true slickensides that are present in some of the phyllonitized rocks. The penetrative lineations are statistically parallel to the fold axes (*B*) and are therefore *B*-lineations, according to the standard terminology (figs. 5, 11, 16). These lineations constitute one of the most important pieces of evidence for the direction of movement on the thrust (Bailey, 1935, pp. 158–159). In view of the failure of this evidence, the currently accepted theory, involving transport of the Moine schists to the west-northwest, must be reconsidered.

Although the Moine schists were undergoing deformation and metamorphism during the main movement on the Moine thrust, the degree of deformation of the schists for more than a mile east of the primary mylonitic rocks is very low. The foliation is recognizably bedding over much of the area, and the slabby nature and the lack of folding of the rocks indicate that there has been little shear movement. In the primary mylonitic rocks, on the other hand, the fine grain, the well-developed lamination, the color layering, and the folding all suggest large amounts of slip on the lamination planes. The zone of primary mylonitic rocks (including the mylonitized quartzites) represents a zone of distributed movement between two relatively undeformed blocks. The term "thrust," which is a contraction of "thrust-fault" (Reid *et al.*, 1913, p. 179), implies a surface of rupture, along which the deformation is restricted to a relatively thin zone. The Moine thrust does not show the characteristic features of a fault, except at isolated localities such as Knockan Crag. The movement has been distributed through a zone approximately 300 feet thick. Instead of the cataclastic textures developed along a fault, the primary mylonitic rocks show a considerable degree of recrystallization, and even some of the Cambrian quartzites are recrystallized. The "thrust" is a lithological boundary in a movement zone of the type that has been called a "movement-horizon" by Knopf (Knopf and Ingerson, 1938, pp. 33–35), and this term would be more fitting for the zone of primary mylonitic rocks.

All the evidence preserved in the megascopic fabric of the primary mylonitic rocks indicates differential movement normal to the fold axis (*B*). The majority of the folds are cylindroidal and have monoclinic symmetry; some are noncylindroidal, and axes of neighboring folds on some exposures may be inclined to each other at angles up to 35°, giving rise to triclinic symmetry for the foliation over the field of the exposure. The majority of the folds are recumbent, and it is estimated that approximately 75 per cent are overturned to the south-southwest. If the megascopic fabric of the primary mylonitic rocks is considered on the scale of the whole area, the minor irregularities disappear and the symmetry is statistically monoclinic. According to the symmetry principle, this should indicate a monoclinic movement picture; the simplest movement of this type is slip along the planes of lamination in a direction perpendicular to the regional fold axis (*B*).

The geometry of small-scale folds must be used with caution in determining the sense of large-scale "tectonic transport" in rocks, as minor drag folds on different limbs of a large fold may be overturned in opposite directions (Wilson, 1953). No large-scale folding is visible in the primary mylonitic rocks, however, and I consider that the sense of movement of the Moine nappe over the movement zone may be deduced from the sense of overturning of the small folds. In a recumbent fold of the intrafolial type (pl. 1, *b;* fig. 13, *d–e*), the sense of movement between

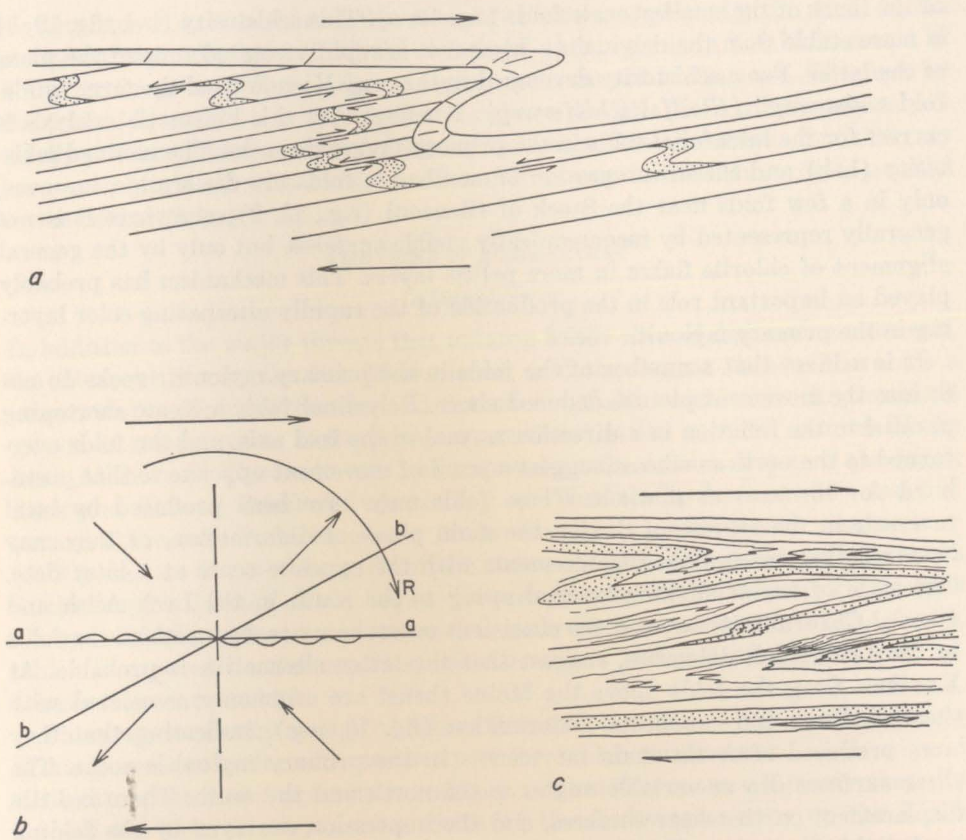

Fig. 19. *a*. Diagram illustrating development of "glide-fold schistosity" (after Kienow, 1953). *b*. Analysis of movement in "glide folding" (after Kienow, 1953). Long arrows indicate the sense of shear; short arrows denote axes of "compression" and "tension." The stable glide-fold schistosity (b–b) is rotated in the sense shown by the arrow (R) to the unstable orientation (a–a). *c*. The sense of slip indicated by intrafolial folds.

the overlying and the underlying layers may be definitely determined from the form of the fold, as shown in figure 19, *c*. All the intrafolial folds observed in the movement zone are overturned to the south-southwest, and the movement picture obtained by integrating the slip movement in all these folds is one of over-all transport of the Moine nappe toward the south-southwest. It is probable that many of the folds that are not obviously intrafolial on the scale of the outcrops in which they occur, are in fact parts of larger structures of this type. The majority of these folds are also overturned to the south-southwest, which confirms the conclusion that there was movement of the Moines in that direction along the movement horizon.

The style of the intrafolial folds is similar to that described by Kienow (1953) and called by him "glide folding" (*Gleitfaltung*). He outlined the development of these folds. During slip on the slip surfaces (a–a, fig. 19, *b*), the surfaces become unstable and bend into flexural slip folds (*Biegefalten*), which become overturned in a direction related to the sense of shear. A new schistosity develops by shearing