*Feldspar and other minerals*
Padum	6	10	10	70	5
Lingshed	7	10	5	70	5
Hanupatta	9	5–10	5–10	50	25
Lamayuru	7	5–10	5–10	70	10

Sir,—The article by Saiyed *et al* (1991; **48**:825–9) presents shortcomings that we must call to your attention. The diagnosis of "pneumoconiosis" seems to be solely based on radiological appearances classified by the International Labour Office (ILO) system. The ILO classification, in and of itself, is not a diagnostic tool and other differential diagnoses could mimic these radiological findings. Tissue documentation certainly would have been more persuasive. Such materials should be available where the "reported" prevalence of pneumoconiosis approaches epidemic levels in certain population segments.

Furthermore, and equally perplexing is the postulated aetiology of fugitive dust exposure and the paucity of quantitative exposure data. Information regarding the frequency, duration, and severity of dust storms, particle size distributions, and the relation between soot and the pneumoconioses is clearly lacking.

Also, pulmonary risk factors such as tobacco smoking and other exposures (including occupational) are missing. It is indeed interesting that respiratory symptoms increased in a concomitant fashion with the frequency and extent of radiological classes of pneumoconiosis. Little can be made of this without adequate information on other pulmonary risk factors. Also pulmonary function tests were performed but no such data were reported.

To the credit of the authors, they realise that further work is necessary to determine the source, concentration, and composition of the causative agent, and the natural history of the disease process. It is hoped that these issues will be pursued vigorously.

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Cigarette smoking and small irregular opacities

Sir,—I was interested to read Weiss's article (1991;**48**:841–4), which showed