In the latter paper these are referred to as "uncrystallographic" slip bands. In both studies these structures were found in crystals in which more than one slip system operated.

Further work is necessary to test this twofold hypothesis of the origin of natural lamellae. The answer should be found, however, in more extensive phase-contrast and electron microscopy of natural lamellae.

EPILOGUE

Since the purpose of this paper is the demonstration of basal slip in quartz, the discussion has been restricted to a relatively simple set of structures developed in experimentally deformed quartz. Other structures are present in the experimentally deformed quartz, exhibiting considerable variety and in many cases greater complexity than those discussed above. These have not yet been studied in such detail. Study of the structures in naturally deformed quartz with phase-contrast microscopy and with an optical compensator also reveals some variety and complexity in these structures. Examination by electron microscopy of the structures in both experimentally deformed and natural samples promises to be very revealing. Our preliminary work in this aspect of the study has been rewarding and suggests that development of better techniques for chemical polishing and improved etching and replication of surfaces of quartz would be very productive.

The discovery that quartz may be deformed and recrystallized with ease in the laboratory and that the resulting material bears so much resemblance to naturally deformed quartz leads one to hope that further studies may reveal additional diagnostic features of lamellae and other structures, which may aid in unraveling the complex tectonic history of rocks. Our experience leads us to believe that most, and possibly all, of the features found in quartz in naturally deformed rocks can be reproduced in the laboratory under known conditions and their mode of origin determined without ambiguity.

The above demonstration that dislocation arrays and walls can explain all the structures of deformed quartz so far studied in detail, plus the power of new observational techniques, seems to portend wholly new possibilities for the quantitative study of these features.

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