per cent $\dot{Q}_s/\dot{Q}_t$," omission of the constant of the regression equation, and faulty subtraction.

Figure 4 (Comparison of "adjusted" change in $\dot{Q}_s/\dot{Q}_t$ induced by oxygen with pulmonary capillary "wedge" pressure, p 624) also appears to have been derived by improper use of regression equation 1.

Although the authors' main conclusions still stand, their attempts to partition $\Delta\ \dot{Q}_s/\dot{Q}_t$ into two fractions have been improperly performed.

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2. Colton T: Statistics in Medicine. Boston, Little Brown and Company, 1974, chapter 6.

(Accepted for publication April 12, 1976.)

To the Editor:—I believe Dr. Pace may have misunderstood the calculations used in our report of the effect of ventilation with oxygen on intrapulmonary shunt fraction,[1] and I regret the lack of clarity in the description. However, he has done us a service by causing us to recalculate the data in table 5 of the original article. Arithmetic and transcription errors are indeed present (but I think for much less complicated reasons that he states), and their correction has the effect of strengthening our hypothesis that pulmonary blood flow redistribution is an important mechanism in the effects observed. I must take personal responsibility for not spotting these errors in a table that was added after the original manuscript submission, in response to editorial review.

We agree that the calculation which Dr. Pace outlines is meaningless. In the equation $y = a + bx$, insertion of the mean of x will always result in an answer equal to the mean of y. However, our method for deriving that portion of Δ per cent $\dot{Q}_s/\dot{Q}_t$ that was due to per cent Δ FRC is dependent only on the regression slope and is described in the legend for figure 4 of the original article, *i.e.*, Δ per cent $\dot{Q}_s/\dot{Q}_t$ (redistribution) = Δ per cent $\dot{Q}_s/\dot{Q}_t$ (total) − (per cent Δ FRC × regression slope). In table 5, values used for Δ per cent $\dot{Q}_s/\dot{Q}_t$ and per cent Δ FRC were the means calculated for each group of patients. In figure 4, values for each individual were used. Acceptance of this computation by the reader requires the assumption that, in the absence of a redistribution effect, the regression slope for Δ per cent $\dot{Q}_s/\dot{Q}_t$ on per cent Δ FRC would remain the same, *i.e.*, redistribution effect is constant, regardless of per cent Δ FRC, and that, in fact, the intercept parameter in the regression equation is the constant due to redistribution. This assumption is partially supported (or, at least, not contradicted) by the lack of statistical difference between the two regressions in figure 3. Also, if the assumption is invalid, the fact that the mean values for per cent Δ FRC are small suggests that any error in table 5, due to the assumption, will also be small.

A recalculated table 5 is appended. This shows that, in patients who had normal pulmonary capillary wedge pressures, 73 per cent of the increase in $\dot{Q}_s/\dot{Q}_t$ was due to redistribution of pulmonary blood flow, whereas in those whose vessels through nonventilated

REVISED TABLE 5. Calculated Relative Effects of Atelectasis and Blood-flow Redistribution on $\Delta\dot{Q}_s/\dot{Q}_t$ during Ventilation with 100 Per Cent Oxygen

	All 20 Patients (Table 2)	14 Patients with Normal PCWP (Table 3)	6 Patients with Increased PCWP (Table 3)
Per cent Δ FRC	−5.9	−6.00	−5.7
Total Δ per cent $\dot{Q}_s/\dot{Q}_t$	+6.2	+8.00	+2.6
FRC-related Δ per cent $\dot{Q}_s/\dot{Q}_t$	+2.09	+2.13	+2.02
Blood flow redistribution-related Δ per cent $\dot{Q}_s/\dot{Q}_t$	+4.11 (66 per cent of total)	+5.87 (73 per cent of total)	+0.58 (22 per cent of total)

lung were (presumably) prevented from vasoconstriction by increased intraluminal pressure, the total change in $\dot{Q}_s/\dot{Q}_t$ was less, due mainly to relative lack of redistribution effect. The statement in the abstract of the original article, that 67 per cent of the Δ per cent $\dot{Q}_s/\dot{Q}_t$ was due to redistribution, is possibly in error by one percentage point only.

In summary, our responses to Dr. Pace are: 1) We do not agree that there is an improper use of the regression equation in table 5 or in figure 4. 2) We agree that there are important arithmetic and transcription errors in table 5, thank him for drawing them to our attention, and apologize for their submission without adequate proofreading. We can understand Dr. Pace's quandary and regret that our paper was not further strengthened by the correct data, submitted in the revised table 5. 3) Remaining minor arithmetic inconsistencies are due to the rounding off of figures at various stages of the computation process, *e.g.*, the discrepancy between the calculated value for Δ per cent $\dot{Q}_s/\dot{Q}_t$ (redistribution) and the intercept parameter in the regression equation —the use of which might have been a simpler alternative.

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(*Accepted for publication April 12, 1976.*)